SAP Business ByDesign Library

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Warning

Project Management

Overview

The SAP Business ByDesign solution helps your organization achieve optimal efficiency and transparency in its management of projects – from end to end. SAP Business ByDesign enables collaboration within a project team. Project managers can plan and structure projects the way they want, with instant access to the tools and visibility required to ensure efficient execution and ongoing control.

Relevance

The Project Management business area is relevant if you need support for:

- Project planning and execution
- Accounting for projects

Benefits

- Project management is tightly integrated with your operational and financial areas.

  The SAP Business ByDesign solution supports the seamless integration of project management with other relevant business areas in your company, including financials, purchasing, and HR. Integration of project management with financials addresses all aspects of project accounting and controlling. Integration with purchasing allows you to purchase third-party support, which can greatly simplify how your organization works with external consultants. You can also access consolidated and detailed information on all project-related purchase requests and orders. Integration with HR means that your internal and external team members can use integrated time recording to record working time, and the project manager can set up an approval process for time records. All areas of your company have reliable, up-to-date project information, which increases visibility across the enterprise and enables better control over projects.

- You can manage a wide range of projects from simple to complex.

  SAP Business ByDesign supports all types of projects, from basic cost collectors to sophisticated full-scope projects. To support multiproject management, projects of any size can be assigned to programs. You can use SAP Business ByDesign to manage projects across the enterprise, in areas as diverse as research, new-product development, and marketing. For added flexibility, you can easily expand projects that are used solely as cost collectors to meet more complex requirements.

- You get interactive and graphical views of your projects.

  SAP Business ByDesign supports all standard graphic representations of projects, and you have instant access to a variety of tools, including Gantt charts, work breakdown structures, and network diagrams. You can select views based on your personal preferences and the type of activity you need to perform.

- Your employees, partners, and management collaborate better.

  SAP Business ByDesign fosters efficient collaboration between employees, partners, and management by supporting timely communication through multiple channels. The software provides functionality that helps your project teams work together more efficiently, share relevant project-related information, and collaborate on all kinds of documents. Automated, event-triggered workflows help you drive escalations and view the status of project tasks at any time.

- You have fast access to data, including information about project progress, deviations, and resource consumption.

  SAP Business ByDesign provides you with reliable and accurate data relating to project progress and deviations. Equally important, you have transparency into the actual consumption of resources, and you can track project status and escalate “red flag” issues when they occur.

Project IDs and Numbering

Overview

In the **Project Management** work center, each project and its project tasks have a unique number. This unique number is necessary to ensure that projects can be identified by other business areas, such as financials. For example, a unique project reference is required for an invoice to be posted to a project or project task.

You can influence these project IDs by defining a default prefix for each project type in your solution configuration. This prefix is then used by the system when assigning project IDs. For example, if you the chose the prefix **RD** for Research and Development, the project ID is RD1, RD2, and so on.

To define the prefixes used for each project type, go to the **Business Configuration** work center and choose the **Implementation Projects** view. Select your implementation project and click **Open Activity List**. Select the **Fine-Tune** phase, then select the **Project Types** activity from the activity list.

It is recommended that you define a prefix for the project type so as to ensure continuous numbering by the system. These Project IDs can be changed until the project is started or released. You can filter for projects with a particular prefix, for example” RD” for Research and Development projects.

If you do not define a prefix for the project type, the system automatically generates an ID from the number range. You can either keep this generated number or enter a personal project ID, for example ‘RON’.

The project task IDs are created by combining the project ID, with a separator as defined during business configuration, and a consecutive number. For example, if the project ID is “RD1”, and you have chosen the dash (-) as your separator, the first project task ID is “RD1-1”. You can change project task IDs as long as the project status is in planning.

Project Status and Integration

Overview

Project Management offers an end-to-end integration with other business areas, such as financials for cost and revenue management, customer relationship management (CRM) for project invoicing, and supplier relationship management (SRM) for project procurement. The integration of Project Management with other business areas gives you increased control and transparency in your projects.

When you set a project status to started or released, integration with other areas is enabled. When a project status is on hold, stopped, or closed, the system automatically disables the integration with other business areas. This ensures that invoices, for example, are not accidentally posted to incorrect projects. The integration between Project Management and other business areas ensures that you are better equipped to make key decisions on your projects and to present crucial data to senior management.

The tables below give a detailed overview of lifecycle and supplementary statuses used in Project Management.

Lifecycle Statuses

Status Name	Possible Action	Description

Status Name	Possible Action	Description
In Planning	• Start • Start and Release • Stop (Revoke Stopping)	Denotes the initial status of the project planning and setup phase. At this stage, you cannot use the project as an accounting object.
Started	• Release • Stop (Revoke Stopping)	This status is applicable only to a project header and once it has started, the project header cannot be deleted anymore. It also becomes an accounting object and all project tasks can be released individually. Status Started is not hierarchical which means it does not affect the structure underneath it. Also, it cannot be revoked.
Released	• Complete (Revoke Completion) • Complete and Close (Revoke Closure) • Stop (Revoke Stopping)	Project header or project tasks with this status become accounting objects. Status Released is hierarchical, which means that all subsequent tasks are affected and automatically converted to it. For example, if a project task is set to Released, then all its subtasks are automatically set to Released too. ⚠ **Caution** Released and Started are the only two statuses that cannot be revoked.
Completed	• Close (Revoke Closure) • Stop (Revoke Stopping)	Denotes the finished state of the project or project task. Completed project header or project tasks can be used in supplier and customer invoicing processes and expense reports, but any operational work on the project or tasks is no longer expected.
Closed	Revoke Closure	Indicates the end state of the project or project tasks and they cannot be used as accounting objects anymore. Also new project tasks cannot be assigned to a closed project. Completed and Closed are quite similar, but the main difference is that nothing can be assigned to a project task or project that is closed, whereas a supplier invoice can still be assigned to a project task or project header that is complete.
Stopped	Revoke Stopping	Project header or project tasks with this status have been canceled and therefore deemed by the system as closed. Stopped and Closed have the same behavior but Closed implies that the project ended successfully and Stopped means that it was canceled with a low probability of being activated.

Note

All lifecycle statuses are hierarchical except Started.

Hierarchical means that all subsequent tasks of a selected task are affected and automatically converted to the status of the selected task.

Supplementary Statuses

Status Name	Representation	Description

Status Name	Representation	Description
On-Hold	Selected checkbox.	Denotes the temporarily suspended status of a project header or project tasks. Since On-Hold is also a hierarchical status, this sets on hold all subtasks of the selected project task and processes related to these tasks. No new assignments or changes to the project header or project tasks are possible, but this status can be revoked.
Fulfillment in Process	Visualized as a small green square in Basic Data in the details section, next to the Project Status field. Fulfillment can be activated only if a project header is released or started, or if a project task is released. In those cases, the Start Processing action starts Fulfillment in Process (the green square becomes visible) and Revoke Start Processing stops it, making the green square invisible again.	Shows whether the work on the project has effectively started. It mostly has informational purpose but influences earned value analysis reports (EVA). The system sets fulfillment automatically in process (the green square appears) as soon as the first time confirmation has been recorded.

i Note

An accounting object is a project header or project task that can be used for assigning costs and revenue to it, recording time or travel costs to it, assigning expense reports or use it for purchasing processes.

For accounting assignments and all other similar processes like time confirmation, only the status of a project header or project task is relevant and not its time frame. For example, a team member can still record time to a project task that has expired, if it still has the status Released.

Project Status before Execution

When you create a project, the initial status is in planning. Once you have finished setting up and planning the project, you can change the status to Started or use Start and Release. If you change the status to started, the integration between the project header and other business areas is activated. For example, an invoice can be posted to the project header from Financials.

When you release the project, the integration between all project tasks and other business areas is activated. For example, team members can record their time to a project task (integration with HR). Once you have released the project or a particular project task, you can not change the status to In Planning At the same time a baseline is automatically created, a snapshot is made, and some information can no longer be changed, for example the project ID, project type, and organizational assignments. Also Schedule becomes active and all scheduling has to be triggered manually.

Project Status during Execution

During the project execution, you can change the status using Stop, Complete, or Complete and Close. Whether you change the project task status to stopped or closed, the system responds in the same way, that is, all time recordings and postings to the selected project task and subordinates are disabled. In addition, all fields for the selected project task and subordinates can no longer be changed.

Project Cost and Revenue Planning

Overview

Accurate planning of project costs and revenues is essential for establishing realistic budgets, avoiding cost overruns, and ensuring that the project will generate sufficient profit. The high cost transparency provided by project management helps you effectively budget your projects and control their costs. Advanced reporting features allow you to quickly detect overspending and pinpoint its causes in detailed cost breakdowns.

Project managers plan project tasks by specifying:

- The anticipated amount of work (services) required
- The planned materials
- The estimated expenses
- The estimated revenues

> **Note**
>
> Revenues **cannot** be planned on overhead cost projects.

Each project task has one or more work packages for which the project manager specifies a service, a team member, and the expected time required. Project tasks can also include expenses, such as for airfare or lodging, as well as internally or externally procured materials. Overhead is applied automatically if you have assigned an overhead rule to the project.

Materials can be planned and procured for projects in two ways:

- In the project only

  In this case the material items are not shown separately in the sales order but are implicitly included in the cost of the project-based services.

- In the project and in the sales order

  In this case the material items are shown in the sales order separately from the project-based services.

> **Note**
>
> Projects are costed **automatically** each time they are saved so that the costs remain current.
>
> However, you need to trigger an update of the planned costs in the following cases:
>
> - You changed a material cost or cost rate.
> - You corrected an error that was due to:
>   - A missing material cost or cost rate
>   - A missing G/L account
>   - A missing price in a list price or contract

Analyzing Planned Project Costs and Revenues

You can analyze the planned costs and revenues for the project in detail as follows:

- In the **Cost and Revenue** work center, **Projects** view
- In the **Project Plan Values** report

Valuation

The planned services and materials are valued using **valuation strategies**, which consist of a priority sequence. If the first cost or price in the sequence has not been maintained, the system attempts to find the next one, and so on. If the system cannot find any of the costs or prices in the priority sequence, it issues an error message.

Note

Valuation strategies are predefined and cannot be changed.

The planned expenses are taken directly from project expense planning, while overhead is calculated based on the overhead rule assigned to the project.

Valuation Strategy for Services

For **internal** employees, the work is valued using the following valuation strategy:

1. Labor resource cost rate
2. Service cost rate

   If you want the work to be valued with the service cost rate, simply make sure that no cost rate is defined for the labor resource.

For **external** employees and employees of other companies within the same corporate group, the work is valued using the following valuation strategy:

1. Price from fixed source of supply
2. Price from contract
3. Price from list price
4. Service cost rate

Note

You define fixed sources of supply in the Sourcing and Contracting work center.

Valuation Strategy for Materials

Materials are valued using the following valuation strategy:

Materials sourced from external supplier	Materials sourced from stock

Materials sourced from external supplier	Materials sourced from stock
1. Price from latest purchase order with reference to the project If a purchase order with reference to the project exists, the system uses the price from that purchase order. If there is more than one purchase order for the same material, the system uses the price from the latest purchase order. 2. Price from latest purchase order without reference to the project If no purchase order with reference to the project exists, the system uses the price from a purchase order that does not reference the project. If there is more than one purchase order for the same material, the system uses the price from the latest purchase order. 3. Price from fixed source of supply 4. Price from contract 5. Price from list price	1. The price of the material is based on the price maintained for the business residence that is sent from the project. This price of the material for a business residence is arrived at from the inventory cost. 2. If the business residence is not sent from the project, then the business residence is derived from unit responsible for the project or the project task, and the material cost is taken for that business residence. If the responsible unit is not maintained, the next responsible unit is used based on the hierarchy. 3. If no business residence can be derived, an average of the material cost across all available business residences is taken and used as the price of the material.

Note

The valuation date for materials is the **start date of the project**. This date is used to determine the financial period for cost allocation. If, however, you plan material costs at the task **item** level and enter a start date for the material item, this start date is used as the valuation date for the material item.

If a planned material has not been activated for valuation, an information message is sent to the project manager when the project is saved. The plan values are flagged as erroneous in the **Project Plan Values** screen and in the **Project Plan Values** report.

Valuation of Expenses

The planned costs for expense items are transferred directly from project expense planning to accounting.

If the currency of an expense item differs from the default currency of the company and set of books, it is converted into the default currency.

Valuation of Overhead

Overhead items are generated automatically by the system after an **overhead rule** is assigned to the project. Overhead rules allow you to apply overhead on an ongoing basis, eliminating the need to run month-end allocations and ensuring that you always see the complete project costs. You can define different rules for different types of direct costs.

For more information on overhead rules, see Overhead Absorption by Projects.

Period Distribution

Calculated costs can be structured by G/L account origin and distributed to fiscal periods based on the scheduling of the corresponding project task.

You can optionally plan project costs and revenues for specific time frames at the **task item** level by entering a Start Date and End Date for the item. If you enter these dates, the costs or revenues for the item are distributed based on these dates and not based on the earliest start and finish dates of the task.

Note

If you enter a start date and end date for a **material** item, the costs are distributed based only on the **start date**.

This feature enables more accurate planning data because the planned costs and revenues for the item are distributed only within the exact time frame during which you expect them to be incurred, rather than evenly across all periods covered by the project task. The **Project Plan Values** report then shows the costs more exactly by period.

Related Information

[Project Cost and Revenue Management]

Project Cost and Revenue Management

Overview

There are two basic aspects of project management:

- **Project Planning and Execution** constitutes the **operational** aspect of project management. It involves planning, scheduling, and executing projects.

  Project managers perform these activities in the **Project Management** work center.

- **Project Cost and Revenue Management** constitutes the **financial** aspect of project management. It involves allocating and tracking costs and revenues for projects.

  Financial analysts use the tasks and reports in the **Cost and Revenue** work center to:

  - Distribute costs and revenues between projects
  - Define cost rates for service cost allocations to projects
  - Apply overhead to projects using overhead absorption
  - Perform revenue recognition for project sales
  - Analyze planned and actual values on projects using dedicated reports

Project Types

You can create projects for internal and external purposes. A number of operational and financial settings are needed to enable the project to meet its intended purpose.

- You specify the operational and financial settings for projects in the **Project Types** fine-tuning activity in business configuration.
- Whenever you create a new project, you select one of the defined project types.

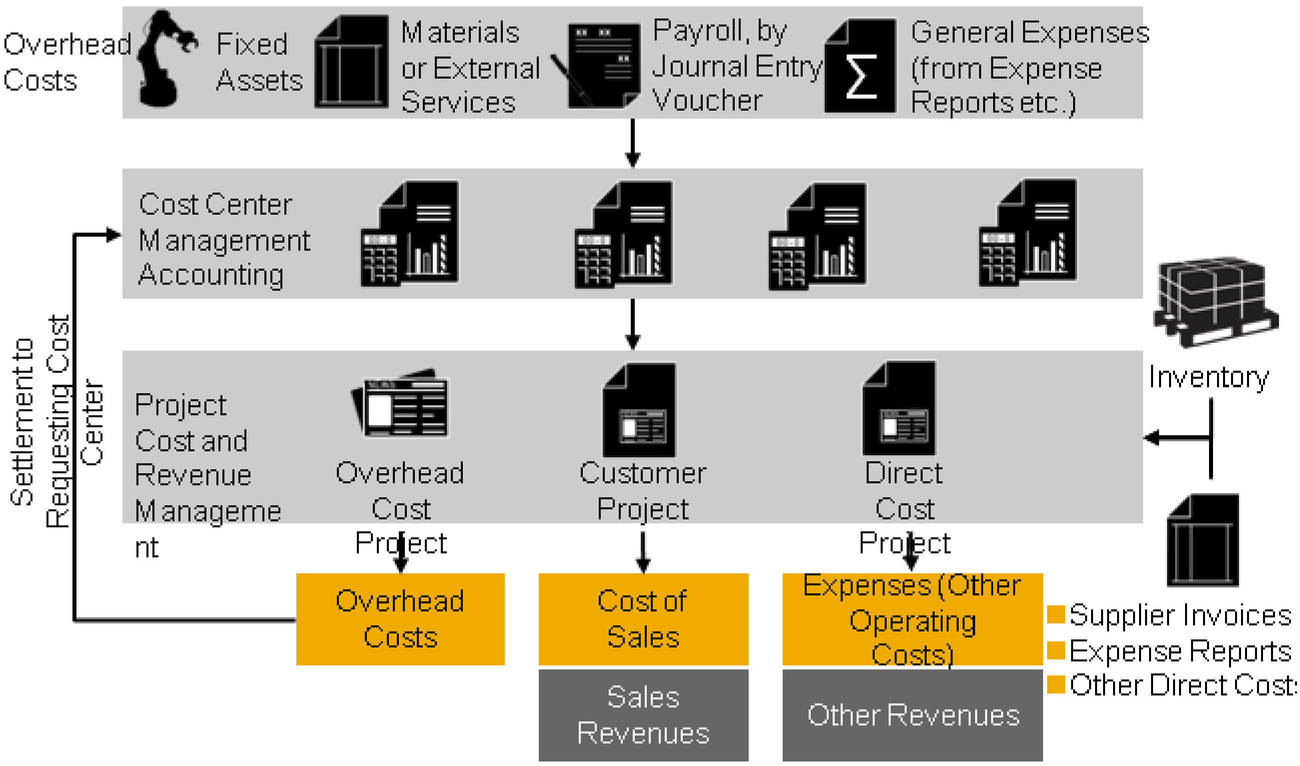
Process Variant Types

The only financial setting stored in a project type is the Process Variant Type. The process variant type controls how project costs and revenues are handled in financial and management accounting and is the most critical setting for project cost and revenue management. It is therefore important that the financial analyst is involved in the setup of the project types.

The project type is based on the following process variant types:

Process Variant Type	Project Type
90 - Project Processing - For Overhead Cost Projects	Overhead Cost Project
91 - Project Processing - For Other Direct Cost Projects	Direct Cost Project
257 - Project Processing - For Customer Projects	Customer Project
427 - Project Processing - For Multi-Customer Projects	Multi-Customer Project

The figure below displays how project cost and revenue management is integrated in management accounting, as well as the main differences between the process variant types.



Process Variant Types in Project Cost and Revenue Management

Projects of all process variant types receive **costs** from various sources:

- **Material costs** resulting from consumptions recorded for the project; this credits inventory
- **Service costs** resulting from service confirmations; this credits the cost centers which performed the services.
- **Other direct costs** using supplier invoices, journal entry vouchers, or expense reports
- Some project types may also receive **overhead costs** using overhead distribution or overhead absorption; this credits cost centers.

Only customer projects, multi-customer projects, and direct cost projects can be invoiced and thus generate **revenues**.

The main difference between the three process variant types is how costs and revenues are posted and processed:

- **Overhead Cost Projects**

  Overhead cost projects are intended for **internal projects** only. Together with cost centers, they allow the management and allocation of overhead costs. Overhead cost projects enable you to analyze overhead costs in more detail than cost centers only.

  All costs charged to overhead cost projects are automatically reallocated back to the cost center that requested the work. Overhead cost projects therefore always have a balance of zero. Overhead cost projects are intended for internal cost collecting purposes only.

- **Direct Cost Projects**

  Similar to overhead cost projects, direct cost projects are intended mainly for **internal projects**. However, in contrast to overhead cost projects, their costs remain on the project. They can be assigned to specific market segments and are thus available in profit analysis.

  Usually, direct cost projects do not generate any revenues. However, in case you get your project costs covered by a business partner, you can create manual customer invoices with reference to a direct cost project.

  i Note

  The system handles costs and revenues posted to direct cost projects as **expenses (Other Operating Costs)** and **Other Revenues**. It does not post costs on direct cost projects to a cost of goods sold account and it does not allow automatic revenue recognition for the revenues.

- **Customer Projects**

  Customer projects are projects which you manage and execute **for your customers** and are always linked to a sales order. This integrates customer projects into the normal order-to-cash scenario and offers standard functions such as reporting by function of expense, profit analysis, and automatic revenue recognition.

- **Multi-Customer Projects**

  You use multi-customer projects for events such as concerts or exhibitions where you sell standardized services.

  The system can automatically defer and recognize costs and revenues for multi-customer projects if an accrual method is assigned to the project. If no accrual method is assigned, costs are posted to the relevant **expense account** and revenues are posted to **Sales Revenues**.

Related Information

Overhead Cost Projects
Direct Cost Projects
Customer Projects
Multi-Customer Projects
Cost and Revenue Distribution Between Projects
Service Cost Allocation to Projects
Overhead Absorption by Projects
Revenue Recognition for Project Sales
Revenue Recognition for Multi-Customer Projects
Project Cost and Revenue Planning

Project Scheduling

Overview

Project scheduling is a system-driven process that helps you monitor the timeline of your project and make sure that deadlines are met. As the project manager, you define the framework of your project by planning tasks, phases, and milestones, and then planning the duration of each project task. You can also define time constraints for project tasks and define the order in which they are to be completed using dependencies. Based on this information, the system calculates the earliest and latest start and finish dates of all project tasks. You can use these dates to determine the window of time in which each project task must be completed to avoid delays in the project schedule. During project execution, you can trigger the system to recalculate the project schedule based on the actual time it takes to complete project tasks or other changes to the project plan.

Duration of Project Tasks

When you create a project task, you can plan its duration by entering the number of working days required to complete the task. This planning is done for project tasks which do not contain any subtasks. The duration of project tasks which contain subtasks – the project header, phases, and summary tasks – is automatically derived from the subtasks they contain. This method is known as bottom-up scheduling. Milestones are used to track important events within a project and have no duration.

i Note

Example: A summary task which contains three project tasks, each with a duration of five days and scheduled to only begin when its predecessor task has finished (Finish-Start relationship), has a duration of fifteen days – the combined duration of its subordinates.

Project Calendar

When planning a project, you can select a calendar that fits your company's working and nonworking days. This calendar is used for the entire project unless you select another calendar for individual phases, tasks, or milestones. A calendar that is selected specifically for a phase, task, or milestone is not overridden if the project calendar is changed. If you do not select a calendar for the project, the system uses the Gregorian calendar.

Dependencies Between Project Tasks

You can specify the order in which project tasks are to be completed by creating dependencies between project tasks. Such relationships must contain a predecessor task and a successor task. The following table shows the dependencies you can create between two project tasks:

Dependencies	Effect
Start-Start	Successor task cannot start until its predecessor task has started
Start-Finish	Successor task cannot finish until its predecessor task has started
Finish-Start	Successor task cannot start until its predecessor task has finished
Finish-Finish	Successor task cannot finish until its predecessor task has finished

If a delay is required between two project tasks, you can set a time lag to postpone the start or finish of the successor task by a certain number of days.

Scheduling Constraints

You can set constraints to control the start and finish dates of project tasks.

You can set one of the following constraints for the start date of a **project task**:

- Earliest possible

- Must start on/at (a specific date)
- Not earlier than (a specific date)
- Not later than (a specific date)

You can set one of the following constraints for the start date of a **summary task**:

- Earliest possible
- Not earlier than (a specific date)

You can set one the following constraints for the finish date of a **project task**:

- Latest possible
- Must end on/at (a specific date)
- Not earlier than on (a specific date)
- Not later than on (a specific date)

You can set one of the following constraints for the finish date of a **summary task**:

- Latest possible
- Not later than on (a specific date)

If you change the dates of a project task, for example by moving the task bar in the graphic section of the Gantt chart, the system will set a start constraint for the project task if the set of dates is **Earliest**. It will set a finish constraint for the project task if the set of dates is **Latest**.

Backward and Forward Scheduling

You can define the start and finish dates of the project. The system then uses forward and backward scheduling to calculate the earliest and latest possible start and finish dates for the project tasks:

- Forward Scheduling: The system uses the start date and the durations of the project tasks to determine the earliest possible start date and earliest possible finish date.
- Backward Scheduling: The system uses the finish date and the durations of the project tasks to determine the latest possible start date and latest finish date.

If you enter only the start date of the project, the system will perform forward scheduling first. Likewise, if you enter only the finish date of the project, the system will perform backward scheduling first. If you enter neither a start date nor a finish date for the project, the system uses the current date as the start date. The number of days between the earliest possible start date and the latest possible start date is the total float – the window of time in which a project task can start without causing a delay in the project timeline. If the total float for a project task is zero days or a negative number of days, that project task becomes part of the critical path to project completion and is colored red in the Gantt chart.

Process Flow

1. You create a project.
2. You can set the start and finish date of the project.
3. You plan your project by creating tasks, phases, and milestones.

4. You can plan the duration for project tasks, as well as dependencies and constraints for all project tasks.
5. While the status of the project is **In planning**, the system automatically calculates the earliest and latest start and finish dates of the project.
6. You set the status of the project to **Started** or **Released** .
7. During project execution, team members record their working times and the system records the actual dates of the project tasks once they are completed. To trigger the system to recalculate the project schedule, click the **Schedule** button in the **Project Plan** view.

Project Invoicing

Overview

Project invoicing is a process that allows you to invoice customers for project-based time and expenses or fixed-price services.

The process consists of the following steps:

- Project invoice preparation
- Creating a project invoice request
- Releasing a project invoice request

⚠ Caution

- You can only perform end-to-end project invoicing for customer projects since they are the only project types that are integrated with sales orders.
- Although you can create project invoices for internal projects these project invoices are not integrated with sales orders and require manual adjustment entries to correctly report them in your income statement. SAP therefore **strongly recommends** you only use customer projects for selling and invoicing project-based services.
- To check which of your project types represent customer projects and which represent internal projects, you can enter the Project Types activity in the **Fine-Tune** phase of your implementation project.

Project Invoice Preparation

Project invoice preparation is the process of assigning times and expenses to sales order items and of preparing defaults for the invoicing clerk on which times and expenses are to be invoiced or written off.

Time and expense items are collected for customer projects with the following source documents:

- Time confirmations
- Supplier invoices and credit memos
- Goods and service receipts
- Goods issues and goods returns
- Expense reports

For the invoicing of project-based services and expenses it is required that all project-related time and expense items are assigned to a **project-task** of the customer project as well as a **sales order item**. The reasons for this are:

- For **fixed price** invoice items: the time and expenses are cost of sales which need to be assigned to a sales order item to allow profit analysis.
- For **time and material** invoice items: the time and expenses are not only cost of sales but also serve as a basis for invoicing.

Usually, the user who enters the source document also enters the relevant project tasks. The sales document item, however, is not known to the user and is also not relevant for the user's work. The problem with the determination of the sales order item is that there is not always a one-to-one relationship between project tasks and sales order items.

Relationship between project tasks and sales order items

The following relationships are possible:

- A project task is assigned to **exactly one** sales order item.
- A project task is assigned to **several** sales order items. This can happen in the following cases:
  - There are several sales orders relevant for the same project. For example, the initial sales order and some follow-up sales orders exist and the follow-up sales order refers to the same project tasks as the initial sales order.
  - There is just one sales order relevant for the project, but several sales order items refer to the same project task. This is a rather rare case, since the project is usually more granular than the sales order.
- A project task is **not assigned** to a sales order item. This is quite common, since the project is used to break down the work necessary for a sales order item. In this case, a project task is directly assigned to the sales order item and several internal project tasks are located below that project task.

Assigning time and expenses to sales order items

The system offers the following options to ensure that all time and expense items are assigned to sales order items before you can create the project invoice:

- The system tries to find the closest possible match between project task and sales order using the following procedure:
  1. If there is just one sales order item with an expense entered as the product, the system assigns all expense items to that sales order item.

     For time and expense items, or if there is more than one sales order item with an expense, the system continues with the procedure.
  2. If the project task is **not directly assigned** to a sales order item, the system searches for a superordinate project task which is assigned to a sales order item and continues the procedure with that project task.
  3. If the project task is assigned to **exactly one** sales order item, the system assigns this sales order item to the time and expense item.
  4. If there are **several** sales order items assigned to the project task, the system checks if one of the sales order items has the same service or expense as the time and expense item. If this is the case, the system assigns that sales order item to the time and expense item.
  5. If none of the steps above found a sales order item, the time and expense item remains unassigned.
- The project manager can review the system assignments and provide the missing assignments in the Invoice Preparation > Not Invoiced Time and Expenses view of the Project Management work center. This view was designed

especially to support the project manager with this task and allows him or her to decide the following:

- Which time and expense items shall be blocked completely for invoicing?
- How much of the incurred time and expenses is to be invoiced?
- How much of the incurred time and expenses is to be written off?

For more information, see Not Invoiced Time and Expenses Quick Guide.

- As the last option, the accountant can assign time and expense items to sales order items in the **project invoice request** by assigning them to invoice items. Since invoice items always refer to sales order items, this action also assigns the time and expense items to the sales order items.

Postings during project invoice preparation

During the preparation of project invoices, the system performs the following postings:

- The user provides the project task when entering the times and expenses but does not provide the sales order item.

  The system posts the time and expenses to the **deferred cost of sales account** without a reference to a sales order item but with reference to the **project task as primary cost object**.

- As soon as a sales order item has been assigned to the time and expense item, the system transfers the expenses on the deferred cost of sales account from the project task to the **sales order item as primary cost object**. The project task is stored as **secondary cost object**.

- If there is no accrual method assigned to the sales order item, the system transfers the expenses from the **deferred cost of sales account** to the **cost of sales account**. If an accrual method is assigned to the sales order item, the revenue recognition run recognizes the cost of sales if the conditions of the accrual method are met.

Creating a Project Invoice Request

A **project invoice request** is a document in which you create the invoice structure for a project-related customer invoice, and forward this document to customer invoicing.

In a project invoice request, you can:

- determine the header data of the project invoice
- specify the invoice items of the project invoice
- assign time and expense items to invoice items

You can create a project invoice request at any point during the project. Depending on what you have agreed with the customer this can be, for example, on completion of a project milestone, or if the customer is invoiced on a time and material basis. You can create a monthly invoice for all project expenses recorded during the previous month.

A project invoice request always refers to a combination of **one** sales order and **one** customer project.

You can create a project invoice request either manually or automatically:

- **Manual creation of a project invoice request**

  To manually create a project invoice request, you can start the **New Project Invoice Request** guided activity based on the following objects:

  - **Sales Orders**

You can start the New Project Invoice Request guided activity based on a sales order in the Project Invoicing > Sales Orders view of the Customer Invoicing work center.

This view displays all released sales orders that contain at least one item that has been assigned to a customer project task and which are therefore relevant for invoicing. The ID of the customer project is displayed together with the sales order.

- Projects

  You can start the New Project Invoice Request guided activity based on a customer project in one of the following views:

  - In the Project Invoicing > Projects view of the Customer Invoicing work center
  - In the Projects view of the Project Management work center
  - In the Invoice Preparation > Not Invoiced Time and Expenses view of the Project Management work center

  These views display all customer projects, that are started or released and which are therefore potentially relevant for invoicing. However, you cannot see if any of the project tasks is assigned to a released sales order. If none of the project tasks are assigned to a released sales order, you have to do this assignment first before you can create the project invoice request.

The New Project Invoice Request guided activity offers functions which support you to create invoice items and to assign time and expense items to the invoice items.

For more information on manually creating or editing project invoice requests, see Create a Project Invoice Request for a Customer Project.

- **Automatic creation of a project invoice request**

  The system also offers the function to automatically create a project invoice request, which you can then edit and complete. This is especially useful for project-based sales order items with a fixed price.

  The system performs the following steps to create an automatic project invoice request:

  - Similar to the default entries in the New Project Invoice Request guided activity, the system copies most of the data from the sales order or the project.
  - The system creates the invoice items based on the items of the sales order.
  - The system assigns time and expense items to the invoice items based on the same logic as the Propose Invoice Item Assignments function in the New Project Invoice Request guided activity.

    For more information on the Propose Invoice Item Assignments function, see Selecting Time and Expenses in a Project Invoice Request.

  There are two ways to trigger the automatic creation of a project invoice request:

  - **Manual trigger**

    You can manually trigger the creation of an automatic project invoice request in the views in which you can also manually create a project invoice request. If you choose New > Automatic Project Invoice Request, the system generates a project invoice request and opens it in an editor so that you can review, complete, and release it.

  - **Trigger using an invoice schedule**

    You can create an invoice schedule for project-based sales order items with invoicing method Fixed Price or Time and Material in the Sales Orders view. Based on this schedule, the system automatically creates project invoice requests and depending on the presence of errors or release related activities, sends business tasks to the **Work** view in the **Customer Invoicing** work center.

If the project-based sales order items have an **Invoice Status** of **Finished**, then the invoice schedule items associated with these sales order items will not be considered for invoicing. You can create a manual customer project invoice request but you will not be able to release it.

Note

Invoice Status for Sales Order Items with the Fixed Price Invoicing Method:

If the invoice schedule of a sales order item with the **Fixed Price** invoicing method covers 100% of the net value, and all invoice schedule dates have been invoiced, then the invoice status of this sales order item is set to **Finished** automatically.

For more information on **invoice schedules**, see here.

The following business tasks are relevant for project invoicing:

- Task — Review and Release Project Invoice Request
- Task — Solve Issue When Creating Project Invoice Request
- Task — Release Failed: Review and Release Project Invoice Request

Tip

Invoice items with the **Fixed Price** invoicing method are usually correctly generated by the system. You only need to change them in case you want to manually adjust the price or the quantity.

The **Percentage** field in the **Invoice Schedule Details** of a business task in the **Work** view of the **Customer Invoicing** work center displays the percentage of the total amount of all fixed price items which has been invoiced in the project invoice request.

If the percentage varies between invoice items, this field is not displayed in the **Invoice Schedule Details**. In this case, you have to open the project invoice request to display the individual line items and their percentages.

It is recommended that you review the assignment of time and expense items and remove or reassign them, if required.

Error Tasks

In case of error tasks of type **Solve Issue When Creating Project Invoice Request**, if the project invoice request is not required, you can manually complete the tasks. To mark tasks as completed, select the tasks, choose **Actions** and then **Set to Complete**. This sets the status of the tasks to **Completed** and removes them from your list of tasks. In addition, you have to delete the related invoice schedule item. If the invoice schedule item is not deleted, and if the error re-occurs, the task will be created again in the next run. To delete the invoice schedule item, in the sales order, navigate to the **Pricing and Invoicing** tab and then the **Invoicing schedule** sub-tab, and delete the relevant item.

Note

Once you delete the invoice schedule item the status of the related open task will be set to **Completed** automatically.

Manual Retry

Based on the information given in the action logs, if the error situation is resolved, open the task and trigger a retry, to create a project invoice request.

Automatic Retry for creating a Project Invoice Request

This feature is available only if you have selected the **Automatic Retries for Project Invoice Request Creation** business option in your solution configuration.

To find this business option go to the **Business Configuration** work center and choose the Implementation **Projects** view. Select your implementation project and click **Edit Project Scope**. In the **Scoping** step of the project, ensure that **Customer Invoicing** is selected within **Sales**. In the **Questions** step, expand the **Sales** scoping element and select **Customer Invoicing**. Select **Project Invoicing** and answer the questions related to **Automatic Retries for Project Invoice Request Creation**.

Whenever the project invoice creation fails during an invoice schedule run, an error task is created. If you select this feature for your solution, then the system automatically selects the error task, and retries project invoice request creation. This system retry occurs only five times, the interval between each run being based on a set formula rather than subsequent days.

If during a retry, the project invoice request is created, then the error task created when the run failed initially is automatically set to complete

Note

The automatic retry functionality is available only for new execution.

Example

For a fixed price item, where based on an invoice schedule, the project invoice request is to be created on the 16th of May.

1. Invoice creation fails on the 16th because the project is in the planning state The retry will then occur on 17th (16th +1)
2. Invoice creation fails on the 17th because the project is in the planning state. Automatic retry will then occur on 19th (17th + 2).
3. Invoice creation fails on the 19th because the project is in the planning state. Automatic retry will then occur on 22nd (19th + 3).
4. Invoice creation fails on the 22nd because the project is in the planning state. Automatic retry will then occur on 26th (22nd + 4).
5. Invoice creation fails on the 26nd because the project is in the planning state. Automatic retry will then occur on 31st (26th + 5).
6. If invoice creation fails on the 31st as well, automatic retry will then occur for a final time on the 6th of June (31st + 6). No more retries will occur after this.

So the retry dates are in the interval of 1,2,3,4,5, and 6 for respective execution. The system tries to create the customer project invoice request in this 15 days range. Any temporary error should get solved by this without manual intervention.

Invoice Processing Status

Once the project invoice request has been created, the whole invoicing process begins which is why the **Invoice Status** of the sales order item to which the items of the project invoice request refer, is automatically changed from **Not Started** to **In Process**.

Print Preview

In the **Project Invoicing** > **Sales Order** view of the **Customer Invoicing** work center, you can display an invoice preview for the following statuses:

Note

If the invoice does not exist yet, it is simulated using the current data.

- Project invoice request — **in preparation**

  If the customer invoice request is consistent, a modal dialog opens with a simulated customer invoice document. If it is not consistent or does not contain any items, an error message is displayed.

- Project invoice request — **released**

  If a customer invoice document exists with a status other than canceled it is displayed.

  If no customer invoice documents exist, a modal dialog opens showing the simulated customer invoice.

- Project invoice request — **invoiced**

  A modal dialog opens showing the existing customer invoice(s).

Note

For project invoice requests that have a status other than **in preparation**, **released**, or **invoiced**, a preview is not possible. In this case an error message is displayed.

Releasing a Project Invoice Request

Just as with the creation of a project invoice request you have two options to release it:

- **Manually**:

  You can review and then manually release a project invoice request in the **Work** view of the **Customer Invoicing** work center. For more information, see here.

- **Automatically**:

  You can specify in the **Sales Order** view of the **Customer Invoicing** work center whether project invoice requests are to be released automatically. To do so, select the **Automatic Release** checkbox in the **Project Invoicing** section under **General**.

Note

If the project invoice request was **created manually**, it has to be **released manually** as well.

Related Information

Project Invoice Requests Quick Guide

Milestone Invoicing for a Multi-Customer Projects

Overview

Service Providers in the Professional Services industry include agreements about the handling of customer invoices into their statement of work. The agreement contains information about planned invoicing dates and the planned amount to be invoiced at each date. This part of the overall contract between service provider and customer is known as an invoice schedule.

In addition to defining a date on which the system automatically creates customer invoices, you can also invoice standardized services automatically when project milestones are reached. To do so, create invoice schedule dates in a sales order in the **Sales Order** work center or in a sales quote in the **New Business** work center, and assign them to a multi-customer project milestone. Until the milestone is reached, the invoice schedule shows the planned milestone date. It is updated with the actual completion date as soon as the milestone is completed.

Note

You can combine scheduled and milestone-based invoice schedule dates within one invoice schedule.

In the **Project Management** work center, select the **Projects** view. Select the specified project and in the **Project Plan** area you can see whether a milestone is used for invoicing purposes:

- The Gantt chart shows a filled rhombus to indicate that a milestone is relevant for invoicing
- On the **Invoice Schedule Assignment** tab under **Sales Tracking**, all sales orders are listed that are linked to milestones

Caution

A milestone that is used in the invoice schedule of a sales order cannot be deleted.

If the milestone has already been set to **completed** and a scheduled invoice request has been created, the status cannot be reversed.

Prerequisites

The following steps have to be fulfilled to be able to use the milestone invoicing functionality:

- The sales order item was created as a standardized service and has a link to a project task
- The milestone is linked to an invoice schedule date in a sales order

Process

As soon as the milestone is manually set to **completed** by the project manager, the following steps are triggered:

1. When a milestone is associated with an invoice schedule, the status of the invoice schedule is **Milestone Completion Pending**. This status changes to **Open** when the milestone is complete. Once the customer invoice is released the status of invoice schedule changes to **Invoiced**.
2. A customer invoice request is generated overnight.

   Note

   To save time, you can also trigger this step manually: under **Customer Invoicing** > **Invoice Requests**, select a sales order invoice request in the **Invoice Requests** work list. Click **Edit**, and in the **Sales Order Invoice Request** screen that opens, click **You Can Also** and select **Create Scheduled Invoice Requests**.

3. The customer invoice request can be created, once the system checks the generated scheduled invoice request.
4. The invoice schedule status changes from open to invoiced, once the customer invoice is released.

Related Information

Project Invoicing

Invoice Schedule

Milestone Invoicing for Customer Projects

Overview

In addition to defining a date on which the system automatically creates customer invoices, you can also invoice project-based services automatically when project milestones are reached. To do so, create Invoice Schedule dates in a sales order in the **Sales Order** work center or in a sales quote in the **New Business** work center, and assign them to a project milestone. Until the milestone is reached, the invoice schedule shows the planned milestone date. It is updated with the actual completion date as soon as the milestone is completed.

Note

You can combine scheduled and milestone-based invoice schedule dates within one invoice schedule.

In the **Project Management** > **Projects** work center, in the**Project Plan** area you can see whether a milestone is used for invoicing purposes:

- The Gantt chart shows a filled rhombus to indicate that a milestone is relevant for invoicing
- In the **Basic Data** section the **Invoicing Relevant** field displays the relevance
- On the**Invoice Schedule Assignment** tab under **Sales Tracking**, all sales orders and sales quotes are listed that are linked to milestones

Caution

A milestone that is used in the invoice schedule of a sales order or sales quote cannot be deleted.

If the milestone has already been set to **completed** and a project invoice request has been created, the status cannot be reversed anymore.

Prerequisites

The following have to be fulfilled to be able to use the milestone invoicing functionality:

- The sales order item was created as a project-based service and has a link to a project task
- Only customer projects are supported
- The milestone is linked to an invoice schedule date in a sales order

Process

As soon as the milestone is manually set to **completed** by the project manager, the following steps are triggered:

1. A project invoice request is generated overnight.

   Note

   To save time, you can also trigger this step manually: under **Project Management** > **Projects** > **Projects**, select a project in the **Projects** worklist, click the menu icon next to the project ID, and choose the **Create Scheduled Project Invoice Request** option from the menu.

2. The status of the invoice schedule item in the sales order is changed from **open** to **project invoice requested**.

3. A business task is sent to the responsible invoicing unit.

4. The generated project invoice request is checked, released manually, and an invoice request is created.

5. Once the customer invoice is created, the system sets the invoice schedule date to **invoiced**.

Related Information

Project Invoicing

Approvals for Project Expenses and Purchases

Overview

The **Project Management** > **Approvals** > **Expenses and Purchases** subview view enables you to view and process expenses and purchases recorded to your projects. Expense reports assigned to your projects are sent to you for approval, along with shopping carts, purchase orders, and goods and service receipts. These can be approved, rejected, or sent back for revision. You can also view the details associated with each expense and purchase approval.

If the approval process for expense reports is activated in your solution configuration, expense reports are sent to the **Travel and Expenses** work center first for approval. In a second step, project-related expense reports are sent to the **Project Management** > **Approvals** > **Expenses and Purchases** view. If an expense report is assigned to several projects and/or cost centers, it is sent to the project manager or line manager whose project or cost center is charged with the higher cost ratio. For example, if the expense report is assigned to a cost center with 40% and to a project with 60%, the expense report is sent to the responsible project manager for approval.

The approval conditions can be further refined by defining a threshold value in the solution configuration. This ensures that expense reports are sent for approval only if they exceed the defined threshold value. After the expense reports have been approved, the financial postings are processed by the system.

You can approve the following purchase-related expenses:

- **Shopping Cart Approvals**

  Shopping carts are sent to the responsible project manager for approval, if ithe approval process for shopping carts is activated in the solution configuration and if the account assignment is done with relation to a project task.

  You can further refine the approval conditions by defining a threshold value in the solution configuration. This ensures that the shopping carts are sent for approval only if they exceed the defined threshold value. Furthermore, you can define the approval as mandatory if the shopping cart contains items without a price.

  For more information, see Task – Approve Shopping Cart.

- **Purchase Order Approvals**

  The procedure for approving purchase orders is defined in the solution configuration, including whether purchase orders should be approved by the purchasing unit manager or by the owner of the relevant accounting object, in this case, the project manager or line manager. For example, if a purchase order is assigned to a project task, the project manager is the approver. If the purchase order contains several line items, the owner of the accounting object relating to the most expensive line item is the approver.

  For more information, see Task – Approve Purchase Order.

- **Goods and Service Receipt Approvals**

  If the confirmed quantity for a project-related purchase order exceeds the ordered quantity, or if the confirmed value exceeds the limit value, the solution creates a task which is sent to the responsible project manager to approve the goods and services receipt.

> **Note**
>
> The goods and services receipt approval is not required if the excess quantity was recorded via the time sheet, as project time recordings of externals always require an approval by the responsible project manager in the **Project Management** > **Approvals** > **Time Recordings** view.

For more information, see Task - Approve Goods and Services Receipt.

> **Tip**
>
> Approvals related to supplier invoices (if needed, according to your solution configuration) are always sent to the invoicing unit manager, regardless of whether the invoice references a project.

Integration with Microsoft Project®

Overview

You can integrate Microsoft Project® with this solution to meet your project management needs. Such integration is recommended if you have any projects (either completed or ongoing), which originated in Microsoft Project and which you would like to make available from your solution. The **New Project** guided activity enables you to create a new project based on an existing Microsoft project, which is saved locally as an XML file. The integration is also relevant if you want to download projects from the solution to Microsoft Project at any time, for example, if you want to share a local version of the project with stakeholders or customers.

> **Note**
>
> The appearance of your projects may vary between Microsoft Project and this solution in terms of the project structure and the scheduled dates because different scheduling logic and calendars are used.

Downloading a Project From to Microsoft Project

In the **Project Management** work center, you can download a project from this solution to Microsoft Project using XML format, which allows you to copy the project structure, dependencies, durations, time constraints, and planned work quickly and easily. In the **Maintain Project** editor click the **Download** button to copy the current version of the project structure into an XML file.

- Project Name, Task Names, IDs, and Task Types

  When you download a project to Microsoft Project, the project name and the task names are included in the XML file, and the names are downloaded in the language specified in the solution. Also, the project ID and the task IDs are the same in the solution as in the XML file. Phases and tasks in the solution appear as tasks in the XML file, but milestones are the same in the solution as in the XML file.

  Constraint types and constraint dates for your project are downloaded to the XML file.

  The calendar used for the project in the solution is not downloaded to Microsoft Project. If you have maintained planned durations for subordinate tasks in the solution, they are downloaded to the XML file in the form of hours.

- Work

  If work is planned for a task or phase in the solution, it is downloaded to the XML file in the form of hours. If the unit of work is working day in the solution, the system converts the value into hours, with reference to value in the **Hours per**

Working Day field. If more than one work package exists for a task or phase in the solution, the planned work of these work packages is summarized and downloaded to the XML file in total.

> **Note**
>
> You can plan work on summary tasks in the solution. If you have planned work on a summary task in the solution, a new subordinate task is created in Microsoft Project for the planned work.

If actual work has been recorded for a task or phase in the solution this actual work is downloaded in hours to the XML file.

- Project Structure and Dependencies

  The project hierarchy is included in the XML file, including predecessor and successor dependencies.

Prerequisites

Microsoft Project 2007 or 2010 is required for integration with this solution. Previous versions of Microsoft Project are not supported.

Creating a New Project Using Microsoft Project as a Source (Microsoft Project Upload)

In the Project Management > Projects view, you can use the **New Project** guided activity to create projects. When you enter the initial data for a new project, you can choose Microsoft Project as the source. This allows you to copy the project structure, dependencies, durations, and planned work from your project in Microsoft to this solution.

- Project Name, Task Names, IDs, and Task Types

  When you create a new project using Microsoft Project as the source, the project name and project task names are the same in this solution as in Microsoft Project. Project ID and task IDs are created in the solution according to the settings defined for that particular project type as defined in your solution settings. Phases must be created manually by switching the task type to **Phase** where appropriate. Tasks and milestones in Microsoft Project are the same as in this solution.

- Milestones

  Milestones have no duration in this solution. As a result, for each milestone in Microsoft Project with duration greater than zero, two project tasks are created in this solution – a new task and a new milestone, and the duration is assigned to the new task. Both the new task and milestone have the same name as the milestone in Microsoft Project. The new milestone is the successor to the new task, and the dependency type between them is Finish-To-Start, which means that the new task must finish before the milestone can begin.

- Time Constraints, Task Durations, and Calendar

  Time constraints, including project start and finish dates, are not copied from Microsoft Project, but you can define start and finish dates for your new project in the **New Project** guided activity, noting that the default start date is today’s date. The default constraints of the new project are **Earliest Possible** and **Latest Possible**. The planned duration for project tasks in Microsoft Project is copied if the tasks have no subordinate tasks. Durations of summary tasks in the solution are automatically calculated from the bottom up, through the project hierarchy.

  Because you can define a default calendar per project type, the calendar used for your project in the solution depends on the selected project type. If no calendar is maintained for the project type, the calendar field is left blank and the Gregorian calendar is used by default.

- Planned Work

If you select **Planned Work** when creating a project and if there is planned work assigned to a task in the Microsoft project, the planned work is copied. One work package is added for the corresponding project task in this solution. For this work package, an amount of planned work is automatically filled, but the service and team member columns are left blank. Planned work from Microsoft Project is copied in hours, and the whole figure (including minutes and seconds) is uploaded without rounding up or down. For example, if 3,33 is entered, this is interpreted as 3 hours and 20 minutes in the XML file and shown as 3,3 in this solution.

Note

The unit of work (hours or working day) in this solution is derived from the selected project type (defined in solution configuration). It can be overwritten in the in the **Project Plan** view of the **Maintain Project** editor for the project header, using the **Work** tab, until the first time recording is recorded in the system.

- Project Structure and Dependencies

  The project structure may differ between Microsoft Project and this solution because of technical differences between the two, for example, with regard to task structure and duration logic. When you create a new project using Microsoft Project as a source, the project tasks are sorted in the same way as in Microsoft Project, including task predecessor and successor dependencies.

- Resources

  Resources in Microsoft Project are not uploaded to this solution.

- Customer-specific fields

  Customer-specific fields in Microsoft Project are not uploaded and are not available in this solution.

Change Management Using Baselines

Overview

Change management is an important part of project management in which the original project plan, represented by the baseline, is used to measure and assess project execution. Specifically, deviations from the original plan with respect to work planning and scheduling are tracked and monitored by the project manager and project stakeholders using baselines.

A baseline consists of the original planning data from the project, including planned start and finish dates, planned durations, and planned work. The initial baseline is created by copying the data from the project after the project plan is completed, prior to starting. If a baseline has not been created when the project is started or released, the system requests that the project manager create one. Depending on the system configuration in the fine-tuning for project types, this initial baseline is then either submitted to the project stakeholders for approval, or activated immediately by the project manager. This active baseline then serves as the primary reference point against which project execution is measured. Thus, the baseline data is used as the basis for reports that analyze the performance of one or more projects.

These reports contain the following scheduling information:

- Operative Project: Actual start date, actual finish date, forecast start date (the latest start date of the project), forecast finish date (the latest finish date of the project)
- Baseline: Baseline start date, baseline finish date
- Schedule Deviation: Comparison of forecast dates against baseline dates

These reports also contain the following work-related information:

- Operative Project: Actual work, remaining work, forecast work (actual work + remaining work)
- Baseline: Planned work
- Work Deviation: Comparison of forecast work against baseline work

The project manager and stakeholders can use these reports to determine the progress of an ongoing project. If the current project data consistently differs from baseline data, this indicates that the original plan may be inaccurate. Changes to the scope or nature of the project can cause such deviations. When there are significant changes to the project, such as additional tasks to be added, the baseline should be modified as well in order to reflect these scope changes. This can be done at any time by carrying out the required changes in the baseline editor.

To control changes to the original project plan, companies can require that modified baselines be submitted to the relevant stakeholder(s) for approval. The project stakeholder is the line manager responsible for the cost center to which the project is assigned, which the system determines using the requesting unit of the project. If the requesting unit is not available, the responsible unit of the project is used. Once a modified baseline is approved, it becomes the new active baseline. This new baseline replaces the previous baseline, and is then used as the reference point for determining deviations from planning in project execution.

In order to support these change management processes, the baseline can have the following status:

- **In Planning**: The initial status when a new baseline has been created.
- **In Approval**: The baseline has been submitted for approval, but approval has not yet been granted. If baseline approval is defined as mandatory in the system configuration, the baseline must be submitted for approval to the relevant stakeholder. If baseline approval is optional, the baseline can also be activated directly by the project manager.
- **Active**: The baseline has been approved by the stakeholder or activated manually by the project manager. There can only be one active baseline, and the active baseline is the one that is used to calculate deviations to the project plan in project reporting.
- **Active with pending changes**: The baseline is active, but another baseline has been created and is in progress.
- **Obsolete**: The baseline is no longer valid, because a new baseline has been activated manually or approved.

For changes not involving the scope of the project, for example if a task takes longer than planned or requires more work than initially planned, the project manager should not modify the baseline, but simply update the scheduling (durations and start/finish dates) and the remaining work in the project. Such delays and additional work and expense are reflected in reports on project performance, as they represent deviations from the original project plan.

Example

The project manager needs to add an additional phase and tasks to an implementation project because the end-user training will not be done by the customer, as was initially planned. Instead, the end-user training will be carried out by the project team. The project manager adds the additional required activities and tasks to the project and updates the baseline. The project manager then submits the modified baseline to the relevant line manager for approval.

Related Information

Change Management Quick Guide

Invoice Schedule

Overview

An invoice schedule consists of the invoice dates and the amounts that are used for the creation of invoices. You can edit the invoice schedule manually, or define an invoicing time frame. This is possible for customer contracts, sales orders, and sales quotes.

There is only one invoice schedule available for the document but not several invoice schedules for each item. In the invoice schedule, specified invoice dates are assigned to the document items. In addition, you can switch between the date view and the item view.

The invoice dates of an invoice schedule can have three different schedule types: **Partial Fixed Price**, **Periodic Fixed Price**, and **Time and Material**.

Schedule Type	Definition	Example
Partial Fixed Price	The total net value is fixed and distributed to specific amounts at defined dates.	The price of software implementation is fixed at $400. • A first invoice date contains $200 (50%) • A second invoice date contains $100 (25%) • A third invoice date contains $100 (25%)
Periodic Fixed Price (Only possible in customer contracts)	The price is fixed per period. The invoicing amount is calculated based on an invoicing period. The total invoiced amount depends on the duration of the agreement.	The price for a rented software is fixed at $100 monthly. For quarterly invoice dates, the system calculates an amount of $300 for each invoice date.
Time and Material	At invoicing dates, the system automatically enables the customer invoice requests based on actual values from service confirmations for invoicing.	For a customer specific enhancement of software, a monthly invoicing is agreed. At the end of each month the actual values from the service confirmations of the whole month are invoiced.

i Note

Invoice schedules can only be created for services, expenses, and entitlements - entitlements can only be used in contracts - but not for products to be delivered, only for products with an project based item type.

Prerequisites

- The use of invoice schedules must be activated in scoping for contracts, sales orders, and sales quotes:
  - Scope question for customer contracts under **Sales > Selling Products and Services > Customer Contracts**
  - Scope question for sales orders under **Sales > Selling Products and Services > Sales Orders**
  - Scope question for sales quotes under **Sales > New Business > Sales Quotes**

  i Note

  Only if invoice schedules are activated in scoping, the tab **Invoice Schedule** is shown in the affected documents.

- Depending on the item type, it is possible to create an invoice schedule for an item. Note that a mixed scenario is possible. This means, that some items can have an invoice schedule, while others do not.

  You can create invoice schedules for the following item types:

Item Type	Price per period (flag in the contract item)	Schedule Type
Service - fixed price Service - fixed price without actuals Service - fixed price (project) Expense - fixed price without actuals Expense - fixed price (project) Entitlement - fixed price Entitlement - fixed price without actuals	no	Partial fixed price
Service - fixed price Service - fixed price without actuals Expense - fixed price without actuals Entitlement - fixed price Entitlement - fixed price without actuals	yes	Periodic fixed price
Service - time and material Service - time and material (projects) Expense - time and material Entitlement - time and material Products - project based	not relevant	Time and material

Invoicing

When the contract or sales order is released, the system creates a contract or sales order invoice request.

This invoice request contains the invoice schedule dates. Every night, a regular job automatically runs and checks the invoice dates. Three days before the invoice date, the job creates scheduled invoice requests for the scheduled invoice dates.

Note

Note that for schedule type **Time and Material**, the status **Pending** is set for service confirmation invoice requests. Three days before the next invoice schedule date the regular nightly job resets the status **Pending** to status **To Be Invoiced** for the service confirmation invoice requests.

Note

In exceptional cases (for example, if you cannot wait for the next job run), a manually intervention to force invoicing is possible:

- In the sales order or contract invoice request, choose **Edit->You can also->Create Scheduled Invoice Requests**
- In the service confirmation invoice request, choose **Edit->You can also->Enable Invoicing**.

When the invoice date is reached, an invoice run processes the invoices from the invoice requests. The status of the invoice schedule date is set to **Invoiced**. After the first date in the invoice schedule is invoiced, the item in the document can no longer be changed.

If you want to cancel a scheduled invoice date that has just been invoiced, you first have to cancel the invoice. Then you can cancel the invoice schedule date.

Status overview of the scheduled invoice dates:

- Open - The invoice schedule date is created
- Invoiced - The invoice is released
- Invoice canceled - The invoice is canceled
- Canceled - The invoice schedule date is canceled (manual action only)

You can also provide the start date and end date for an invoice schedule defined for a contract item, such that the invoice date lies within that range. This can be done in the Schedule Invoice subtab available under the Pricing and Invoicing tab of the **Contracts UI**. The start and end dates are then printed on the Output form of the contract document.

Create Invoice Dates with Schedule Type Partial Fixed Price

1. Create a contract or a sales order item for a service (item type Service - fixed price) such as a software implementation. Ensure that the Price per Period is not flagged, so that the amount can be distributed to the invoice dates.
2. Under Pricing and Invoicing choose Invoice Schedule.
3. Click Add Item. To select the item for which you want to edit invoice dates, click the Open Value Selection icon in the Line field.
4. Click Add Date. The default is the posting date for sales orders and sales quotes, or the contract start date for contracts. You can change the invoice date or edit the amount and percentage.

   The default for the first invoice date is 100%. For example, you can change the first invoice date to 40%. You add a second invoice date one month later. The default is 60%. You change it to 30%. You add a third date for 30% two months later.
5. Every night a regular job runs automatically. The job creates invoice requests with invoice request type Scheduled Invoice Request three days before the invoice date . If the job cannot create scheduled invoice requests (for example, inconsistent sales order request), a processing log and application log entry is created in the Customer Invoicing work center in the Invoice Schedule Processing Logs work center view. Here you can analyze the issues.

   ### i Note
   Often, the issue is an inconsistent sales order invoice request. The reason why a sales order invoice request is inconsistent can be found in the Invoice Request view in the Customer Invoicing work center. Select the inconsistent invoice request, and click Check.
6. When the invoice date is reached, an invoice run processes the invoices based on the invoice requests. The status of the invoice schedule date is set to Invoiced.

i Note

- The system issues an error if the sum of the invoice dates exceed 100 % of the net value of the item(s).
- The system also issues a warning if 100 % is not reached
- The project invoice request, the invoice request, the invoice, and the print form of the invoice always shows the whole quantity together with the percentage. However, the net value already corresponds to the partial amount. The print form can be changed to show the partial quantity (adapted quantity) in the Application and User Management work center under Form Template Maintenance for Customer Invoice.

Create Invoice Dates with Schedule Type Partial Fixed Price for Project-Based Services

Prerequisite: The sales order is assigned to a project.

1. Create an order item for a service (item type **Service - fixed price (project)**) such as a project–based software implementation.

2. Under **Pricing and Invoicing** choose **Invoice Schedule**.

3. Click **Add Item**, and select the item for which you want to edit invoice dates.

4. Click **Add Date**, and edit the invoice date with the amount or percentage.

   Note

   You can also select a **Milestone** from the applied project. Then the invoice date gets the date of the milestone (**Earliest Date** of the **Scheduled Dates**). In this case, completion of the milestone triggers the creation of the project invoice request.

   For example, you can edit a first invoice date for 50% for the completion date of the milestone Blueprint; a second invoice date half a year later for 25%; and a third invoice date three months later for 25%.

5. Project Invoice Requests are created in the following ways:

   - You can define the dates as when a project invoice request should be created while creating a project-related sales order. The defined dates will be used as the invoice date in the created document.

   - After defining the dates, depending on your business scenario, you can further define as how many days in advance or in the future the project invoice request should be created from the defined invoice date. This is possible through a fine-tuning activity called **Project Invoice Request Creation Settings with Invoice Schedule**. Based on the number of days you select on the fine-tuning activity, **project invoice request** will be created. The default creation date for the project invoice request is set to three days prior to the defined date in the sales order.

     To find this fine-tuning activity, go to the **Business Configuration** work center and choose the **Implementation Projects** view, and then click **Open Activity List**. Under **Activity List**, go to **Fine-Tune** and select **Project Invoice Request Creation Settings with Invoice Schedule**.

   - If a milestone is assigned to an invoice date, the job creates a project invoice request, when the milestone meanwhile was completed.

   Note

   If you cannot wait for the next job run you can also trigger the job for the creation of project invoice requests manually:

   - Work Center Customer Invoicing: Project Invoicing Sales Orders: Select the sales order and choose **Create Scheduled Project Invoice Request** in the context menu.

   - Work Center Project Management: Projects: Select the project and choose **Create Scheduled Project Invoice Request** in the context menu.

6. For each project invoice request, a business task is created for the **Work** view in the **Customer Invoice** work center.

   Note

   In some cases, the system cannot create project invoice requests (for example, because another open project invoice request exists). In this case, the system creates an error business task in the **Work** view in the **Customer Invoice** work center. The reason can be checked in the application log and has to be solved.

7. Review and release the project invoice requests manually.

   Note

   You can use an automatic release for the project invoice requests if you set the flag **Automatic Release** in the sales order in the **Project Invoicing** section under **General**.

8. When the project invoice request is released, the system creates an **invoice request** with invoice request type **Project Invoice Request**.

9. When the invoice date is reached, an invoice run processes the invoices based on the invoice requests. The status of the invoice schedule date is set to **Invoiced**.

Note

The status of the invoice schedule dates in the sales order is set to **Invoiced**, when the invoice is released. You are able to change the dates in the invoice schedule at any time prior to the status being set to **Invoiced**.

If the date or percentage/amount in the invoice schedule is changed:

- An existing project invoice request with status **In preparation** is deleted. An updated project invoice request is created in the next nightly job run.
- An existing project invoice request with status **Released** is cancelled. An updated project invoice request is created in the next nightly job run.
- All open business tasks for this invoice schedule are deleted.

Create Invoice Dates with Schedule Type Periodic Fixed Price

Note

Periodic Fixed Price schedule types are only possible in contracts.

1. Create a contract item with an entitlement (item type **Entitlement - fixed price**), such as rented software. Ensure that the item is flagged for **Price per Period**. Therefore, the schedule type is **Periodic Fixed Price**.

   Note

   The flag **Price Per Period** means that the price is related to a quantity of time unit. If an invoicing time frame is used, the amount is proposed from the invoicing period (difference between two invoice dates) multiplied by the price. The amount can be manually overwritten, especially for the first and/or last invoice date(s).

   Example: The price for a rented software is $ 100 monthly. The flag **Price per Period** is set in the item.

   - For quarterly invoice dates, the system calculates an amount of $ 300 for each invoice date.
   - For yearly invoice dates, the system calculates $ 1,200 for each invoice date.

2. Under **Pricing and Invoicing** choose **Invoice Schedule**.

3. For example, click **Edit Invoicing Time Frame**, and edit a time frame with a monthly recurrence pattern for the current year. Select the **Applied** check box to assign the selected invoicing time frame to the item.

4. Click **OK**. The system creates monthly invoice dates for the rented software with a price per month.

   Note

If you want to change the invoicing time frame, you must first reset **Apply** to the applicable items.

5. Every night a regular job automatically runs. The job automatically creates invoice requests three days before the invoice date with invoice request type **Scheduled Invoice Request**.

6. When the invoice date is reached an invoice run processes the invoices based on the invoice requests. The status of the invoice schedule date is set to **Invoiced**.

Create Invoice Dates with Schedule Type Time and Material

1. Create a contract or sales order item for a service with item type **Service - time and material**, such as a customer–specific enhancement of software. Therefore, the schedule type is **Time and Material**.

2. Under **Pricing and Invoicing** choose **Invoice Schedule**.

3. For example, click **Edit Invoicing Time Frame**, and edit a time frame with a quarterly recurrence pattern for the actual year. Select the **Applied** check box to assign the selected invoicing time frame to the item.

4. Click **OK**. The system automatically creates quarterly invoice dates.

   i Note

   You only edit the invoice dates for the schedule type **Time and Material** in the sales order or contract. When the invoice date is reached, the actual values of the service confirmations are invoiced.

5. When the service confirmations are released, the system creates service confirmation invoice requests with status **Pending**.

6. Every night a regular job runs automatically. The job resets the status **Pending** of the service confirmation invoice requests to status **To Be Invoiced** three days before the invoice date.

   i Note

   If a service confirmation invoice request has an invoice date within the next three days, the status **To Be Invoiced** is automatically assigned.

7. When the invoice date is reached, an invoice run processes the invoices out of the service confirmation invoice requests. The status of the invoice schedule date of the contract is set to **Invoiced**.

Create Invoice Dates with Schedule Type Time and Material for Project-Based Services

Prerequisite: The sales order is assigned to a project.

1. Create an order item for a service (item type **Service - time and material (project)**) such as a customer–specific software integration.

2. Under **Pricing and Invoicing** choose **Invoice Schedule**.

3. Click **Add Item**, and select the item for which you want to edit invoice dates.

4. Click **Add Date**, and edit the invoice dates.

   i Note

   You can also select a **Milestone** from the applied project. Then the invoice date gets the date of the milestone (**Earliest Date** of the **Scheduled Dates**). In this case completion of the milestone triggers the creation of the project invoice request. For example, you can edit a first invoice date for the completion of the milestone Blueprint; a second invoice date half a year later and a third invoice date three months later.

5. Project Invoice Requests are created in the following ways:

    - You can define the dates as when a project invoice request should be created while creating a project-related sales order. The defined dates will be used as the invoice date in the created document.

    - After defining the dates, depending on the business scenario, you can further define as how many days in advance or in the future the project invoice request should be created from the defined date. This is possible through a fine-tuning activity called **Project Invoice Request Creation Settings with Invoice Schedule**. Based on the number of days you select on the fine-tuning activity, project invoice request will be created. As per default the project invoice request would be created one day after the specified invoice date.

      To find this fine-tuning activity, go to the **Business Configuration** work center and choose the **Implementation Projects** view, and then click **Open Activity List**. Under **Activity List**, go to **Fine-Tune** and select **Project Invoice Request Creation Settings with Invoice Schedule**.

    - If a milestone is assigned to an invoice date, the job creates a project invoice request, when the milestone meanwhile was completed.

6. For each project invoice request, a business task is created for the **Work** view in the **Customer Invoice** work center.

    Note

    In some cases, the system cannot create project invoice requests (for example, because another open project invoice request exists). In this case, the system creates an error business task in the **Work** view in the **Customer Invoice** work center. The reason can be checked in the application log and has to be solved.

7. Review and release the project invoice requests manually.

    Note

    You can use an automatic release for the project invoice requests if you set the flag **Automatic Release** in the sales order in the **Project Invoicing** section under **General**.

8. When the project invoice request is released, the system creates an **invoice request** with invoice request type **Project Invoice Request**.

9. When the invoice date is reached, an invoice run processes the invoices based on the invoice requests. The status of the invoice schedule date is set to **Invoiced**.

Note

The status of the invoice schedule dates in the sales order is set to **Invoiced**, when the invoice is released. You are able to change the dates in the invoice schedule at any time prior to the status being set to **Invoiced**.

Create Invoice Dates

You can either edit invoice schedules step-by-step by clicking **Add Date**, or by using an invoicing time frame by clicking **Edit Invoicing Time Frame**.

- For invoice dates with schedule type **Partial Fixed Price**, you can edit the invoice dates with an amount or percentage.
- For invoice dates with schedule type **Periodic Fixed Price**, you can edit the invoice dates with an amount or a quantity of time unit.
- For invoice dates with schedule type **Time and Material**, you can only edit the invoice dates. The amounts are based on actual service confirmations values.

Edit Invoicing Time Frame

To edit an **Invoicing Time Frame** you can:

- Edit a start and end date. For example, at the beginning and end of the year. Or edit a start date and occurrences. For example, at the beginning of the year for eight occurrences.
- Edit a recurrence pattern. For example, monthly, every second month, weekly, quarterly.
- Edit a week day. For example, biweekly – but always on Tuesday.
- Edit a specific day. For example monthly – but always on the third day of the month.

You can define multiple invoicing time frames. The invoicing time frame can be applied to different items. These items are then invoiced using the respective invoicing time frame.

If you want to change the invoicing time frame, you must first reset **Apply** to the applicable items. The invoicing time frames are stored in the document.

Use of the Recurrence Pattern in the Invoicing Time Frame

- **Recurrence pattern ending by date**

  If you use the recurrence pattern in the invoicing time frame for schedule type **Periodic Fixed Price** or for schedule type **Time and Material** , the system automatically creates invoice dates within the time frame, without a maximum number of dates.

  For schedule type **Partial Fixed Price**, you use **Add Date** and maintain the percent or amount. If you use the invoicing time frame, the system automatically creates all dates within the time frame **without** a maximum number of dates. The sum is always 100 percent. The last invoice date includes any rounding differences.

- **Recurrence pattern ending by occurrences**

  If you use the recurrence pattern in the invoicing time frame to end by a number of occurrences, the system automatically creates a number of invoice dates within the time frame, which is equal to the number of occurrences specified.

Copying of an Invoice Schedule

If you copy documents, the invoice schedule is also copied. You can copy an invoice schedule

- from a sales quote to a sales order or sales quote
- from a sales order to a sales order or sales quote
- from a customer contract to a customer contract

The corresponding invoice schedule dates are updated by shifting all dates with the difference of the posting dates of the source and the target document. For contracts the difference of the contract start date of the source and target document is taken.

Related Information

Milestone Invoicing for Customer Projects

Milestone Invoicing for Multi-Customer Projects

Earned Value Analysis (EVA)

Overview

Earned Value Analysis (EVA) is a common standard method in project management to enable an accurate valuation of the progress of a project in terms of scope, schedule, and costs. While the comparison of only actual costs and planned costs may lead to wrong conclusions since the actual progress of the project is not considered, EVA introduces the Earned Value (EV) as a quantification of the project progress which can be set into relation to the Planned Value (PV) and to the Actual Costs (AC). This allows the derivation of different key figures to assess the cost and schedule performance of a project. By tracing those key figures a trend analysis can be generated presenting an overview of the current project status, and identifying performance problems at an early stage.

As the project progress for past dates is based on information from project snapshots, the reporting dates for which all the key figures are determined are the:

- Creation dates of all available snapshots for the selected project
- Actual date when the report is called (data for this date is taken from the project itself)
- Planned end date of the active baseline (only planned value [Budget at Completion (BAC)] is available). This is valid as long as the end date has not been reached yet.

Note

If more than one snapshot is created per day, only the most recent one is used as basis for calculation. Snapshots that are created on the same day the report is triggered are not taken into account. Here, the data of the project itself is used. For cases in which the project end date is in the future, extrapolated actual values are derived from the values of the current date.

Prerequisites

There are some prerequisites to be fulfilled in the project planning and execution to ensure that the Earned Value Analysis can provide reasonable results:

- In project planning the project has been broken into sufficient detailed tasks and work packages.
- The planned tasks have been scheduled and distributed over the project duration according to their planned durations and dependencies.
- During project execution the time for the performed work is recorded promptly and the task status is set once completed. The project progress can be determined for past dates from the project start to the actual date. This implies that the values which are used to assess the progress are stored or can be calculated.
- During project execution snapshots have to be created at regular intervals to store the project state (generally this means that the snapshot creation is scheduled with a snapshot creation run definition).

Key Figures

The Earned Value Analysis method is available as a report in the **Reports** view of the **Project Management** work center and runs with the following key figures:

- **Actual Costs (AC):** Incurred until the reporting date
- **Planned Value (PV):** Including the Budget at Completion (BAC)

Note

BAC = total planned costs of a project baseline = PV at the planned end of a project baseline.

- **Percentage of completion (PoC):** Determined by the project progress according to a method specified below
- **Earned Value (EV):** Based on the PoC

  Comprises the results of a project at a given time as well as all related costs that were initially budgeted.
- The following calculated key figures based on the Actual Costs, Planned Value, and Earned Value:
  - **Schedule Performance Index (SPI)**

    A measure of schedule efficiency.

    SPI = EV/PV
  - **Schedule Variance (SV)**

    Indicates how far ahead or behind schedule the project is.

    SV = EV-PV
  - **Cost Performance Index (CPI)**

    Shows the cost efficiency of a project.

    CPI = EV/AC
  - **Cost Variance (CV)**

    A measure of cost performance.

    CV = EV-AC
  - **Estimate at Completion (EAC)**

    The expected total cost of a project task.

    EAC = BAC/CPI
  - **Estimate to Complete (ETC)**

    The expected remaining costs from a specific point in time until the project is completed.

    ETC = EAC-AC

Supported Methods

The following methods for the calculation of the Percentage of Completion are supported:

- **Work PoC on project header level**

  Reflects the ratio of the cumulated actual work divided by the sum of the actual and the remaining work.
- **Manual PoC on project header level**

  The project manager can enter his or her own estimation of the project progress on the project header.
- **0/100: PoC based on completed tasks**

  This method assumes that a task can only reach a PoC of either 0 or 100 per cent since it remains 0 per cent until it is fully completed. For example, a work package with an actual PoC of, for instance 80 per cent, keeps a PoC of 0 per cent until it is finalized.

- **20/80: PoC based on completed and started tasks**

  Calculates with an initial point of completion of 20 per cent and adds the remaining 80 per cent after the activity is finished.

Percentage Billing

Overview

With the percentage billing, you can define the percentage of billing against sales order item assignment rule created manually. Whenever there is any expense recorded against a project attached to a sales order, you can define a billable percentage of the expense.

Scenarios

The following scenarios explain the percentage billing calculation:

- If you define **% Billing** for less than 100, then the defined percentage is proposed for invoice with each expense and the remaining percentage is written off. For example, when you define **% Billing** at 80% and 10 hours is recorded, the system will propose 8 hours for invoice and 2 hours will be written off.
- If you define **% Billing** for more than 100, then the defined percentage is proposed for invoice with each expense. For example, when you define **% Billing** at 120% and 10 hours is recorded, the system will propose 12 hours for invoice with 2 hours as over invoicing.
- If you define **% Billing** for less than or more than 100% and there is an existing customer project invoice request, then the following scenarios may happen:
  - When you define the **% Billing** at 120% and 10 hours is recorded, the system will propose 12 hours for invoice with 2 hours as over invoicing in project invoice request. If you now manually change the number of hours to 8, then later on for the follow up project invoice request, the system will propose only 2 hours.
  - When you define the **% Billing** at 120% and 10 hours is recorded, the system will propose 12 hours for invoice with 2 hours as over invoicing in project invoice request. If you cancel customer project invoice request later, expense will be again available as 12 hours.
  - When you define the **% Billing** at 120% and 10 hours is recorded, the system will propose 12 hours for invoice with 2 hours as over invoicing in project invoice request. In case, if you change it manually to 10 hours, on cancellation of above customer project invoice request, expense will be available as 10 hours and it will not change again on applying the rule.
- Even if you delete the customer project invoice request **In Preparation** status, you can still apply **% Billing**, if there is no existing released customer project invoice request for the same expense.
- For cancellation of the source document, you can apply **% Billing** to the negative quantities created, (when the positive quantity is attached to a customer project invoice request) if there was no manual change of the positive quantity in its customer project invoice request.

i Note

- **% Billing** is 100% by default for both automatic and manually created rules.
- **% Billing** and **To be Written Off** are mutually exclusive.

- **% Billing** is always editable for manual rules.
- **% Billing** is applicable on the billable hours only.

Sourcing Material from Stock for Projects

Overview

During the execution of a project, you may need to source materials from your own inventories. You can choose to either source the material from stock or purchase the material.

When you are sourcing material from stock, it can be allocated in three different ways:

- **Consumption at Site**: In this scenario, the project consumes the materials from a particular site
- **Pick-Up**: In this scenario, materials are carried to the site of consumption by the person responsible for it.
- **Pre-Delivery**: In this scenario, the materials are pre-delivered to the site of consumption.

Once the stock is allocated in any of the above ways, it can be consumed against the project as required. The costing and invoicing for material happen accordingly.

Prerequisites

- The **Sourcing Materials from Stock** business option is selected in your solution configuration.

  To find this business option, go to the **Business Configuration** work center and choose the **Implementation Projects** view. Select your implementation project and click **Edit Project Scope**. In the **Scoping** step of the project, ensure that **Project Planning** is selected within **Project Management**.

  In the **Questions** step, expand the **Project Management** scoping element and select **Project Planning**. Select **Project Stock Consumption** and answer the questions related to **Sourcing Materials from Stock**.

Process Flow

1. Plan if the materials to be used in the project need to be sourced from stock or have to be purchased. For more information, see Maintain Project - Project Plan.
2. To source the planned materials from stock, create a project stock order. For more information, see Maintaining Projects - Products.
3. When you save the project stock order, the system does the following:
   - Creates a customer demand corresponding to the order, and performs an Available-To-Promise (ATP) check. You can verify the availability of the material and release the customer demand. For more information, see Customer Demand Quick Guide.
   - Creates an entry corresponding to the project stock order for the relevant product in the **Products** view of the **Supply Planning** work center, with category **Project Stock Order** and status **New**. When you release the customer demand, the system changes the category to **Project Stock Order in Execution** and status to **In Execution**. For more information, see Quick Guide for Products in Supply Planning.
4. Allocate material against the project stock order.

   For more information, see Delivery Control Quick Guide.

5. In the **Pick-up** and **Pre-Delivery** scenarios, release the outbound delivery. For more information, see Outbound Deliveries Quick Guide.

6. Use the allocated materials in the project by consuming the materials allocated to your project or project task.

   For more information, see Maintaining Projects - Products.

7. Valuate the material consumed. This valuation based on strategy for the valuation of materials sourced from stock. For more information, see Project Cost and Revenue Planning.

8. Return any material not used. For more information, see Maintaining Projects - Products.

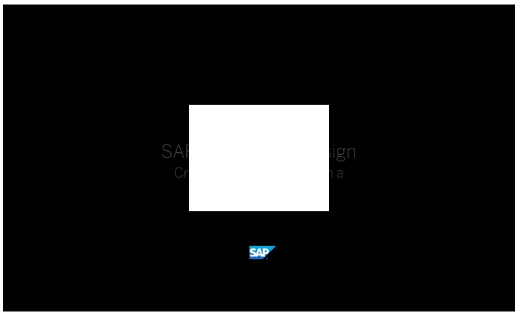
Projects Quick Guide

In the **Projects** view of the **Project Management** work center, you can create and maintain projects, and get an overview of the time and expenses recorded to your projects. In the **Projects** subview you can find general information about your projects, such as their current status, the person responsible, and risk. You can refine this information in the worklist using the entries in the **Show** field, for example, to show all of the active projects to which you have access. From this subview you can directly access the **Maintain Project** editor, which enables you to create new projects and edit existing ones using the following tab pages within the project editor: **Project Plan**, **Team and Staffing**, **Products and Purchasing**, **Sales Tracking**, and **Project Overview**. The **Sales Tracking** tab page is visible only for billable projects.

For more information on project editing, see the Maintain Projects Quick Guide.

In the **Time and Expenses** subview, you can see an overview of all time recordings and project-related expenses recorded to your projects. For more information, see the Project Invoice Requests Quick Guide.

Watch this video about **Creating a New Project from a Template**:



Open this video in a new window

Business background

Projects Worklist

The **Projects** subview is the main access point for maintaining projects in the **Project Management** work center. In this subview, the **Projects** worklist gives you general information about your projects, such as their current status, the person responsible, and risk.

For more information, see Projects Worklist.

Creating Projects

In the **Projects** view, under the **Project Management** work center, and under the **Cost and Revenue** work center, the **New Project** screen helps you create new projects in your role as project manager or financial analyst. You can create new projects with or without using a source, for example, existing projects in the solution, Microsoft Projects®, or templates. Creating new projects from existing projects or templates ensures you can copy the structure and additional information of an existing project, and helps save you time and effort.

For more information, see Creating Projects.

Project IDs and Numbering

Each project and its project tasks have a unique number. This unique number is necessary as project management is integrated with other business areas, such as Financials. For example, an invoice can be posted to a project or project task and so, the number must be unique. You can influence the pattern used for assigning these numbers (IDs) within the business configuration for the project type.

For more information, see Project IDs and Numbering.

Project Status and Integration

Project Management offers an end-to-end integration with other business areas, such as financials for cost and revenue management, human resources (HR) for resource and time and labor management, customer relationship management (CRM) for project invoicing, and supplier relationship management (SRM) for project procurement. The integration of Project Management with other business areas gives you increased control and transparency in your projects.

For more information, see Project Status and Integration.

Project Cost and Revenue Planning

Project cost and revenue planning helps you budget and control your project costs. It offers advanced reporting features for increased cost visibility, allowing you to quickly detect cost overruns and view detailed breakdowns of project spending.

For more information, see Project Cost and Revenue Planning.

Project Cost and Revenue Management

Project Cost and Revenue Management constitutes the financial view of project management. It manages and allocates direct costs, overhead costs, and revenues for projects, and allows you to track detailed information on the cost and revenue structure of your projects.

For more information, see Project Cost and Revenue Management.

Project Scheduling

Project scheduling is a system-driven process that helps you monitor the timeline of your project and make sure that deadlines are met. As the project manager, you define the framework of your project by planning tasks, phases, and milestones, and then planning the duration of each project task. You can also define time constraints for project tasks and define the order in which they are to be completed using dependencies. Based on this information, the system calculates the earliest and latest start and finish dates of all project tasks. You can use these dates to determine the window of time in which each project task must be completed to avoid delays in the project schedule. During project execution, you can trigger the system to recalculate the project schedule based on the actual time it takes to complete project tasks or other changes to the project plan.

For more information, see Project Scheduling.

Integration with Microsoft Project®

You can integrate Microsoft Project with SAP Business ByDesign for your project management needs. Such integration is recommended if you have any projects (either completed or ongoing), which originated in Microsoft Project and which you would like to make available from your SAP Business ByDesign solution. The **New Project** guided activity enables you to create a new project in SAP Business ByDesign based on an existing Microsoft project, which is saved locally as an XML file. The integration is also relevant if you want to download projects from the solution to Microsoft Project at any time, for example, if you want to share a local version of the project with stakeholders or customers.

For more information, see Integration with Microsoft Project.

Change Management Using Baselines

Change management is an important part of project management in which the original project plan, represented by the baseline, is used to measure and assess project execution. Specifically, deviations from the original plan with respect to work planning and scheduling are tracked and monitored by the project manager and project stakeholders using baselines.

For more information, see Change Management Using Baselines.

Project Management

The **Project Management** business scenario enables you to plan and execute the entire lifecycle of projects of any scope. It provides the core processes required to manage projects, including scheduling, resource staffing, and cost estimation and management. When the project is released, integrated processes such as purchasing, as well as time confirmations and other expenses (i.e. goods issues, goods and services receipts, supplier invoices and expense reports) are enabled, resulting in costs being posted to the project. Dedicated reports enable the project manager to monitor the status of the projects, as well as the costs incurred during the runtime of the projects.

For more information about Business Scenario Explorers, see the Business Scenario Explorer Quick Guide.

Order-to-Cash (Project-Based Products and Services)

The Order-to-Cash (Project-Based Products and Services) business scenario is used to manage the complete end-to-end process of selling project-based products and services to customers. This scenario integrates sales quotes and sales orders with project management allowing you to create customer invoices for time and expenses recorded against a project. Invoices can be created on a time and material basis, a fixed-price basis, or a combination of both. After the customer invoice has been issued, customer payments can be monitored. This scenario also supports the analysis of project profitability based on project costs and revenues.

For more information about Business Scenario Explorers, see the Business Scenario Explorer Quick Guide.

Tasks

Create a New Project

1. Click **New**, then select **Project** to open the **New Project** screen.

   → **Tip**

   You can also create a new project by starting the **New Project** common task that belongs to the **Project Management** work center.

2. In the **Enter Initial Data** step, select the **Project Type**, **Source**, and **Project Language**.

   You can use a **Template**, an **Existing Project**, or a **Microsoft Project**® as the source for the new project. To create the new project from scratch, choose **None**.

   If you want to create an overhead cost project, select **Cost collecting project** as the project type and if you want to create a direct cost project, select for example, **Marketing project** or **Strategic Sourcing Project**. For more information about project types and process variant types you can use, see [Configuration: Project Types](#).

   After filling out all the necessary fields, click **Next**.

3. In the **Copy Source** step, search and select a template or an existing project or upload a **Microsoft Project** file.

   > ℹ **Note**
   >
   > The **Copy Source** step appears only if you chose **Template**, **Existing Project**, or **Microsoft Project** as a **Source** in the previous step. If you chose **None**, this step is skipped.

   Specify which project details you want to copy from the template or the existing project. You can display the details of a selected project by clicking **Show Details**. Click **Next**.

4. In the **Define Project** step, change the copied data as required or enter new data.

   - Update the **Project Name**, **Project ID**, **Project Type**, **Person Responsible**, and **Project Language**, and other data (depending on the project type) including the **Start/Finish Date**, as required.
   - Select the **Mail Notification** checkbox to send an e-mail to the person responsible for the task and the project manager, when a work package is assigned by a team member. For more information on maintaining e-mail addresses in the system see, **Edit My Contact Data** in the Tasks section of the [Company Address Book Quick Guide](#).
   - Enter further information as required and click **Next**.

   > ℹ **Note**
   >
   > The fields you can update depend on the project type you selected.

5. In the **Define Team** step, you add team members and organizational units to the project. Select a team member and then **Substitute** if you want that team member to be the substitute for the project responsible on the new project. Click **Next**.

6. In the **Review** step, check the data and correct it if necessary, and then click **Finish** to save the project.

7. Click **Close** to return to the **Projects** view.

Create a Project from a Sales Order

For information about how to create a project from a sales order, see [here](#).

Create and Edit a Service Agent

1. Start the **New Service Agent** common task, which belongs to the **Project Management** work center. You can also create a new service agent from **Project Management** > **Resources** > **Service Agents**, clicking **New** and choosing **New Service Agent**.

2. Enter the service agent's name, address, and communication details and other service agent-specific data, such as the supplier that they work for and the organizational assignment. Add a note if required.

   > ℹ **Note**

You can check if a service agent already exists in the system if you have chosen this option during the **Scoping** step of the business configuration. When you enter the details of a service agent, click **Check For Duplicates**. The system also notifies you of potential duplicates when you save the details of a new service agent. You can view the potential duplicates listed.

3. Enter business information about the new service agent.

    a. In the **Business Details** section, enter information about the service agent that is working **internally** for your company, such as function and department, if applicable. This might be appropriate if the service agent is working on site for you.

    If the service agent is working on site, enter the **In-House Address** and **In-House Communication** information.

    b. In the **Business Address** and **Business Communication** sections, enter information about the service agent that is working **externally** for your company, such as phone, fax, and e-mail at the supplier's address, or function and department within the supplier's company.

4. To enter additional information about the service agent, click **View All** to open the editor.

    → **Tip**

    You can also add more information to a particular service agent by selecting the service agent in the work list, clicking **Edit** and then **General**.

    i **Note**

    If you set the service agent's status to blocked, the system displays a warning message for the entire service agent account. This may affect purchasing, sales, and any related business partners, but you can still use the service agent in your business processes. However, this status automatically locks the user for that service agent if one has been assigned, and the service agent cannot access your system until you change the status.

5. Click **Save and Close** to save the new service agent and close the screen.

Create a Shopping Cart

For information about this task, see here.

Track the Status of a Shopping Cart

For information about this task, see here.

Edit Time Sheet

1. Start the **Edit Time Sheet** common task, which belongs to the **Project Management** work center.
2. Select the week for which you wish to record your working time.
3. Enter the project task.
4. Specify the type of service, that is activity.
5. Enter the amount of time you spent on this project task during the week.
6. Release the times you recorded.

Approve Time Recordings

For information about this task, see here.

New Expense Report

For information about this task, see here.

Expense Report Assignment to Project Task

When editing a project, you can now specify per project task, whether it can be used as a cost assignment in the expense report or not. If the **Expense Report Allowed** flag is not set, the expense report will not permit the project task to be used as an accounting object. Per default, the flag is enabled.

When a new task is created, it will initially inherit this setting from its parent task. If the task hierarchy is changed, no new defaulting will be applied.

Maintain Projects Quick Guide

You can access the **Maintain Project** editor from the **Project Management** work center, in the **Projects** view. You can create new projects and edit existing ones using the following tabs: **Project Plan**, **Team and Staffing**, **Products and Purchasing**, **Sales Tracking**, and **Project Overview**. You can open and edit a project by selecting the project ID in the **Projects** view, and click **View All**. You can also open and edit a project by selecting the project in the worklist, choosing **Edit**, and choosing an option from the dropdown list. If, for example, you choose **Project Plan**, the project automatically opens in the **Project Plan** view within the editor, where you can make changes to the project plan. For more information about the **Projects** view, see Projects Quick Guide.

Business background

Maintaining Projects - Project Plan

Within the **Maintain Project** editor, you can use the **Project Plan** tab page to maintain your projects by using different interactive graphical subtabs. These graphical subtabs are as follows: **Gantt Chart**, **Work Breakdown Structure**, and **Network Diagram**. Depending on your personal preference and the activities you want to perform, you can choose between these interactive graphical subtabs, each of which offer different benefits. You can access all project details in the various tabs in the **Details** area, such as **Basic Data**, **Work**, or **Scheduling**. The **Project Plan** tab page allows you to modify the schedule and the structure of a project in a visual way, and to edit the project data quickly and easily.

For more information, see Maintaining Projects - Project Plan.

Maintaining Projects - Gantt Chart

Within the **Maintain Project** editor, you can use the **Gantt Chart** to maintain your projects. When you open the **Maintain Project** editor and the **Project Plan** view, the **Gantt Chart** is displayed by default. Using the **Gantt Chart** enables you to view and maintain the project schedule and structure, with an emphasis on the timelines and progress of the project.

For more information, see Maintaining Projects - Gantt Chart.

Maintaining Projects - Team and Staffing

Within the **Maintain Project** editor, you can use the **Team and Staffing** view to choose your project team and assign the team members to work packages that belong to a particular phase or task. There are three subviews within the **Team and Staffing** view: **Team**, **Staff by Structure**, and **Staff by Team Member**. In the **Team** subview, you can assign the team members you want to work on your project. These team members will be available in the **Staff by Structure** and the **Staff by Team Member** subviews, where you can plan your project on a more detailed level. In each of the subviews, you can view important information for each team member, such as the planned, actual, and remaining work.

For more information, see Maintaining Projects - Team and Staffing.

Maintaining Projects - Product Procurement

Within the **Maintain Project** screen, you can view the overall project by products, on the **Products** tab. You may have planned services for the project that need to be completed but for which you do not have the staff, either in the project team or in the organization. You can select a service in this view and conveniently create a purchase request for a service agent to complete the work. In the same way, you can plan and request necessary materials for the project. You can choose a preferred supplier and you can also make notes or add attachments to the purchase request. On the **Purchase Requests** subtab, under the **Products and Purchasing** tab, you can subsequently view the status of your purchase request. You can also view all other existing purchase requests and purchase orders for the project, including the details and document flow. The document flow shows the complete purchasing process, including purchase requests, purchase orders, goods and service acknowledgments, and invoices.

For more information, see Maintaining Projects - Product Procurement.

Maintaining Projects - Sales Tracking

In the project editor, the project manager can access the complete document flow for billable projects, including all predecessor and successor documents. The corresponding fact sheets and journal entry vouchers can also be accessed, and in the extended view, the payment information is shown.

For more information, see Sales Order Processing.

Sourcing Material from Stock for Projects

During the execution of a project, you may need to procure material for use in the project. You can choose to either source the material from stock or purchase the material.

For more information, see Sourcing Material from Stock for Projects

Materials in Projects

The Materials in Projects business scenario is relevant for project-based service providers who handle materials in addition to services (for example, infrastructure service providers, IT, or energy infrastructure as gas pipeline or wind power). They need to plan and schedule materials on projects, procure these materials from within the project, and sell these materials along with the project services within one project invoice. This scenario enables you to source materials from your own inventories by creating project stock orders. You can choose to either source the material from stock or purchase the material.

The Materials in Projects from Project Purchase Requests business scenario is relevant for project-based service providers who handle materials in addition to services (for example, infrastructure service providers, IT, or energy infrastructure as gas pipeline or wind power). They need to plan and schedule materials on projects, and procure these materials from a supplier.

For more information about Business Scenario Explorers, see the Business Scenario Explorer Quick Guide.

Tasks

Edit and Schedule a Project

1. In the Projects worklist, select the project you want to edit, Choose Edit and choose Project Plan from the dropdown list to open the Maintain Project editor.
2. Choose Expand to show the entire project structure in the Gantt Chart subview of the Project Plan view. You can add a project task by directly entering the name, duration, and the person responsible in the table section of the chart. If you enter a person responsible, the system automatically processes the data. If you enter a project task name and duration without entering a person responsible, press the `Enter` key so that the system will process the data.
3. In the graph section, drag a project task to the right or left to change its start and finish dates. You can also enlarge the task bar to increase the duration of the project task. Choose Save and then Close to save your changes and return to the Projects subview.

Add a Work Package to a Task

1. In the Projects worklist, select the relevant project and choose Edit , then choose Project Plan to open the Maintain Project editor.
2. Choose Expand to see the full project structure in the Gantt chart and select the relevant task in the project structure.
3. Choose the Work tab and then choose Add Row to add a work package.
4. Enter details in the fields provided, such as the service and an amount of planned work. You can enter the team member who will perform the work, or this can be done at a later stage.
5. Choose Save and Close to return to the worklist in the Projects view.

The work package is added to the task and the details are saved to the system. To access these details, select the relevant project in the worklist of the Projects view, and choose Edit, then choose Project Plan.

Assign a Team Member to a Work Package

1. In the Projects worklist, select the relevant project and choose Edit, then choose Team and Staffing to open the Maintain Project editor.
2. Choose Team, then choose Add Row to enter the name of the team member you want to add to the project.

   → **Tip**

   In the Team, Staff by Structure, and Staff by Team Member subtabs, you can display and monitor an employee's availability by choosing Show Availability. You can search for team members based on their skills and availability using the Resource Search subview in the Resources view, and from there, assign them to your project.

3. Choose Staff by Structure, then choose Expand to see the full project structure including staffed and unstaffed work packages.
4. Select the relevant task, and choose your team member from the dropdown list in the Staff with Team Member field. A new work package is added to this task which is staffed by the team member you selected.
5. Select a service to correspond with the task, and enter an estimated amount of planned work for the work package.
6. Choose Save and Close to return to the Projects view.

The team member is assigned to the work package for the task and the details are saved to the system. To access the work package details, choose the relevant project in the worklist of the Projects view, and choose Edit, then choose Team and Staffing.

Procure a Service Agent

1. In the **Projects** worklist, select the relevant project and choose **Edit**, then choose **Products and Purchasing** to open the **Maintain Project** editor.
2. Choose the **Product Overview** subtab.
3. Select the relevant product, choose **Create Purchase Request**, and then either **For Whole Project** or **For Released Project Tasks**.
4. On the **New Purchase Request** screen:
    a. Enter a preferred service agent or supplier (if known), the requested amount of work, and the **Delivery From/To** dates.
    b. You can specify additional information, such as the service location and notes, if necessary.
5. Choose **Finish** , **Save**, and then **Close** to return to the **Projects** worklist.

The purchase request is saved to the system and added to the list in the **Products and Purchasing** view of the project editor. To view the purchase request in this list, choose **Purchase Requests** and select the relevant row to display the details. The purchase request can also be accessed in the **Purchase Requests and Orders** work center.

Project Period Planning

For information about this task, see here.

Copy Project Task

You can now copy tasks with their planned values to specified parent tasks or to specified locations of the project plan. This feature is useful if you are creating identical tasks for a project.

To copy a task, do the following:

1. Select the task and click **Copy** and select **Copy**.
2. Select the specified parent task or specified location and click **Copy** and select the following:
    - **Paste under Parent**: To paste the copied task under a specified task or at a specified location.
    - **Paste Before**: To paste the copied task before a specified task.

Calculate Project Cost

You can calculate the cost for work, materials, and expenses involved in a project. To calculate the cost for a project, do the following:

1. For each project task, enter the required service, material or expense in the **Work**, **Materials**, or **Expenses** tab of the **Project Plan** tab, in the **Maintain Project** editor.
2. In each tab, enter information in the following fields:
    - **Start Date**
    - **End Date**
    - **Planned hours** (**Work**) or **Planned Quantity** (**Materials**) or **Planned Expenses** (**Expenses**)
3. Click **Valuate**

The cost for the service, material, or expense is displayed in the **Direct Cost** column. Overhead costs are also displayed in the **Overhead Cost** column and are added to the direct cost to give the total cost (**Total Cost** column).

Note

You have to personalize the tabs to be able to view the **Direct Cost**, **Overhead Cost**, and **Total Cost** columns. To do so, select each tab, and in the title bar select **Personalize** > **This Screen**. In the **Sections** table select the **Untitled Table** checkbox and in the **Fields** table select the **Direct Cost**, **Overhead Cost** and **Total Cost** checkboxes. Save your changes.

Note

You have to click **Valuate** only the first time around, after that the costs or any changes in the costs are calculated automatically. If you click **Valuate** again, all costs are recalculated.

You can view the total cost for each task, as well as the cost for the work, materials, and expenses separately in the **Gantt Chart** by selecting **Cost** in the **Show** field. **Cost (agg)** in the **Show** field displays the aggregate cost for the whole project.

When there are period plans with different cost rates owing to varying task periods, the cost rate is the average of the cost rates of all the period plans. You can find detailed cost information on period plan level if period plans exist.

Project Purchase Request Runs Quick Guide

About this document

The **Project Purchase Request Runs** view of the **Project Management** work center enables you to create and schedule mass data runs for the creation of project purchase requests. The following mass data runs is available:

- Project Purchase Request Creation Run

A Mass Data Run (MDR) is the automatic mass processing of a task or a business transaction. MDRs enable mass processing of business data and are used in business processes, for example, invoice runs, payment authorization runs, or balance confirmation runs. When a user schedules an MDR the system represents it as a background job. During scoping, it is possible to provide default variants of the MDRs.

MDRs are created and maintained in the work centers. Using the **Job Scheduler**, users schedule the run to execute once or regularly at specified times.

In the **Background Jobs** view of the**Application and User Management** work center, you can monitor and reschedule MDR jobs that are created by users in other work centers.

For more information, see Mass Data Runs (MDR).

Tasks

Create a Project Purchase Request Creation Run

1. The project purchase request run allows you to create several project purchase requests across all your projects at the same time.

   In the **Project Management** work center, on the **Project Purchase Request Creation Run** view, click **New** to open the **New Project Purchase Request Creation Run** screen.

2. **Select Parameters**

   Enter a run ID and, if required, a description for the run The following control parameters are needed for creating the run:

   - **Bundling**: This is available only for project purchase requests created for supplier or service at project level.
   - **Delivery address**: 2 options are available, they are as follows:
     - Business residence of the partner company

       Note

       This address is relevant only if **Intercompany** option is selected.

     - Business residence of the project company
   - **Fixed Quantity**: You can enter the number of hours of service you will need. If this field is left blank, standard hours set for each service are applied
   - **Over Delivery**: Select this indicator if you want the person providing the service to continue time recording after the number of hours mentioned in the project purchase request
   - **Next PPR Creation**:

     There are two options available:

     - If an open quantity exists:

       A new purchase request is only created if any open quantity exits.

     - If no open purchase order exists:

       A new purchase request is created if no open purchase order for the same project and same service exists. If a supplier can be added per default automatically to the purchase request, this supplier is then also considered for the comparison with the open purchase orders.

   In the **Projects** tab, enter the projects that you want to apply the run to. If you do not enter the projects, the run will be applicable for all the projects you are responsible for.

   In the **Services** tab, enter the services for which you want the project purchase requests to be created. If you do not enter specific services, then the run will be applicable for all the services.

   - **Create Items for**:
     - **Intercompany Services**: Select this indicator if you want to create items for partner companies that belong to the same corporate group and that are technically working in the same SAP Business ByDesign system.
     - **Third Party Services**: Select this indicator if you want to create items for Third Party.
     - **Unassigned Services**: Select this indicator if you want to create items for all unassigned services maintained in the project. Unassigned services are the services that do not have a team member assigned to them.

3. **Review**

   Review the details of the **project purchase request run** and click **Save**. Click **Set to Active**, to activate the run.

4. **Confirmation**

   Choose one of the following options as required:

   - Click **Close** if you do not want to schedule a run immediately.

- Choose Schedule Immediate Run to execute a run immediately.
- Choose Schedule Single Run to define a date and time for a run.

Setting Status for a Run

In the Project Purchase Request Runs view, Under Actions you can set the status as:

- Set to Obsolete sets the active run to Obsolete status
- Undo Obsolete sets the obsolete run to In Revision status and has to be activated again to set it to Active status

Schedule a Project Purchase Request Run

1. In the Project Management work center, on the Project Purchase Request Creation Run view, select a run and click Schedule to open the Schedule Job screen.

   You can also schedule the run on the New Project Purchase Request Creation Run screen.

2. Choose one of the following options as required:

   - Choose Start Immediately to execute the run immediately.
   - Choose Run After Job and select a job.

     The run will then be executed immediately after the specified job.
   - Choose Single Run to define a date and time for the run.
   - If you want to execute the run at regular time intervals, choose Recurrence and choose a recurrence for the run, for example, daily, weekly, or monthly.

3. To save the run and return to the Project Purchase Request Creation Run view, click Save and Close. The run has been scheduled and will be executed as specified

4. To know more about each run, select the run on the Project Purchase Request Creation Run screen. Information of the run will be present in the Details tab.

Monitor Scheduled Project Purchase Request Run Definitions

1. Go to the Project Purchase Request Run view
2. In the worklist, select the newly created Project Purchase Request Run definition

Select the Application Log instance from the run, to inspect details of the jobs that have been run.

In General tab, If the run is successful then, you can see following details:

- Number of Project Purchase Requests created
- Project ID for which Project Purchase Request was created
- Project Task ID for which Project Purchase Request was created

In Settings tab, you will see what are the settings/configuration considered for this run.

In Results tab, you will standard information about work packages and affected objects.

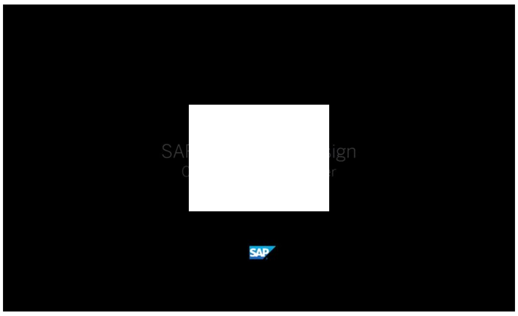
Note

- The run will be executed in batch process with a maximum limit of 10. In case if the run was split into more batches, you will see run relevant information for each batch
- The application logs are retained for four weeks and are then automatically deleted

Sales Orders Quick Guide

Knowing the status of your sales orders shows that you are on top of your customer requirements and gives the customer a good impression of your company. To respond to customer inquiries quickly and correctly, you need a system that gives you access to accurate, timely, and complete information on all of your sales orders.

Watch this video about **Creating a New Sales Order**.



Open this video in a new window

Business background

Sales Order Processing

The sales order process involves creating sales orders for products or services according to specific terms with fixed conditions. The sales order is usually created by a sales employee, and can be generated out of a sales quote, a sales contract, or an opportunity. The system supports pricing functionality and a check of the availability of products. The cost of sales can be determined using product valuation, which enables the seller to evaluate the profitability of the sales order. If services are needed to fulfill the sales order, service items can be added. A service request can be created directly from the order if required. In addition, sales order processing enables you to give customer-specific prices and discounts on your products.

For more information, see Sales Order Processing.

Kits Process Flow

For more information, see Kits Process Flow

Approval for Sales Order

The sales order process involves creating sales orders for products or services according to specific terms with fixed conditions. The sales order is usually created by a sales employee, and can be generated out of a sales quote, a sales contract, or an opportunity. The system supports pricing functionality and a check of the availability of products. The cost of sales can be determined using product valuation, which enables the seller to evaluate the profitability of the sales order. If services are needed to fulfill the sales order, service items can be added. A service request can be created directly from the order if required. In addition, sales order processing enables you to give customer-specific prices and discounts on your products.

For more information, see Approval for Sales Order.

Pricing

Pricing is based on price master data such as price lists and discount lists, which are used to automatically calculate pricing within all business documents for sales and service processes. A predefined pricing procedure is used to determine the gross value the customer has to pay for certain products or services to be received on a certain day at a certain place. The pricing procedure consists of price components, such as list price, discounts, surcharges, freights, taxes, and costs. The order of these price components is essential for the calculation of the total value.

For more information, see Pricing in Customer Relationship Management.

Working with Pricing

In sales and service documents there is a tab called **Pricing** or **Pricing and Invoicing**. It displays all related price components. If required you can modify these price components.

For more information, see Working with Pricing in Sales and Service Documents.

Profit Margin

The information regarding profit margin and profitability can be very useful for management decisions. Therefore the profit margin can be calculated in sales and service documents.

For more information, see Profit Margin.

Tax Determination

As a rule, companies are legally required to calculate taxes on products that they buy or sell, and to levy these taxes from their customers. After the products have been provided, the taxes must be declared and levied to the respective tax authorities. The system supports you by providing a substantially automated tax calculation for the following tax types: Value-Added Tax (VAT), Sales and Use Tax, Withholding Tax. The system also provides a reporting tool that gives you effective control over your obligatory declaration of these taxes.

For more information, see Tax Determination.

Credit Limit Check

As a rule, companies are legally required to calculate taxes on products that they buy or sell, and to levy these taxes from their customers. After the products have been provided, the taxes must be declared and levied to the respective tax authorities. The system supports you by providing a substantially automated tax calculation for the following tax types: Value-Added Tax (VAT), Sales and Use Tax, Withholding Tax. The system also provides a reporting tool that gives you effective control over your obligatory declaration of these taxes.

For more information, see Credit Limit Check.

Order-to-Cash (Sell-from-Stock)

The **Order-to-Cash (Sell-from-Stock)** business scenario enables you to sell goods from stock using a wide range of standard features to handle sales quotes, sales orders, deliveries, customer invoices, and payments. This scenario includes features, such as, available-to-promise (ATP) check, pricing, credit card, credit limit check, and automatic order creation.

Order-to-Cash (Standardized Services)

The **Order-to-Cash (Standardized Services)** business scenario enables you to sell services with functions to handle quotes, create sales orders with service items, plan service execution, and fulfill, confirm, and invoice services sold. The selling of services can be the main line of business or a value-added service for physical goods.

Order-to-Cash (Project based Products and Services)

The **Order-to-Cash (Project-Based Products and Services)** business scenario is used to manage the complete end-to-end process of selling project-based products and services to customers. This scenario integrates sales quotes and sales orders with project management allowing you to create customer invoices for time and expenses recorded against a customer project. Invoices can be created on a time and materials basis, a fixed-price basis, or a combination of both. After the customer invoice has been issued, customer payments can be monitored. This scenario also supports the analysis of project profitability based on project costs and revenues.

Order-to-Cash (Third-Party Order Processing – Material)

The Order-to-Cash (Third-Party Order Processing - Material) business scenario enables your company to create sales orders that are used to ship products with or without a product specification to your customer directly from a supplier rather than from your own company. A third-party purchase request is created automatically when you release a sales order for a product to which purchasing contracts and/or list prices have been assigned in the system. The third-party purchase order can be created automatically or manually. You can enter the supplier's confirmation data in the system when they send the delivery notification. Based on this third-party delivery, supplier invoicing and customer invoicing is triggered. You can use the Order-to-Cash (Third-Party Order Processing – Material) scenario if you always ship directly from a supplier or if you only ship directly from a supplier in exceptional cases.

Order-to-Cash (Make-to-Order)

The Order-to-Cash (Specified Products) business scenario enables your company to produce and sell products for a specific customer demand.

You can create a sales quote or sales order with a product specification that includes customer-specific requirements, plan the multilevel demand for a sales order item, and create supply for the required products. You can order and receive materials based on requirements from the customer, release the production order, and create production tasks. During task confirmation, it is ensured that only those materials that were replenished for a specific customer demand are consumed. Output products are always confirmed as specified stock. A final inspection identifies if any of the units do not conform to the customer requirements.

You can post a goods issue. The system creates an outbound delivery and the products are shipped to the customer. An invoice is created based on the outbound delivery and the system updates financial accounting.

Customer Contract Management

The **Customer Contract Management** business scenario enables you to create and manage contracts related to services in the framework of your support entitlements or managed services. In addition, the following features are provided:

- Seamless integration with service request and service confirmation processing, allowing you to fulfill and confirm services carried out for a contract.
- Invoice schedules for contract items
- Generation of (standard) contract out of sales order using a contract template
- Price agreements for items sold on a time and material basis

The scenario incorporates business functions from related areas that directly support service delivery for contracts, such as processing due items and payments in Financial Management.

For more information about Business Scenario Explorers, see the Business Scenario Explorer Quick Guide.

Tasks

Create a Sales Order

1. Go to the **Sales Orders** work center.
2. You can choose the **Sales Orders** view and go to **New** > **Sales Order** or directly click **New Sales Order** from **Common Tasks**. A **New Sales Order** quick activity opens.

   You can also create a sales order from:

   - A sales quote, or a sales quote for contract in the **Sales Quotes** view
   - A lead in the **Leads** view
   - An opportunity in the **Opportunities** view
   - A service request in the **Service Request** view

   Note

   You can also create a sales order with reference to a contract by clicking **Create with Reference** > **Contract** from the **New Sales Order** screen. The system automatically copies details such as **Account ID**, **Product ID**, **Price Agreement**, and so on from the contract to the sales order.

   Note

   You can copy a Sales Order (with Kit) by selecting the respective line item and clicking **Copy**. You can also create a Sales Order with reference to a Sales Order (with Kit) by clicking **Create with Reference** from the **New Sales Order** screen.

3. Enter details of the account associated with the sales order in the **Account** field, such as, the account ID or account name. The system will automatically display the related master data in **Account**, **Main Contact**, **Ship-To** or **Service Recipient**, **Bill-To**, **Employee Responsible** and all default sales data. If necessary, click the **Open Select Dialog** icon to search for the account.

   If the sales order is associated with a new account, click **New** to generate a unique account number.

4. Under **General**, enter further details to identify the sales order:

   - In the **Description** field, enter a description of the sales order.
   - If necessary, in the **External Reference** field, enter the ID customer uses to identify their order.

     Note

     If payment and delivery details are available for the account, the system automatically copies the corresponding data to the sales order. The data is copied from the **Sales** view of the account and depends on the relevant distribution chain determined in the sales order.

5. Under **Delivery** or **Fulfillment**, you can define a delivery/fulfillment priority for the sales order. This field may already contain a default value if the delivery/fulfillment priority was maintained in the account sales data for the relevant

distribution chain (combination of sales organization and distribution channel). You can change this default value, if necessary.

Note

If you choose **Immediate** for the **Delivery Priority**, the sales order is treated as a rush order and is released to the execution department automatically. That is, this order is set to **Released** automatically in the **Customer Demand** view of the **Outbound Logistics Control** work center and immediately appears in the **Delivery Control** view of the **Outbound Logistics** work center.

From the **Shipping Conditions** field drop-down, you can select the type of shipping for your sales order. Shipping Conditions determine the duration of shipping and can be configured in your system. You can provide the shipping conditions at both, the header and item levels. At item level, you can find the **Shipping Condition** field in the **Items** tab. Changes at header level are automatically updated at item level unless no manual changes are made at item level.

Shipping conditions are only applicable for the item types **Product- consignment fill-up**, **Product- delivery-based** and sales kits.

You cannot change the shipping condition when the sales order delivery status is **In Process** or **Completed**, and this information flows to the subsequent documents till the outbound delivery.

Note

- For specific sales order screens, you can access the Shipping Condition field through **Personalization**.
- The shipping conditions added to the sales order will be visible in the **Customer Invoice** UI, at the item level. The same will be visible in the XMLs for invoice and proforma invoice.
- You can also provide the shipping condition at the header and item levels for a sales order via **A2X services**, by passing it in an XML payload request.

6. If you have scoped revenue accounting contracts in the solution, you can assign an existing revenue accounting contract to the sales order or create new by clicking on **New** under **Revenue Accounting Contract**.
7. Enter the product or service details under **Items**. You can also add products of type **consignment**. To know more about consignment, see Customer Consignment.

Note

You can also enter kits as items. To add a sales kit product, you can enter the Global Trade Item Number (GTIN)/ Universal Product Code (UPC) number of a sales kit header. You can also provide this via A2X services during sales order creation, by passing the GTIN/UPC number of the Sales kit header as the product ID in an XML payload request The availability of the GTIN/UPC number facilitates sales representatives in accepting sales orders containing sales kit products, via electronic data interchange (EDI).

a. In the **Product ID** field, enter the product or service ID. If necessary, click the **Open Select Dialog** icon to search for the product or service. The system automatically displays its description and list price.

If you have scoped revenue accounting contracts in the solution, the system assigns the item to a new Performance Obligation (POB). The POB of the item gets mapped to the assigned revenue accounting contract.You can also edit an existing Revenue Accounting Contract to generate or delete existing POBs. You can delete a POB only if it has not been assigned to any sales and service document.

Note

In case, you have not assigned an ID under **Revenue Accounting Contract**, the system will automatically assign a new revenue accounting contract to the sales order. The POB of the item will be mapped to the assigned revenue accounting contract. If you select an existing revenue accounting contract, new POBs get created and each item gets assigned to a new POB.

You can also change the POB of the item to another existing POB of the assigned revenue accounting contract.

For more information on Revenue Accounting Contract and Performance Obligation, see IFRS 15/ASC 606: Revenue Recognition Accounting.

Note

If you enter a **Product ID** of a service item of type **Service fixed price without actuals**, and assign the sales order to a **multi customer project**, you will see a **Service Fulfillment via Project** check box under **Cost and Revenue Assignment**. The indicator is unchecked by default. If you select the check box, the system will do the following steps:

- Plan the costs from the project and not the sales order
- Make mandatory fields **Labour Resource** and **Duration** in the sales order item level non-mandatory

You can then release the service item for sales execution, and the invoice can be generated.

Note

If there are existing contracts with the same **Account ID** and **Product ID** as used in the sales order, the system suggests a list of contracts available that you can enter into the **Reference Contract ID – Contract Item ID** field.

b. Enter the required quantity. The system calculates and displays the value. It also checks whether the product is available on the requested date.

Note

- For kits, you can enter quantity at the kit header and quantity of the kit components will get adjusted accordingly. The quantity of kit components cannot be edited.
- List price of the items is automatically fetched if it is maintained. If the list price is not maintained, you can manually enter the list price. For a kit, you can enter list price at kit header, as pricing is applicable only at kit header level.
- You can select the **Fulfillment** as **External** or **Internal**, for kits you can do so only at the kit header level.

c. Repeat the steps outlined above to enter additional items.

Note

You can also use a fast entry to enter multiple items:

Click **Fast Entry** to enter multiple items without triggering pricing or checking product availability:

- The system generates ten blank lines. When five lines are filled new ten blank lines are added automatically. It also disables some such as copy, follow-up, or submit.
- After maintaining all items click **Check Fast Entry** or **Save**. The system then checks all data created and performs pricing and product availability.

d. If necessary, you can structure the items in the sales order by entering text items or changing their sequence:

- **Creating Text Items**

  You can create text items that can be used as headings for the items underneath, or to print additional texts in a sales quote or sales order confirmation. Simply enter a description without entering a product

ID. Text items are not relevant for pricing or delivery. Text items are copied to sales quotes and sales orders in copy and follow-up scenarios.

- **Changing Sequence of Items or Renumbering Items**

  You can change the sequence of items in a sales quote or a sales order, to ensure that items are displayed in a logical sequence in the sales quote or sales order confirmation. For example, you want to keep a normal item and a related text item together. You can do this in the following ways:

  - Move an item up or down by selecting it and clicking move up or move down.
  - Position an item between two existing items by manually entering a line number that is between the two line numbers of the existing items

  After you have done this, you can let the system reset the line numbers so that they are displayed consistently in the sales quote or sales order confirmation. To do this, click **Renumber**. The sequence of the items will remain as you have set it.

  You can change the sequence of items under the following conditions:

  - The sales quote or sales order is not based on a preceding sales documents.
  - The sales quote or sales order does not have any follow-up sales documents.

  You can also change the sequence of items after you have submitted the sales quote or sales order.

  These features don't work in the following cases:

  - For sales quotes and orders that have been migrated
  - For quotes for contracts
  - In sales quotes and orders that have A2A, B2B, or `Internet` in the **Origin** field
  - For sales orders that have one or more items relevant for Available-to-Promise (ATP) check
  - For sales orders that have been released

i Note

Depending on your business configuration, the system performs the following checks:

- Available-To-Promise (ATP) check for products, either immediately or when you click the **Check Availability** button in the sales order:

  - A **green light** confirms that the requested quantities are available on the requested date.
  - A **red light** indicates that the requested quantities are not available at all on the requested date.
  - A **yellow light** indicates either a late delivery or that there is an insufficient confirmed quantity of the requested products available.

  #### → Tip

  If a product is not available you can choose **Replace Product** to search for alternative products, product specifications, or ship-from locations, in order to replace the selected item based on projected product quantities.

  For the search you can maintain the **Horizon**, that represents the time frame for which the projected product quantity is calculated. The **Projected Quantity** is calculated by the available stock plus supply minus demand, considering the horizon set (without considering the transport times and without considering the replenishment lead time).

- Credit limit checks when the account (debtor) or total gross amount of a document is changed. For further information about credit limit checks, see Credit Limit Check.

8. Then submit the sales order.

   The following options are available for submitting a sales order:

   - **Release Order** is for releasing the order. The status of the sales order changes from **In Preparation** to **Open**. The order becomes active for supply planning and outbound logistics control and project invoicing. ATP results become binding for material items.

     Project-based items are forwarded to project invoicing where invoicing and order completion is done. For more information, see Project Invoicing.

     If you have revenue accounting contracts scoped in your solution, you can change a revenue accounting contract and performance obligations throughout the active life cycle of the sales document. You cannot make any further changes to the contract if the overall life cycle status of the document is set to Complete. There is no dependency on the item level status.

     i Note

     If an approval process for sales orders is activated, the system starts at first the approval process and when this process is finished the sales order is automatically released.

   - **Send Order Confirmation to Account** submits the order confirmation depending on your output settings, such as sending an e-mail or fax to the account, or the order is sent to the printer, and releases the order if it has not yet been released.

   These options are only available for standardized service items:

   - **Release to Service Execution** submits all service items to the **Order Pipeline** view for service execution and releases the order if it has not yet been released.

   - **Confirm Service Execution** opens the **Service Confirmation** screen for service items that are relevant for confirmation if they already have been released for execution.

   - **Complete Service Execution** sends all service items to the invoice proposal process (for invoices that require no service confirmation).

9. Now the new sales order is saved to the system and added to the list in the **Sales Orders** view. To open the sales order from this list, click the appropriate sales order ID link.

   i Note

   You can create a down payment request for a selected sales order from the list in the **Sales Order** view by clicking **Create Down Payment**. The system then releases the down payment automatically, and after clearing, the down payment is considered in the invoice documents that are related to that particular sales order.

   i Note

   If the sales order is **In Preparation** and you only save the order, the ATP check becomes non-binding.

Create a Complete Delivery Sales Order

1. Click **Complete Delivery** under **General** in the sales order.

2. You can choose the value for the **Delivery Rule**, for example **Single-Delivery — Full Quantity**. This value is then copied to all product items.

3. All products with the same requested date, ship-to address, and delivery rule gets automatically the same **Delivery Group** and therefore will be shipped together.

→ Tip

If the delivery date for a delivery group is too late, you can optional show the simulated delivery date in the item table using hidden field **Simulated Schedule Line**. This simulates the earliest delivery date and quantity for each product to show earlier possible delivery dates. If only one product is responsible for a late delivery, you can remove this product from the delivery group by selecting the delivery rule **Multiple Deliveries** for this product (This triggers a new ATP check for all items). In this case the product will be delivered at a later time.

For more information, see Complete Delivery Orders

Create a Sales Order Using Microsoft Excel

You can create a sales order by entering it in a predefined Microsoft Excel template and uploading them to the SAP Business ByDesign system. For information on this task, see here.

Sell a Contract in a Sales Order

When you enter an entitlement product, that references a contract template, into a sales order item, a contract is automatically generated and linked to the sales order after you release it. For information on this task, see here.

Assign Source of Supply

For more information, see here.

Create a Project from a Sales Order

Work for services that you sell to a customer can be tracked internally in a customer project that is created directly from a sales order.

For more information, see here.

Create an Invoice Schedule

You can create an invoice schedule for a document by using an invoicing time frame:

1. Under **Pricing and Invoicing** choose **Invoice Schedule**.
2. Click **Edit Invoicing Time Frame**. Now you can edit a new time frame or view an existing time frame with a monthly recurrence pattern for the actual year, for example.

   Select the **Applied** check box to assign the selected invoicing time frame to the item.
3. Click **OK** . The system creates monthly invoice dates for the applied items.

You can also create an invoice schedule step by step:

1. Under **Pricing and Invoicing** choose **Invoice Schedule**.
2. Click **Add Item**. Now you can select an item for which you want to create several invoicing dates.
3. Click **Add Date** to maintain several invoice dates for the selected item.

For more information about invoice schedules, see Invoice Schedule.

Create a Tax Exemption Certificate

For information about this task, see here.

Update a Sales Order

1. Choose the **Sales Orders** view from the **Sales Orders** work center.
2. To edit a sales order
    - Select an order in the list and click **Edit** to open the sales order quick activity
    - Select the **Sales Order ID** in the list to open the sales order fact sheet and click **View All** to open the sales order editor.
3. Change the sales order details on the **General** tab page:
    - For a product, under **Delivery**, select the delivery priority, the required Incoterms, and the Incoterms location for the sales order. You can also temporarily block the delivery process. For a service, select the fulfillment priority under **Fulfillment**.
    - Under **Payment**, select the payment terms.

      If you have selected **Credit Card** from the **Payment Method** list, additional fields are shown.

      The credit card information defaults from the party role payer master data. If several credit cards are maintained, only the credit card token from the payer is selectable. If a new credit card needs to be assigned to the order, it must first be created in the account master data. To check the authorization details, click **Authorization Status**.
    - You can view and change the **Internal Comment** and the **Customer Information**

      The notes in the **Internal Comment** and **Customer Information** fields of the sales order are copied from master data.

      On header level, notes are copied from account master data as follows:
        - Text entered under **Internal Sales Note** is copied to **Internal Comment**.
        - Text entered under **External Sales Note** is copied to **Customer Information**.

      On item level, notes are copied from product or service master data as follows:
        - Text entered under **Sales Notes** is copied to **Customer Information**.

      All text fields in the sales order can be changed, but if the account is changed on header level, the notes are overwritten with the texts of the new account, product or service.
    - Enter or change further information if required.

      Note

      If payment and delivery details are available for the account, the system automatically copies the correspondent data to the sales order. The data is copied from the **Sales** view of the account depending on the relevant distribution chain determined in the sales order. Changes you make to these details in the sales order only impact that sales order and have no impact on the account details.
4. To edit your items or add new products or services to the order choose **Items**:
    a. Click **Add Row** to create a new row in the table.

b. In the **Product ID** field, enter the product or service ID. If necessary, click the **Open Select Dialog** icon to search for the product or service. The system automatically displays its description and price. Optionally you can also enter or change the price manually.

c. Enter the required quantity. The system calculates and displays the expected value. It also checks whether the product is available in the requested quantity on the requested date.

d. Optionally in the **Item** table itself it is possible to add the **Product Specification** column to the table and assign to each item a defined product specification.

e. Repeat the steps outlined above to enter additional items.

> **Note**
>
> The system displays a green light if the products are available on the requested date, a red light if the products are not available at all, and a yellow light if there is some stock available but it may not be enough to cover the order. The system gives alternative options, for example it indicates that half the products are available on the requested date and that the others will be available later or that the full quantity of products can be delivered later than requested.

f. If you want to access the price history for an item, select the item in the list and click **Price History**. The price history of other sales quotes or sales orders is displayed using the corresponding account, product, and product specification.

In addition you can have a look to the price history of other products by using the **Advanced Search**.

5. To track the progress of the order and access all related documents, such as a sales quote, service request, customer invoice or delivery, choose the **Document Flow** tab page. In the extended view of the document flow you see in addition related activities such as appointments or activity tasks. For further information, see Document Flow.

6. At the top of the **Sales Order** editor, click **Save** to save the updated sales order, then click **Close** to return to the **Sales Order** view.

   The updated sales order is saved to the system, and can be accessed from the list of sales orders in the **Sales Orders** view. To open the sales order from this list, select the appropriate sales order ID link.

Update Manual Reference for a Sales Order

You can add a manual reference to an existing sales order. The reference can be of the type activity, campaign, lead, opportunity, and so on. You can remove the reference when required.

Updating manual reference only adds a document as a reference to the selected sales order. No new document is created in the process.

To update a manual reference for a sales order, follow these steps:

1. In the **Sales Orders** work center, choose the **Sales Orders** view.

2. Select the sales order from the list for which you want to update the reference manually.

3. Click **Actions** and choose **Update Manual Reference**. The **Update Manual Reference** dialogue box opens.

4. Select the required reference type from the **Reference Type** drop-down.

5. Enter the account name directly in the **Reference ID** field or choose from the list.

6. Click **Add**. The manual reference is updated for the selected sales order.

7. To remove the reference, select it from the list and click **Remove**.

8. Click **Close** to exit the **Update Manual Reference** dialogue dox.

Cancel a Sales Order

1. Choose the **Sales Orders** view from the **Sales Orders** work center.
2. Select a sales order in the list that you want to cancel and click **Edit** to open the sales order quick activity, then click **View All**.
3. To cancel the sales order you have the following options:
   - You can cancel the complete order on header:
     a. To do this choose the **General** tab page and choose a value from **Reason for Rejection**.
     b. After you saved the sales order, the **Reason for Rejection** is copied to the items, that are not already canceled separately.
   - You can cancel single items:
     a. To do this choose **Items** and select the item that should be canceled.
     b. On the **Details** tab page of the item choose a value from **Reason for Rejection**.
     c. Repeat the steps for all items that you want to cancel and save the sales order.

   Note

   If the **Delivery Status** of an item is **In Process**, contact your warehouse before you cancel the item, because it could be that the item is already being sent to the customer.

Note

- If you already canceled single items, it is possible to cancel the complete sales order on the **General** tab for the remaining items. The reason for cancellation that is set on the **General** tab is also applied to the remaining items .
- You can remove the reason for rejection on header and the cancellation is then ,removed on header and on all items that are canceled by header. Separate cancellations on item remain unaffected.
- If the sales order has the status **In Preparation**, you can also delete the order in the **Sales Order** view.
- If the sales order is released for execution and the status is **In Process**, you should contact the warehouse to make sure that the cancellation has been accepted.
- If a project is assigned to a sales order that has been canceled, you can close or stop the project manually.
- If a project task is assigned to a sales order item that has been canceled, you can delete the project task if it has the status In Planning. Otherwise, the assignment to this project task remains for documentation purposes.

Reverse a Sales Order

1. **Note**

   - task if it has the status **In Planning**. Otherwise, the assignment to this project task remains for documentation purposes.

Delete a Sales Order

1. Choose the **Sales Orders** view from the **Sales Orders** work center.

2. Select a sales order in the list that you want to delete and click **Delete** .

i Note

You can only delete sales order which are created by intercompany process without any items or which are received from an external system.

You may want to cancel a sales order for several reasons. For example, your customer no longer wants the product that they have ordered or something has gone wrong in your execution department and you are no longer able to deliver the product.

For more information, see here.

Track the Life Cycle Status

1. In the **Sales Orders** > **Sales Orders** view.

2. Choose one of the predefined searches of the **Show:** field and click **Go**.

3. Now you can track the status of your sales orders.

   The life cycle status for orders are:

   - **In Preparation**

     This is the initial status. You can edit without restriction the account and involved parties. The order can be deleted in this status.

     i Note

     Orders originating from business-to-business or that have follow-up activities cannot be deleted.

   - **Open**

     This status indicates that the order has been released. Ordered products are transferred to logistics and can no longer be removed from the order.

   - **In Process**

     This status indicates that at least one line item has been released for execution. The following fields become read only: On item level **Quantity**, **Ship-To**, and **Requested Date** and **Incoterms** that have been copied from the **General** tab view.

   - **Completed**

     This status indicates that the order has been invoiced or was canceled by entering a **Reason for Rejection** on the **General** view.

   i Note

   To change the status of a sales order to **Completed**, be sure that the items have been canceled properly or that the delivery status is **Finished** for at least one of the items.

4. In case you want to have a deeper look into the related documents, such as a sales quote, service request, customer invoice or delivery, you can also access them on the sales order fact sheet. To do this, click **Sales Order ID** and then choose the **More** tab.

Create a Target Group from a Sales Orders Worklist

For marketing purposes you can create a target group of accounts listed in a worklist. To do this:

1. Call up the required worklist, and modify it to your needs.
2. Click Export followed by To Target Group.

   The New Target Group screen opens.
3. Check the details and save the target group.

Withdraw Approval

You can withdraw approval from a sales order using Withdraw Approval. It removes the approval task from the approver’s list.

Project Invoicing Quick Guide

In the Project Invoicing view in the Customer Invoicing work center, you can create and edit project invoice requests for time and expenses incurred on a customer project. You can create a project invoice request either from a sales order assigned to a customer project or from a customer project directly. In addition, you can view and edit all of your project invoice requests.

This view contains the following subviews:

Sales Order Subview

In the Sales Order subview, you can create a project invoice request for a selected sales order. The Sales Order subview displays all released sales orders that contain at least one item that has been assigned to a customer project task and which are therefore relevant for invoicing. If a project invoice request has already been created and released for part or all of the work in a sales order, you can view the invoice date of the previous project invoice request in the Last Invoiced On column. A sales order can have one of the following invoicing statuses:

- In Process

  One or more project invoice requests have been created for this sales order. This status is set by the system when you create the first project invoice request for a sales order.
- Not Started

  No project invoice requests have been created for this sales order.
- Finished

  No further project invoice requests are expected for this sales order. You can set the invoicing status of a sales order to finished to indicate that invoicing should now be complete for this sales order. It is, however, still possible to create a project invoice request for sales orders with the status Finished. You can also change the status back to In Process by selecting Revoke Finish from the Change Status menu.

Projects Subview

In the Projects subview, you can create a project invoice request for a selected project. The Projects subview displays all projects that are billable and therefore relevant for invoicing.

Project Invoice Requests Subview

In the **Project Invoice Requests** subview, you can get an overview of all project invoice requests for your projects. You can edit, release, cancel, and delete project invoice requests. A project invoice request can have one of the following statuses:

- **In Preparation**

  The project invoice request has been created but not yet released. You can edit and release the project invoice request.

- **Released**

  The project invoice request has been released to customer invoicing. You can cancel the project invoice request.

- **Invoiced**

  A customer invoice has been created for the project invoice request. You can cancel the project invoice request.

- **Canceled**

  The project invoice request has been canceled.

Business background

Project Invoicing

Project invoicing is a process that allows you to invoice customers for project-based time and expenses or fixed-price services.

The process consists of the following steps:

- Project invoice preparation
- Creating a project invoice request
- Releasing a project invoice request

For more information, see Project Invoicing.

Order-to-Cash (Project-Based Services)

The Order-to-Cash (Project-Based Products and Services) business scenario is used to manage the complete end-to-end process of selling project-based products and services to customers. This scenario integrates sales quotes and sales orders with project management allowing you to create customer invoices for time and expenses recorded against a project. Invoices can be created on a time and material basis, a fixed-price basis, or a combination of both. After the customer invoice has been issued, customer payments can be monitored. This scenario also supports the analysis of project profitability based on project costs and revenues.

For more information about Business Scenario Explorers, see the Business Scenario Explorer Quick Guide.

Tasks

Create a Manual Project Invoice Request

Note

You can only have one unreleased project invoice request for a sales order and project. If there is an unreleased project invoice request, the transaction **New** > **Project Invoice Request** is not available. Instead, the **Edit Project Invoice Request** button allows you to edit the existing project invoice request.

For information about this task, see Create a Project Invoice Request for a Customer Project.

Create an Automatic Project Invoice Request

An automatic project invoice request automatically includes invoice items for fixed price items. After creating the automatic project invoice request, you can review it and manually add invoice items for time and expense items.

You can create automatic project invoice requests in one of the following views:

- Customer Invoicing > Project Invoicing > Sales Orders
- Customer Invoicing > Project Invoicing > Projects
- Project Management > Projects

Navigate to the view from which you want to start this activity, select the sales order or project from which you want to create the project invoice request, click **New** and choose **Automatic Project Invoice Request**.

This brings you to an editor screen which offers you the same entry fields as the **New Project Invoice Request** guided activity.

For information about the field in the project invoice request, refer to the Create a Project Invoice Request for a Customer Project step-by-step instruction.

Note

You can only have one unreleased project invoice request for a sales order and project. If there is an unreleased project invoice request, the transaction New > Automatic Project Invoice Request is not available. Instead, the **Edit Project Invoice Request** button allows you to edit the existing project invoice request.

Release a Project Invoice Request

1. In the **Project Invoice Requests** subview, select a project invoice request with the status **In Process**.
2. Click **Release**.

   The project invoice request is released to invoicing. The invoice items are displayed in the Invoice Requests view where the follow-on customer invoice is created. After the follow-on customer invoice has been created and sent to the customer, the project invoice request status is set to **Invoiced**.

Edit a Project Invoice Request

You can only edit unreleased project invoice requests. If there is an unreleased project invoice request, you can edit it starting from the following views:

- Customer Invoicing > Project Invoicing > Sales Orders
- Customer Invoicing > Project Invoicing > Projects
- Customer Invoicing > Project Invoicing > Project Invoice Requests
- Project Management > Projects
- Project Management > Invoice Preparation > Not Invoiced Time and Expenses
- Project Management > Invoice Preparation > Project Invoice Requests

To edit a project invoice request, proceed as follows:

- In one of the **Project Invoice Requests** views, select a project invoice request with the status **In Process** and choose **Edit**.
- In one of the other views, select a sales order or a project with an unreleased project invoice request and choose **Edit Project Invoice Request**.

This brings you to an editor screen which offers you the same entry fields as the **New Project Invoice Request** guided activity. If the project invoice request has been released or invoiced, the fields are for display only.

For information about the field in the project invoice request, refer to the Create a Project Invoice Request for a Customer Project step-by-step instruction.

Display a Preview of a Project Invoice Request

1. In the **Sales Orders** subview, select a project invoice request with the status **In Preparation**, **Released**, or **Invoiced**.
2. Click **New** → **Automatic Project Invoice Request**. The Project Invoice Request screen appears.
3. Click **Preview**.

   Note

   If an invoice does not exist yet, the **Invoice Document ID** field remains empty and a simulation with the current data is performed.

4. Select **Invoice**. The invoice, or a simulation, is displayed.

Cancel a Project Invoice Request

1. In the **Project Invoice Requests** subview, select a project invoice request with the status **Released**, **Partially Invoiced**, or **Invoiced**.
2. Click **Cancel**.

If the project invoice request is not invoiced, the project invoice request is canceled and the invoice request is removed from the **Invoice Requests** view of the **Customer Invoicing** work center. All time and expense items that were assigned to the project invoice request are open for invoicing again.

If the project invoice request has already been invoiced, the project invoice request is canceled. The corresponding customer invoice has to be canceled manually. All time and expense items that were assigned to the project invoice request are open for invoicing again as soon as the customer invoice is canceled.

Note

A project invoice request may be partially invoiced and it can be also invoiced with more than one customer invoice. Therefore the above statements apply to the items of the project invoice request accordingly.

Cancel and Copy a Project Invoice Request

1. In the **Project Invoice Requests** sub-view, select a project invoice request with the status **Released**
2. Click **Cancel and Copy**

   When you cancel and copy a project invoice request, the invoice items of the selected invoice request are copied into a new project invoice request and the old project invoice request is cancelled. You can access the **Cancel and Copy** feature in **Project Invoice Requests** view from both **Project Management** and **Project Invoicing** work center.

Cancel and Copy is enabled only for released status of customer project invoice requests.

> **Note**
>
> - To be invoiced quantity in the new project invoice request will be the sum of to be invoiced quantity and deferred quantity from the previous project invoice request. Whereas written off quantity will remain the same.
>
>   For example, in a total of 5 hours of to be invoiced quantity, 2 hours is the deferred quantity in the previous project invoice request. Now, when you click cancel and copy, the system will propose the addition of the deferred quantity that is 2 hours, in the to be invoiced quantity in the new customer project invoice request.
>
> - Cancel and copy saves the new project invoice request and the cancelled project invoice request.

Delete a Project Invoice Request

1. In the **Project Invoice Requests** sub-view, select a project invoice request with the status **In Process**.

2. Click **Delete**.

   The project invoice request is deleted and all time and expense items that were assigned to the project invoice request will be made available for invoicing when you next create a project invoice request for the project.

Change the Invoicing Status of a Sales Order

In the **Sales Orders** view, you can manually change the invoicing status of all items in a sales order, as long as no open follow on documents exist for those items. If an invoice schedule exists, the invoice schedule status must be invoiced, cancelled or open.

If it is possible to manually change the invoicing status, the **Change Status** button is active. Otherwise, it is grayed out.

To manually change the invoicing status, proceed as follows:

1. In the **Sales Orders** subview, select a sales order with the status **In Process** or **Not Started**.

2. From the **Change Status** menu, select **Finish**.

   The invoicing status is set to **Finished**, which indicates that you do not expect any further invoices to be created for this sales order.

> **Note**
>
> If you later decide that you want to create a further project invoice request for this sales order you can change the status back to **In Process** by selecting the sales order and selecting **Revoke Finish** from the **Change Status** menu.

Change the Invoicing Status of individual items in a Sales Order

In the **Sales Orders** view, you can manually change the invoicing status of individual items in a sales order, as long as no open follow on documents exist for those items. If an invoice schedule exists, the invoice schedule status must be invoiced, cancelled or open.

To change the invoicing status, proceed as follows:

1. In the **Sales Orders** subview, select the required sales order.

2. Select the Items tab in the details section; the various items in the sales order are listed here.

3. Select the sales order item whose status you want to change.

4. From the Change Status menu, select Finish Invoicing.

If it is possible to change the invoicing status of a sales order item, the Change Status button is active. Otherwise, it is grayed out

The invoicing status is set to Finished, which indicates that you do not expect any further invoices to be created for this item in the sales order.

Note

If you later decide that you want to create a further project invoice request for this sales order item you can change the status back to In Process by selecting the sales order item and selecting Revoke Finish Invoicing from the Change Status menu.

Printing of "Additional Remarks" of Intercompany Expense Reports

You can print the additional remarks of an intercompany expense report on the itemized list form of the project invoice requisition and on the customer invoice form.

Projects Worklist

Overview

The Projects subview is the main access point for maintaining projects in the Project Management work center. In this subview, the Projects worklist gives you general information about your projects, such as their current status, the person responsible, and risk.

You can refine this information in the worklist by selecting one of the following options in the Show field:

- The My Active Projects option displays all the projects which you have access to, and which have a status either in planning, started, released, or completed.
- The My Projects option displays all the projects which you have access to, regardless of their status.
- The Active Projects | Substitute For option displays all the projects that have the status in planning, started, or released and for which you are assigned to be a substitute for the project lead.
- The Active Projects option displays all the projects that have the status in planning, started, released, or completed, regardless of who is responsible for the projects. The list only contains projects for which you have access authorization.
- The All Projects option displays all projects for which you have access authorization, regardless of the project status and who is responsible.

You can also refine information in the worklist by selecting the filter row icon. You can use any of the attributes such as Project ID, Project Name, Status, Person Responsible, Project Type and Customer Responsible to filter out the required information

You can use the following code list to filter your search according to the status :

Project Status	
Code	Status

Project Status	
1	In Planning
2	Started
3	Released
4	Stopped
5	Closed
6	Completed

From this subview you can directly access the project editor, which enables you to edit projects. You can open and edit a project by selecting the project ID in the **Projects** worklist, and clicking **View All** in the **Project Overview**. You can also open and edit a project by selecting the project in the worklist, clicking **Edit**, and choosing an option from the dropdown list. For example, if you choose **Project Plan**, the project automatically opens in the **Project Plan** view within the editor. For more information about maintaining projects, see Maintain Projects Quick Guide.

Creating Projects

Overview

In the **Projects** view, under the **Project Management** work center, and under the **Cost and Revenue** work center, the **New Project** screen helps you create new projects in your role as project manager or financial analyst. You can create new projects with or without using a source, for example, existing projects in the solution, Microsoft Projects®, or templates. Creating new projects from existing projects or templates ensures you can copy the structure and additional information of an existing project, and helps save you time and effort.

Entering Initial Project Data

In the **Enter Initial Data** step of the guided activity, you can choose a source for your new project, if required. If you choose an existing project as your source in the guided activity, the system lists all the projects for which you are responsible, and you can select from this list which project you want to copy. If necessary, you can search for and copy from additional projects for which you are the person responsible. When you create a new project from an existing project, the project structure, that is, all phases, tasks, and milestones are automatically copied. You can copy additional information, such as the planned work, which ensures that all work packages are copied. You can also copy attachments and the project team members from the existing project to the new project, if required. If you choose a Microsoft project as your source, you can upload your Microsoft project as an XML file and use it as a reference for creating your new project.

If you want to create a new project without using existing projects or templates as references, you can select **None** as the source. In this case, the system automatically skips to the **Define Project** step.

You choose a project type such as **Customer project with sales integration** or **Marketing project**. Each project type contains settings which are defined during business configuration and that apply to the corresponding project. There are several project types you can use and they are based on four different process variant types. These process variant types determine how the project costs are posted in Financials.

Process Variant Type	Project Type
Overhead Cost Projects	• Cost Collecting Project

Process Variant Type	Project Type
Direct Cost Projects	• Customer Project without Sales Integration • Direct Cost Project • Marketing Project • Research and Development Project • Strategic Sourcing Project
Customer Projects	• Customer Project with Sales Integration
Multi-Customer Projects	• Multi-Customer Project

For more details about process variant types and further information about configuring your project types, see Configuration: Project Types.

i Note

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

Copying a Source

You can select a project, a template, or Microsoft project (as an XML file) to use as a basis for creating your project.

If you choose a template as your source, the system lists all the active templates for which you are responsible. You can search for and copy from additional active templates if necessary. When you create a new project from a template, the project structure, that is, all phases, tasks, and milestones are automatically copied. You can copy additional information, such as attachments and the planned work, which ensures that all work packages are copied to your new project.

Defining the Project

In the **Define Project** step of the guided activity, you define the details for the project and you must enter a name in the **Person Responsible** field. This person must have access to the **Project Management** work center in order to be able to process project-related approvals such as time approvals.

i Note

By default, the **Step 3: Define Project** step of the guided activity displays **Project Name** as a mandatory input field to be updated by the user.

You can also combine other fields automaticallyto generate the project name. This is possible only when you already have defined custom fields in your project.

For example, if you have existing custom fields such as **Customer Alias** (with the value *<ABC Corp>*) and **Project Description** (with the value *<Staffing Service>*), you can choose to use the combination of these fields **Customer Alias + Project Description** (with the value **ABC Corp Staffing Service**) as the project name automatically.

To set up this automatic concatenation, partner developers can use string concatenation logic provided by PDI Addons using the Cloud Applications Studio.

Selecting the **Mail Notification** checkbox, enables the sending of an e-mail to the person responsible for the task and the project manager, on the assignment of a work package by a team member. In case there is no person responsible for the task, the e-mail will be sent to the person responsible for the parent task.

Under **Organizational Assignments**, you can assign the project to a program but it is mandatory to define the responsible unit for the project, that is, the department responsible for carrying out the project. You can also enter the requesting unit for the project, that is, the department that requested the project, depending on the project type. If you specify what type of time approval requirements apply to the project, this selection is inherited to subordinate project tasks. You can also specify the time recording requirements for each project task individually.

You can specify if a work description is required to be entered on the time sheet when time is recorded for a project task. This selection is inherited to subordinate project tasks. You can also specify the work description requirements for each project task individually.

Under **Customer**, you can enter customer details, which is visible depending on the project type, for all direct cost projects, for example customer projects. If you select the **Billable** checkbox, both the project (header) and its project tasks are automatically marked as billable as part of project invoicing. If you do not select this checkbox, both the project (header) and its project tasks are not billable.

Note

If you have marked a project (header) as billable, you can change the selection only when the project status is in planning. If you have marked a project as billable, you can change the selection for the project tasks in the **Maintain Project** editor, in the **Work** tab of the **Project Plan** view, even when the project status is released.

Depending on the project type, the **Profit Analysis Attributes** section may be visible, for example, for customer projects. You can define the customer group, product category, country, region, and sales unit. These attributes are used for profitability analysis reporting.

Defining the Team

In the **Define Team** step of the guided activity, you can assign team members to the project, or you can assign entire organizational units, for example functional units, cost centers, or reporting line units. If you assign organizational units to your project, this enables employees of these organizational units to record time to the new project.

Note

If you want to search for team members based on their skills and availability, you can do so in the **Project Management** > **Resources** view.

You can also select a default service for a team member, which is used when you assign the team member to a work package. You can also replace a team member with another one, which means that all task responsibilities and work packages will be assigned to the new team member.

Note

If the team member has already recorded times to the project, this employee cannot be replaced by another team member.

In the **Define Team** step of the guided activity, you can define the team members for your project and you can later staff your project on a more detailed level using these team members, in the **Maintain Project** editor, in the **Team and Staffing** view. For each team member defined, you can enter additional information, such as, the start date and finish date of the project assignment, and the committed work, that is, the amount of work the team member (or that employee's line manager) has confirmed. This additional information is used to calculate the resource availability. You can also select any team member to be a substitute for the project responsible, giving them the same authorizations and obligations as those of a project responsible.

Reviewing and Confirming the Project

In the **Review** step of the guided activity, you can review the details you have defined for your new project. If you want to make changes to your selections, you can go back to any of the previous steps of the guided activity. You can confirm the details of the project in the **Confirmation** step.

Maintaining Projects - Project Plan

Overview

Within the **Maintain Project** editor, you can use the **Project Plan** tab page to maintain your projects by using different interactive graphical subtabs. These graphical subtabs are as follows: **Gantt Chart**, **Work Breakdown Structure**, and **Network Diagram**. Depending on your personal preference and the activities you want to perform, you can choose between these interactive graphical subtabs, each of which offer different benefits. You can access all project details in the various tabs in the **Details** area, such as **Basic Data**, **Work**, or **Scheduling**. The **Project Plan** tab page allows you to modify the schedule and the structure of a project in a visual way, and to edit the project data quickly and easily.

The main tasks for each subtab on the **Project Plan** tab page are described below.

Visualizing the Project Schedule and Structure

The **Gantt Chart** subtab helps you visualize the project schedule and structure. The emphasis is on the timelines and tracking of the project progress. You can change the dates and durations of project tasks, and add dependencies between project tasks. You can also use the four arrows (Move Up, Move Down, Outdent, and Indent) to change the project structure, or you can drag objects to the desired position.

Organizing the Project Structure

The **Work Breakdown Structure** subtab allows you to organize the structure of the project, adding phases, tasks, and milestones, as necessary. You can graphically create and arrange the project structure by using drag and drop. The system adds new or moved project tasks as subordinates of the tasks onto which they are dropped. You can also use the four arrows (Outdent, Indent, Move Left, and Move Right) to change the project structure.

→ **Tip**

You can use the Step In function from the context menu of the project task to focus only on the selected project task and its subordinates.

Planning the Process Flow of a Project

The **Network Diagram** subtab facilitates you in planning a process-oriented project organization as you can change the project flow by adding dependencies between project tasks. You can add a dependency between project tasks by selecting a project task, moving the mouse cursor over the right side of the selected project task until the dependency link appears and connecting it to the successor project task. You can change the dependency type or delete a dependency by clicking the dependency link, and choosing the corresponding entry from the context menu. The system adds new project tasks on the same hierarchical level as the task onto which it is dropped.

Under **Project Plan**, the following tabs are available in the details section :

Basic Data Tab

Depending on the selected row, you can edit general data for a project as a whole (project header) and the project tasks, that is, phases, tasks, and milestones. The **Status** field gives you information about the current status of the project header or the selected project task. If any of your team members record time to the project, Fulfillment in Process (a small green box) appears next to Status. You can also set it or revoke it manually, on the project header or project task level, by choosing Start Processing or Revoke Start Processing, respectively.

The Person Responsible field at project header level represents the project manager. It is necessary that this person has access to the Project Management work center so that project-related approvals, for example, time approvals can be processed.

The project manager can define the persons responsible at project task level. A blank entry in the Person Responsible field for a project task means that the person responsible of the superior project task is used, or the next superior project task. Depending on the time confirmation type selected during project creation, all time confirmations to the project are sent to project responsible or their substitutes for approval. This selection is inherited to subordinate project tasks. You can also set the time confirmation requirements for each project task individually.

Here you can also define the risk of the project, priority, put the project task or project header on hold or add comments. Some fields are available only on the project header level such as New Risk, Project Language and Estimated Project PoC.

Project Settings Tab

Here you can define time recording settings on project level.

The time recording settings that you define here are used for a more detailed decision on which situations time recordings shall be approved or not allowed at all. They restrict the decision based on the task time recording setting even more.

i Note

Changes made to any time recording options in the project do not affect time recordings that are already In Approval.

The following settings can be defined:

- Approver:

  Setting this option defines who is receiving the time recording approval, either the project lead or the task owner.

  If the task owner is selected, but not maintained on the respective task, the task owner of the next task in the hierarchy is used as approver.

- Non-Listed Service:

  Setting this option to Approval Required or Not Allowed affects time recordings for a service that is not listed under Products.

- Non—Team Member:

  Setting this option to Approval Required or Not Allowed affects time recordings for a person that is not part of the project team.

  This means that the person is neither explicitly listed as team member nor is part of one of the listed organizational units under Team and Staffing.

- Outside of Planned Period:

  Setting this option to Approval Required or Not Allowed affects time recordings whose date for which the hours are recorded is outside of the planned period of the relevant work package. The planned period of the work package is defined by its Start Date and End Date. If no date is defined for this work package, the corresponding date of the planned period of the task, defined by its Earliest Start Date and the Latest Finish Date, is considered instead.

- Exceeds Planned Work:

Setting this option to Approval Required or Not Allowed affects time recordings that – in addition to time recordings for the same work package that are already Released or In Approval - exceed the planned work of the respective work package.

For new projects the time recording settings on project level are defaulted as follows:

- Approver: Project lead
- Non-Listed Service: No Approval Required
- Non—Team Member: Approval Required
- Outside of Planned Period: No Approval Required
- Exceeds Planned Work: No Approval Required

i Note

These time recording settings do not have any influence on the work package determination (see chapter **Work Package Assignment Determination Order** below).

i Note

Period Plans are not taken into account.

i Note

For intercompany projects, these settings are hidden.

Work Package Assignment Determination Order

For the assignment of time recordings to work packages, the following order is applied:

1. Service and team member are maintained.
2. Only the team member is maintained.
3. Only the service is maintained.

    i Note

    If there exist several work packages for which only a service is maintained, then the time recording will be assigned to the work package that has been created first.

If no fitting work package exists, a new work package is created.

The start date and the end date of a work package do not have any influence on the assignment of time recordings as the information is neither mandatory nor binding and can be changed later on.

i Note

If neither a service nor a team member is maintained for a work package, time recordings cannot be assigned to this work package. Instead of this, the time information of the period plan is the relevant assignment criteria.

Work Tab

You can plan the estimated work effort for the project header or for phases and tasks. This tab is not available at milestone level because work can not be assigned to milestones. Using a table format, you can quickly plan one or more work packages for a selected project task.

Note

Alternatively, you can add work packages to a project task under **Staff by Structure**.

Each row in the worklist represents a work package. Work packages contain at least one of two pieces of information: a service (what is to be done), or a team member (who should do it).

As soon as the project status is started or released and the team members do their time confirmations, the actual work and remaining work are updated by the system. The actual work is read-only and is filled from the time confirmations. If the planned work is changed and there are not yet any manual changes of the remaining work, the remaining work is adapted automatically by the system (planned work minus actual work). If the planned work of a work package is changed and there are manual changes of the remaining work, the system does not recalculate the remaining work. The remaining work can be changed by the project manager, or by the responsible team member in the **Project Team** work center. If you want to see all time confirmations and changes made to the remaining work, click **Display History**.

For more information about remaining work, see Remaining Work — Project Plan.

If a project is defined as billable, all work packages are billable by default. You can mark the work packages as not billable on an individual basis, if necessary. For billable work packages all corresponding recorded expenses are included in the project invoice when an invoice request is created.

If a project is defined as not billable, the associated work packages are not billable either.

In case you expect that the quantity of service will be more than the quantity requested in the purchase request you can select the **Over-Delivery Allowed** checkbox. This will ensure that the external service provider will be allowed to record time for the service provided, even if it is more than the quantity entered on the project purchase request.

If you select for this feature to be available for a work package, when the purchase request is created, the **Over-Delivery Allowed** checkbox will be selected by default for that purchase request item. You can choose to edit this feature for each purchase request item if needed.

For more information, see Maintaining Projects - Products .

Work packages can be based on either working days or hours. Note that the data in the **Unit of Work** field can only be changed on selection of the project header row. Changing the unit of work is only possible until the first time confirmation exists.

Period Plans are used for the detailed timely planning of a work package. Start and End Date are required. It is possible to schedule time gaps, but overlapping periods are not allowed.

The **Unassigned Line** summarizes the planned, actual and remaining work that do not fall in a planned time frame of the period plan.

Materials Tab

You can plan materials in required quantities for the project header or for phases, milestones and tasks. You can mark the materials as not billable on an individual basis, if necessary. The only mandatory entry is **Material**.

You can plan to obtain the material for consumption in a project by either:

- Sourcing them from stock
- Purchasing them from an external supplier

If you are sourcing the material needed for the project from stock, select the **From Stock** checkbox, when you are planning the material.

An unplanned material consumption from stock increases the actual quantity of a material where the **From Stock** checkbox is selected. In case this material does not exist at the point of time the material consumption from stock has taken place, a new material where the **From Stock** checkbox is selected is created automatically by the system.

Only when you select the **From Stock** checkbox in the **Materials** tab, you can create a project stock order for the sourcing of materials from stock from the **Products** tab.

For more information, see Maintaining Projects - Products .

Expenses Tab

You can plan the expense type and the estimated expenses for any portion of the project, such as the project header or project tasks, for example, hotel costs or flights.

Revenues Tab

You can plan the revenue type and the estimated revenues for any portion of the project, such as the project header or project tasks, for example, domestic or international sales.

Scheduling Tab

You can edit dates and durations for the project header or for project tasks. Based on your entered data, the system calculates the earliest and latest dates. All the dates are categorized into several groups:

- **Planned Dates**
- **Scheduled Dates**
- **Actual Dates**

The displayed fields vary depending on whether the project header or project task is currently selected.

The actual start date on the project task level is the date of the earliest recorded time confirmation via the time sheet; it is also editable for the project manager. The actual start date of the project is the earliest actual start date of all project tasks. When the project status is in planning, the scheduling is performed automatically by the system. When the project status is started or released, the scheduling has to be triggered manually by clicking **Schedule**. The actual finish date on project task level is editable for the project manager. The actual finish date of the project is the date when the project has been completed or closed (corresponds to the completion date of the project) or is the date when the project has been stopped.

The duration of a phase or task can only be changed if there are no subordinate tasks. If the phase or task has subordinate tasks, its duration is automatically calculated by the system and cannot be changed. If the actual start/finish date on the project header level is populated, then **Project Duration** is automatically populated. There is no duration for milestones.

Checklists Tab

You can add and edit checklists, which are assigned to the project header or to project tasks. Checklists are used by project managers and team members as a reminder of all the aspects of a project that need to be considered. As the project manager, you can create a checklist with relation to a project task. As a consequence, the team member responsible for the task will also be responsible for the checklist and can update the checklist in the **Project Team** work center. The status of a checklist is read-only and is calculated considering the status of its individual checklist items.

i Note

You can see an overview of your project checklists in **Checklists** of the **Project Overview** tab page on the **Maintain Project** screen.

Attachments Tab

You can add attachments and assign them to the project header or to project tasks.

> **Note**
>
> You can see an overview of all attachments for your project under **Attachments** of the **Project Overview** tab page on the **Maintain Project** screen.

Accounting Tab

Under **Organizational Assignments** you can define the department responsible (responsible unit) for carrying out the project. For overhead cost projects, you can also enter the requesting department (requesting unit) for the project. Here you can also assign the project to a program.

> **Note**
>
> Programs are used to group several projects together to benefit from aggregated reporting. Any organizational unit can be flagged as a program in the **Organizational Management** work center.

Under **Customer**, which is visible for direct cost projects and customer projects, you can define a project as billable for project invoicing. If you define the project as billable, all work packages are defined as billable by default. You can mark the work packages as not billable on an individual basis, if necessary. If a project is defined as not billable, the associated work packages are not billable by default. Customer projects are billable by default and you cannot change it.

Under **Profit Analysis Attributes**, which is only visible for direct cost projects, you can define details, such as the customer group, product category, country, and sales unit. These attributes are then used within profitability analysis reporting.

> **Note**
>
> The **Billable** checkbox at project header level can only be changed while the project status is in planning. At work package level, the checkbox can be changed at a later point in time when the project is already released.

The **Accounting** tab page has more details on the project header level. At a project task level, you can only enter a responsible unit as long as the project task is in planning.

Dependencies Tab

You can add and change dependencies between project tasks in a table format. The selected project task represents the predecessor and you can enter the successor in the table and also choose the desired dependency type. You can also enter a lag, if needed. The tab is not available on project header level.

> **Note**
>
> You should generally add dependencies between project tasks graphically under **Gantt Chart** and **Network Diagram** of the **Project Plan** tab page on the **Maintain Project** screen.

Related Information

[Maintain Projects Quick Guide](#)
[Maintaining Projects — Products](#)

[Remaining Work — Project Plan](#)

[Project Period Planning](#)

Maintaining Projects - Gantt Chart

Overview

Within the **Maintain Project** editor, you can use the **Gantt Chart** to maintain your projects. When you open the **Maintain Project** editor and the **Project Plan** view, the **Gantt Chart** is displayed by default. Using the **Gantt Chart** enables you to view and maintain the project schedule and structure, with an emphasis on the timelines and progress of the project.

The **Gantt Chart** has two sections: a table section and a graph section. In the table section you can directly edit relevant key information, such as, the project task names, durations, and the person responsible. The table section contains general information by default. You can see work-related and schedule-related information by choosing **Work** or **Schedule** from the drop down list in the **Show** field. Each option for this field represents a set of predefined columns in the table section. In the graph section you can change the start or finish dates of a project task, change the duration of a project task, or create dependencies between project tasks.

In the graph section of the chart, phases, tasks and milestones are represented by the following colors and symbols:

- The project header is represented by a blue brace symbol
- Phases are represented by blue phase symbols
- Tasks are represented by gray bars
- Milestones are represented by gold diamonds

  Note

  Phases and tasks with duration of zero are represented by a blue diamond (phases) and a gray diamond (tasks).

- Phases, tasks, and milestones that lie on the critical path are colored in red
- The Percentage of Completion (PoC) for phases and tasks for which actual work was recorded is represented by a thin green bar.

  Note

  Actual work can not be recorded against milestones, therefore no PoC is shown.

- Constraints are represented by yellow cones at either end of the affected project task. A start constraint date is represented at the start of the project task, and a finish constraint date is represented at the end of the project task. Milestones can have only one constraint because they only have one date.

The main tasks in the **Gantt Chart** subview are described below.

Adding and Editing Project Tasks

You can create or edit a project task in the **Gantt Chart** subview by directly entering the name, duration, and the person responsible in the table section of the chart.

You can do this by simply entering the project task to the last row of the table section. Alternatively, you can create tasks in the graphical section by drawing a task bar. This way you can easily add new tasks at the end of the project structure which will be sorted on the same hierarchy level as the task below which they are added.

To add a new phase, task, or milestones within the project structure, choose **Add**. For this you select the project task after which you want to add another phase, task, or milestone. The new project task is created on the same hierarchy level.

Updating the Project Structure

You can update the project structure in the table section of the chart by using the Move Up, Move Down, Outdent, and Indent arrows. This rearranges the sequence and hierarchical level in which the project tasks appear in the project structure. You can also rearrange the order of the project tasks by using your mouse for drag and drop. In the table section, you can select the project task you want to move and drag it upwards or downwards to another row in the table, which is emphasized by a bold line. You can add subordinate project tasks to phases and to tasks, but not to milestones.

Changing the Project Dates and Durations

You can change the dates of project tasks in the graph section of the chart by moving the corresponding bar to the left or the right. If the toolbar shows the **Earliest Dates**, the system automatically sets a start constraint date when you graphically move a project task. If the toolbar shows the **Latest Date**, the system automatically sets a finish constraint date when you graphically move a project task. You can also change the duration of project tasks in the graph section of the chart, by enlarging or reducing the length of the corresponding bar. You can change the duration of phases or tasks that have no subordinate project tasks. If a phase or task has subordinate project tasks, their durations are read-only and derived by their subordinates. Milestones do not have durations because they occur on one date.

Creating Dependencies Between Project Tasks

You can create dependencies between project tasks in the graph section of the **Gantt Chart**.

Further functions in the Gantt Toolbar include:

- Zoom In/ Zoom Out Icons: Changes the graphical display of your project
- **Schedule** button: As long as the project status is in planning, the scheduling is done automatically. After your project is started or released, you must manually click the **Schedule** button to reschedule the project, which is relevant if you have changed dates or durations.
- **Scroll To**: You can center the graphical view to today, or to a project task.
- **Find**: You can find a project task.
- **Hide Details** or **Show Details**: Shows or hides the details area.

Maintaining Projects - Team and Staffing

Overview

Under **Project Management** > **Projects** select a project, click **Edit** and then choose **Team and Staffing**, under which you see **Team**, **Staff by Structure** and **Staff by Team Member** subtabs.

Under **Team** you can assign the team members you want to work on your project. Additionally, you can assign organizational units to the project so that the employees of these organizational units can record time to the project and receive the project header task in the worklist of their time sheet. Assignment of an organizational unit to the project is optional.

Under **Staff by Structure** you can see the work packages that have been assigned to phases and tasks during project planning. A work package details at least one of three pieces of information: a service (what is to be done), a team member (who should do it), and an amount of planned work (how much needs to be done). Phases and tasks can contain one or more work packages, and you can see what work packages are staffed and unstaffed. Staffed work packages are visualized with an icon of a person with a green light, and the name of the team member is listed in the table. Unstaffed work packages are visualized with an icon of a person with a red light, and Not Named (N.N.) is listed in the table.

Under Staff by Team Member, you can see the work packages that have been assigned to each team member in the project. You can also see all unstaffed work packages listed under Not Named (N.N.).

Under each of the subtabs, you can view a team member's availability, project assignments, and further information by clicking Show Availability. The resource availability is reduced considering the start and finish dates of the project assignment and the committed work for that team member.

The main tasks on the Team and Staffing tab page are described below.

Defining Team Members

In Team you can do the following:

- Assign new team members to the project.
- Remove team members from the project.
- Replace team members within the project.
- View the committed work, which is the work confirmed for a team member, either by their line manager or by a resource manager (if available).
- View the default service, which is the service used when the team member is staffed to a work package.
- Assign a team member to be a substitute for the project responsible. You can mark several team members as substitutes which grants them all the same access rights and responsibilities as the project responsible has.

In the Mandatory Approval of Time Recording column, you can define whether this team member's time recordings require approval. This setting further restricts the decision based on the task and project time recording settings.

i Note

For newly added team members, the **Mandatory Approval of Time Recording** option is set to No Approval Required. It is the responsibility of the project lead to maintain this option according to their requirements.

i Note

Changes made to any time recording options in the project do not affect time recordings that are already "In Approval".

i Note

For intercompany projects, this setting is hidden.

The Plan Variance column details if the forecast work, that is the actual work and the remaining work, differs from the planned work, and if so, the information is highlighted in red. If this occurs, you should take corrective measures and adapt the project planning, for example by increasing the planned work. The Commitment Variance column details if the forecast work, that is the actual work and the remaining work, differs from the committed work, and if so, the information is highlighted in red. If this occurs, you should ask the team member's line manager to increase their committed work.

You can personalize this screen by adding the following optional fields:

- Reporting Line Unit

- Job/Function
- Commitment Last Changed On
- Commitment Last Changed By
- Assignment Date (the person's date of assignment)

The resource manager edits the **Start Date**, **End Date** and **Committed Work** fields, although **Committed Work** can also be edited by the project manager. In any case, the system keeps track of all entries in **Commitment Last Changed On** and **Commitment Last Changed By**. These fields cannot be edited.

Staffing the Project by Structure

In **Staff by Structure** you can view the work packages that have been assigned to phases and tasks in the project during work planning. You can assign a new work package to a phase or a task, with a chosen team member. To do this, you select the task or phase and choose an entry from **Staff with Team Member**. You can select a task or phase and staff it with a team member. As a next step, you can enter the service and the planned work for each team member directly in the table.

You can also update the staffing by a work package (staffed or unstaffed) and by choosing a team member from **Staff with Team Member**. As a result, the selected work package will be staffed by the chosen team member.

If you want to see all the team members, project tasks assigned to them and work-related figures in one place, click **Staffing List**. In **Staff by Structure** you can also delete a work package if necessary.

Staffing the Project by Team Member

In **Staff by Team Member** you can view the work packages that have been assigned to team members in the project during work planning. You can view which work packages are staffed and unstaffed, and you can assign team members to unstaffed work packages.

Note

Work packages can only be staffed with different team members as long as no actual work has been recorded to the work package. If a work package is selected which contains actual work, then **Staff with Team Member** and **Delete** are deactivated.

As in **Staff by Structure** you can also update the staffing by selecting a work package (staffed or unstaffed) and by choosing a team member from **Staff with Team Member**. As a result, the selected work package will be staffed by the chosen team member.

Example

Ron wants to add a new team member to the project team for the Residential Line Exhibition project, and then staff this team member to several tasks. He opens the **Team and Staffing** tab page on the **Maintain Project** screen, and **Team** opens by default. He chooses **Add Row** and enters Mark Pope as a new team member for the project. Using **Show Availability**, Ron views Mark's availability to work on the project in the coming weeks, and he enters a start date and a finish date for Mark's assignment to his project. In **Staff by Team Member** he assigns Mark to one of the unstaffed work packages in the project by selecting his name from **Staff with Team Member**. The work package is added to Mark's worklist in the **Project Team** > **Project Work** > **Work Packages**.

Maintaining Projects - Products

Overview

Within the **Maintain Project** screen, you can view the overall project by products, on the **Products** tab.

You may have planned services for the project that need to be completed but for which you do not have the staff, either in the project team or in the organization. You can select a service in this view and conveniently create a purchase request for a service agent to complete the work.

In the same way, you can select the planned materials and request them for the project.

With materials, you can choose to either to:

- **Source the material from your own stock**

  To source the materials from stock, the **Sourcing Materials from Stock** business option must be selected in your solution configuration. To find the business option **Source Materials from Stock**, go to the **Business Configuration** work center and choose the **Implementation Projects** view. Select your implementation project and click **Edit Project Scope**. In the **Scoping** step of the project, ensure that **Project Planning** is selected within **Project Management**.

  In the **Questions** step, expand the **Project Management** scoping element and select **Project Planning**. Select **Project Stock Consumption** and answer the questions related to **Sourcing Materials from Stock**.

  To source a material from your own stock, you need to select the **From Stock** checkbox while planning for the material needed in the project.

  In the **Products** tab, under the **Product Overview** subtab, you can then select this material and request for it by creating a project stock order. Under the **Project Stock Orders** subtab, you can subsequently view the details of your project stock order.

- **Purchase the needed materials from an external supplier**

  To purchase a material from an external supplier, you need to create a purchase request. You can choose a preferred supplier and you can also make notes or add attachments to the purchase request. On the **Purchase Requests** subtab, under the **Products** tab, you can subsequently view the status of your purchase request.

You can view all other existing purchase requests, purchase orders, for the project, including the details and document flow in their respective tabs under the **Products** tab. The document flow shows the complete purchasing process, including purchase requests, purchase orders, goods and service acknowledgments, invoices, project stock orders, and goods issues.

For each planned service or material you can compare the quantities given in the table. This comparison helps you decide if you want to purchase external support or material for your project. You can find these quantities in **Products** > **Product Overview**

Note

Some of the fields are not visible by default, but they are available for personalization.

Key Figure	Service/Work	Material
Planned Quantity	Shows the total planned quantity per service.	Shows the total planned quantity per material.
Actual Quantity	Shows the quantity that has been recorded by all team members assigned to the service.	Shows the quantity of material that has been already used.
Remaining Quantity	Shows the difference between the planned and actual quantity of service. Note that the remaining quantity can be changed manually.	Shows the difference between the planned and actual quantity of material. Note that the remaining quantity can be changed manually.

Key Figure	Service/Work	Material
Overall Requested Quantity	Shows the quantity that has been requested/ordered externally.	Shows the quantity that has been requested/ordered externally or from stock.
Delivered Quantity	Shows the quantity that has been provided by an external supplier as requested.	Shows the quantity that has been delivered by an external supplier or consumed from stock as requested.
Overall Outstanding Quantity	Shows the quantity that is expected to be provided by an external supplier. Overall Outstanding Quantity = Outstanding Order Quantity + Outstanding Delivery Quantity.	Shows the quantity that is expected be delivered by an external supplier or consumed from stock. Overall Outstanding Quantity = Outstanding Order Quantity + Outstanding Delivery Quantity.
Outstanding Order Quantity	Shows the quantity that has been requested externally but not yet ordered.	Shows the quantity that has been requested externally but not yet ordered.
Outstanding Delivery Quantity	Shows the quantity that has been ordered externally but not yet provided by the external supplier.	Shows the quantity that has been ordered externally but not yet delivered by the external supplier or ordered from stock but not yet consumed.
Overall Reassigned Quantity	Shows the quantity that was originally requested/ordered for this project/project task, but manually reassigned in the purchase order or during delivery.	Shows the quantity that was originally requested/ordered for this project/project task, but manually reassigned in the purchase order or during delivery.
Quantity Open for Request	Shows the quantity that is open for external procurement. Quantity Open For Request = Remaining Quantity – Overall Outstanding Quantity.	Shows the quantity that is open for external procurement or procurement from stock. Quantity Open For Request = Remaining Quantity – Overall Outstanding Quantity.
Unstaffed Work	Shows the quantity of work that has been planned but not yet assigned to any team member.	n/a

Note

- Quantity Open for Request for work packages is not applicable for internal team members.
- For services project purchase requests are always considered, and for shopping carts and purchase orders where **Time Recording Required** is set.

Note

The externally requested quantity of a product, either a service or material, is the sum of all purchase requests and purchase orders according the following rules:

- The quantity of a purchase request is considered as requested quantity as soon as its release status is **Released** or its release status is **Release Requested** and the purchase request is already in approval.
- If for a purchase request no purchase order exists, the quantity of the purchase request is used.
- If one or more purchase orders exist, and the sum of the of the purchase order quantities falls below the quantity of the purchase request, the quantity of the purchase request is used.

- If one or more purchase orders exist and the sum of the of the purchase order quantities exceeds the quantity of the purchase request, the sum of the purchase order quantities is used.

Note

You can create both purchase requests and project stock orders from **Product Overview** tab or from **Task Overview** tab.

Purchase Requests

If you require external support for a service or a material, you can directly create a purchase request for the selected product on the **Product Overview** tab.

Note

You can select multiple products to create a single purchase request. The purchase request will display all the products and quantities required.

You can create a purchase request for:

- The whole project
- The released project tasks
- The service/supplier

Options for Purchase Requests Creation

Option	Description
Purchase request for whole project	The quantity of service or material to be requested from a supplier is displayed for the project as a whole.
Purchase request for released project tasks	The quantity of the work package or material to be requested from a supplier is displayed for each of the released project tasks.
Purchase request for service/supplier	The quantity of service or material to be requested is displayed for each supplier.

Alternatively you can create a purchase request for the products of the selected project task in the **Task Overview** tab. You have the following options for creating a purchase request:

- For All Services and Materials
- For All Services
- For All Materials

In the newly created purchase request you can enter details, such as a service agent or supplier, if you want to purchase the time of someone you have previously worked with or if you want to purchase material from a known supplier. You can also enter further information including the **Quantity**, the **Delivery Location**, **Notes**, and **Attachments**. If you enter a customer that already exists in the system, the customer's address is entered into the purchase request automatically. If this address is not available, the address of the **Delivery Location** or **Recipient** is used. You can edit the system defaulted address manually to redirect the delivery from the supplier.

In case you expect that the quantity will be more than the quantity requested in the purchase request you can select the **Over-Delivery Allowed** checkbox. This will ensure that for that the external service provider will be allowed to record time for the service provided, even if it is more than the number of hours entered in the project purchase request. For materials, this will ensure that the supplier will be allowed to deliver more than the quantity entered in the project purchase request. You can then edit this feature for individual purchase request items in the **Basic Data** tab under the **Purchase Requests** tab. Once the purchase order has been ordered, editing this feature is not possible. This feature is displayed in the purchase order created from the purchase request as a read-only field.

If the multistep approval process for a project purchase request is enabled in your solution, you can submit this project purchase request for approval once it is created by clicking **Submit**.

If you do not want to submit the project purchase request for approval right away, click **Finish** to save your changes.

If you want to create a draft document of the project purchase request and want to process the draft at a later of point of time, click **Draft**. If you create a draft of the project purchase request, the project purchase request document will not be released for approval and hence will have the status **Not Released**. You can remove an item in a project purchase request in draft status.

The newly created purchase request will be shown in the **Purchase Requests and Orders** work center as soon as it is released, where the relevant person from the purchasing department can process it and manually create a purchase order. You can also see this purchase request under **Products** > **Purchase Requests**.

Note

If the following conditions are fulfilled, a purchase order is created automatically by the system:

- A contract or list price exists for the purchased product.
- Automatic purchase order creation is enabled for the product category to which the purchased product belongs. This can be done using the common task **Define Automatic Creation of Purchase Orders** in the **Purchase Requests and Orders** work center.
- If a preferred supplier has been entered in the purchase request, this supplier must correspond to the supplier determined by Supplier Relationship Management.

If you create a purchase request for a service directly from the project, the **Time Recording Required** checkbox is automatically selected in the purchase order, and the service agents procured for that project must record their time using time sheets. If you do not want the service agents to use time sheets, you can deselect the checkbox in the purchase order.

Note

You can order services and materials using a shopping cart with account assignment to the project or a project task. You can also order services and materials by directly creating a purchase order with account assignment to the project or a project task.

If the **Evaluated Receipts Settlement** checkbox is selected in the purchase order, supplier invoices are automatically created by the system based on goods and services receipts as defined in the **Supplier Invoicing** work center, **Evaluated Receipts Settlements** view.

You can see all of your purchase requests under **Products** > **Purchase Requests**. This subtab gives you the details of a purchase request such as **Item Type**, **Project Task** to which the costs are assigned as well as some additional data in the **Details** section, such as information in **Basic Data**, **Delivery To**, **Notes** and **Attachments**.

In case the cost of purchase request item with source as shopping cart is distributed among multiple project tasks, the project tasks are shown under the **Project Task Assignment** tab. Otherwise, the project tasks are shown under **Project Task** column. The **Project Task Assignment** tab shows project task assignments for the selected purchase request item. Only the project tasks of the project, which is currently open, are displayed here.

Along with **Requested** and **Ordered** quantities of services or materials, you can also see whether there is any **Open Quantity**, that is, if there are some services or materials you requested but for which there is still no purchase order created. **Purchasing Status** notifies you of the current status of a purchase request item and **Purchase Request Source** tells you whether the currently selected purchase request item was created from a shopping cart or a project. If a purchase request item was created from a project, then you can change, for example **Project Task**, **Quantity** or **Requester**. If **Purchasing Status** is **Pending** or **Requested**, it pertains to a purchase request and if **Purchasing Status** is **Partially Ordered**, **Ordered**, **Partially Canceled** or **Canceled**, then it pertains to a purchase order.

If the multistep approval process for a project purchase request is enabled in your solution, then you will be able to view the **Purchase Request Approval** subtab under the **Products** tab.

i Note

Configuration settings are normally performed by an administrator. If you do not have the required authorization, contact your administrator.

To find this business option, go to the **Business Configuration** work center and choose the **Implementation Projects** view. Select your implementation project and click **Edit Project Scope**. In the **Scoping** step of the project, ensure that **Project Planning and Execution** is selected within **Project Management**.

In the **Questions** step, expand the **Project Management** scoping element and select **Project Planning and Execution**. Select **Project Procurement** and answer the questions related to multistep approval process for project purchase requests.

The value limit for project purchase requests can be determined by the administrator by setting up a work distribution rule in the **Employee Work Distribution** view under the **Application and User Management** work center. For more information, see Employee Work Distribution Quick Guide.

In the **Purchase Request Approval** tab you can see all the project purchase requests that have been created, and their approval status. A project purchase request that has been finished and saved but not sent for approval can be submitted by clicking on **Submit**.

Project Purchase Request	Corresponding Approval Status
Saved without being submitted for approval	Not Started
Submitted for approval	In Approval/Approval not Necessary (depending on the net value)
Approved	Approved
Approval rejected	Rejected
Sent back for revision	In Revision
Withdrawn from approval	Withdrawn

For more information on the approval process, see Setting Up Approvals and Approval for Project Purchase Request

You can also withdraw project purchase requests from the approval process by selecting the project purchase request and clicking **Withdraw from Approval**.

For each project purchase request, the approvers and approval status are displayed in the **Approval Process** table.

Under **Products** > **Purchase Orders** you can see the details of your purchase orders. Additional information such as **Item Type**, **Product**, **Project Task** to which the costs are assigned and **Quantity** is also available.

In case the cost of purchase order item is distributed among multiple project tasks, the project tasks are shown under the **Project Task Assignment** tab. Otherwise, the project tasks are shown under **Project Task** column. The **Project Task Assignment** tab shows project task assignments for the selected purchase order item. Only the project tasks of the project which is currently open are displayed here.

Example:

Ron opens the **Products** tab in the **Maintain Project** screen to view all time-based services that are planned for his project. He sees that there are 10 days of planned work for the consulting service, 6 days of unstaffed work for the same service, and that there is externally requested work for 4 days for this service. The quantity of actual work remains zero until some of the work has been done and confirmed by team members assigned to the service. Ron now wants to get external support for another 2 days; he clicks **Create Purchase Request** and chooses to create a purchase request for the released project tasks. A purchase request opens and he enters the details including the requested amount of work, in this case 16 hours, which equals 2 days, service delivery dates, a preferred service agent, and the delivery location. He clicks **Finish** and then **Save** to save the purchase request. The purchase request is sent to the purchasing department when the corresponding project task status is released. Ron can see this purchase request listed in the **Purchase Requests** subtab.

Project Stock Orders

If you are sourcing materials from your own stock you have to create a project stock order. You can create project stock orders in two ways.

Project Stock Order	Description
Project stock order for the whole project	In this type of project stock order, the quantity of material to be sourced from stock is displayed for the project header task as a whole.
Project stock order for the released project tasks	In this type of project stock order, the quantity of material to be sourced from stock is displayed task wise for each of the released tasks.

If you want to create the project stock order click **Finish**. You cannot make changes to the document after you have finished the document.

If you want to create a draft document of the project stock order and want to process the draft at a later of point of time, click **Draft**.

If you want to cancel the creation of Project Stock Order, click **Cancel**.

The project stock orders once created are displayed in the **Project Stock Orders** tab. Project stock orders contain materials, with 3 types of options.

Item type	Description
Consumption at Site	Materials will be consumed at the site of the project.
Pick-Up	Material is picked up and carried to the site, by the person responsible.
Pre-Delivery	Material is pre-delivered to the site.

You can have materials of type **Pick-Up** and **Pre-Delivery** in one project stock order, however materials of type **Consumption at Site** cannot be combined with the other item types and a separate project stock order has to be created.

Description of fields in the project stock orders tab

- **Status**: Gives the life cycle status of the project stock order. The status can be:

Status	Description
In Preparation	When the project stock order has been newly created.
Requested	On saving the project stock order.
In Process	Once material has been allocated.
Completed	Once all the requested quantity has been consumed. **Note** You can manually complete a project stock order if after partial delivery of material, the rest of the order is cancelled.
Canceled	**At the item level**: When all material associated with an item is canceled

- **Cancelation Status**: Gives the cancellation status of the project stock order. The status can be:

Cancelation Status	Description
Not Canceled	When the project stock order is being processed or has been delivered.
Canceled	**At the item level**: When all material associated with an item is canceled.
Partially Canceled	When a few items under a header have been canceled.

- **Delivery Status**: Shows the extent to which the requested material has been delivered. The status can be:

Delivery Status	Description
Not Started	When the project stock order has been newly created.
In Process	On saving the project stock order.
Finished	Once all the requested quantity has been delivered.

- **Availability Status**: Availability of material is represented by colored indicators.

Indicator	Description
Colorless	Confirmation of material availability is pending.
Green	Material is available in stock.
Red	Material is not available in stock.
Yellow	Material might not be available in the requested quantity or on the requested date.

Note

The indicator at the header level reflects the lowest indicator status at the item level, for the items under that header. For example: If there are 3 items under a header, and two of them show a green indicator and one of them a red indicator, the header will show the red indicator.

- **Ship From Location**: The site from which the material is being shipped. Many companies might have inventories of material at particular sites and this site will then become the **Ship from Location**. The ship from location is mandatory.

  For the item type Pre-Delivery, ship-from location can be an internal or externally managed location. For the item type Consumption at Site and Pick-up, ship-from location can be only an internally managed location.

- **Ship To Location**: The site to which the materials are delivered. This can vary depending on item type:

Ship To Location	Description
For Consumption at Site	The project manager is the recipient.
For Pick up and Pre Delivery	The customer for the project and the customer location are the recipients.

Once the material is allocated, it is seen in the **Delivered Quantity** column, and can be used for the project by clicking **Consume**. Consumed material is displayed in the **Consumed Quantity** column.

This material can then be used in the project.

You can cancel a project stock order at any point during the execution of the project. When you cancel a project stock order after a certain quantity of material has been delivered, and when no more material is needed, you can close the project stock order by clicking **Complete**.

i Note

When completing or closing a project, the user should ensure that all stock orders are completed. If not, errors will occur in the follow-up processes of logistics, because the referenced project is not active anymore. Hence, when closing a project the user should decide on what to do with the open project stock orders (cancel, complete, or leave open).

If you have marked material as consumed in the system, but have not used it in the project, you can return this material either as stock material or non-stock material. You can do this in the **Internal Logistics** or **Project Management** work center, by starting the **Consumption for Project** common task.

In case you are returning the material to stock, you need to select the **Project Stock Type** checkbox for each item.

If you have not consumed the allocated material and also not marked it as consumed in the system, you can return the allocated material. In the **Consumption at Site** and **Pick-up** scenarios, you can use the **Goods Movement** common task in the **Internal Logistics** work center to move the material to another logistics area. This removes the tagging of the project to the material. In the **Pre-Delivery** scenario, you can use the **Change of Stock** common task in the **Internal Logistics** work center to remove the tagging of the project to the material. Following this, you can return the material to stock using the **New Parts Return Notification** common task in the **Inbound Logistics** work center.

Related Information

Project Stock Orders.

Configuration: Project Types

Overview

⚠ Caution

This document contains details and instructions regarding configuration settings. Such settings are normally performed by an administrator. If you do not have the required authorization, contact your administrator.

To find this activity, go to the Business Configuration > Implementation Projects view. Select your implementation project and click Open Activity List. Select the Fine-Tune phase, then select the activity from the activity list.

You can use this configuration activity to define your individual project types based on your business needs. The list contains predefined project types and you can change them or add additional ones. You can then define default settings for each individual project type. When creating a new project, the project type is a mandatory field. The default settings of the chosen project type will be applied to the new project. You can view and edit the default project types you selected in the Scoping step.

Settings

The controls and possible settings in this activity are explained below.

Controls and Settings	Explanation	Task
Obsolete	Indicator for project types that are no longer in use.	Select if you want to make a project type obsolete. That prevents it from appearing on the list of available project types when you are creating a new one.
ID	Unique identifier of a project type.	Enter a unique identifier that starts with Z.
Name	Name for the project type.	Enter the name of the project type.
Prefix	Prefix which will be used when automatically generating the project ID.	Enter a prefix for the project type.
Separator	Separator which will be used when automatically generating the project task ID. The separator will be inserted between the project ID and the project task ID.	Select one of the predefined separators.
Process Variant Type	The following process variant types are available: • Project Processing - For Overhead Cost Projects • Project Processing - For Direct Cost Projects • Project Processing - For Customer Projects Process variant types are predefined by SAP. This setting is critical since it determines how costs are posted in financial and management accounting. You cannot change the process variant type after you saved the project type. • **Overhead Cost Project** Use this process variant type for internal projects which serve as additional collectors of overhead cost. Projects of this type allow the allocation and reporting of overhead costs in more detail than cost centers alone. All costs charged to projects of this type are automatically reallocated back to the cost center that requested the project (Requesting Unit). • **Direct Cost Project** Use this process variant type for internal projects which support specific market segments. Project costs and	Select the process variant type that specifies how the project costs are posted.

Controls and Settings	Explanation	Task
	revenues remain on the projects and are posted as Other Operating Costs and Other Revenue, not as Cost of Goods Sold and Sales Revenue. Therefore, do not use this project type for projects which you run on behalf of customers. You can make the project cost and revenues available in reporting by assigning profit analysis attributes to these projects. • **Customer Project** Use this process variant type for projects which you manage and execute for your customers. These projects must always be linked to or created from a corresponding sales order. The system handles project costs and revenues as Cost of Goods Sold and Sales Revenues. This integrates these projects into the standard sales scenario, which offers functions such as reporting by function of expense, profit analysis, and automatic revenue recognition. For this process variant type you can also do the following: ◦ You can suppress creation of business tasks for missing time and expenses while creating project invoice request for invoice schedule by selecting the following statement to true: **Do not create business task in case of missing time and expenses while creating project invoice request for invoice schedule** ◦ You can suppress creation of automatic rules for sales order assignment for not yet invoiced time and expenses by selecting the following statement to true: **Do not create automatic rules for sales order assignment for not yet invoiced time and expense**	
Default Language	Default for the project language of projects with this project type. The languages are predefined by SAP.	Select the default language for the project type from the drop-down list. You can change the project language when you create the project.
Default Working Day Calendar	Default for the working day calendar of projects with this project type. The calendars are predefined by SAP.	Select the region or country-specific calendar that you want to assign for the project type. If you do not choose a default setting, the universal Gregorian calendar is used for scheduling.
Default Unit	Default for the unit of measure for planning and recording work for projects of this project type. The units are predefined by SAP.	Select the unit of measure that you want to use to plan and record work for the project. If you choose the default unit **Working Day(s)**, you must enter a value for the **Hours per Working Day**.
Hours per Working Day	Hours per day that can be planned for the project.	You must enter the hours per working day if you choose the default unit **Working Day(s)**.

Controls and Settings	Explanation	Task
Mandatory Approval of Time Recording	Specifies if each time recording posted to the project header must be approved by the project manager. If not selected, only unplanned work and work recorded by service agents must be approved. The flag is not inherited to subordinate project tasks.	Select this check box if you want to approve each time recording posted to the project (header).
Mandatory Approval of Baseline	Specifies if the baseline must be approved before the project can be released. The approver is the line manager of the requesting unit (cost center) that is entered in the project.	Deselect the check box if you want to make the baseline approval optional.
Automatic Snapshot at Status Change	Specifies if a snapshot is automatically taken each time the project status changes, for example, from **In Planning** to **Released**, or from **Released** to **Closed**.	Deselect the check box if you do not want automatic snapshot creation.

Create a Shopping Cart

Overview

If you want to purchase materials or services that you need for your daily job, for example, computer equipment or training courses, you can request these products directly by creating a shopping cart.

Procedure

1. Go to **Home** > **Self-Services Overview** > **Go Shopping**.

   Note
   You can also start this activity from **Track My Shopping Carts**. Click **New** and select **Shopping Cart**.

2. In step **1 Select Products**, select the materials or services that you want to order:
   - From a catalog:

     Select the catalog from which you want to order and search for the required product. For more information, see Add an Item from a Catalog.
   - From previously ordered or recommended items:

     In the **Show** list, choose **Previously Ordered Items** or **Recommended Items** and click **Go**. Select the product that you want to order form the list, enter the quantity and click **Add to Cart**.
   - Using the search:

     Enter the product that you want to order in the **Find** field and click **Go**.
3. In step **2 Edit Shopping Cart**, review the items that you selected and enter or update the item data, such as the **Delivery Date** or **Quantity**, as required.

   Note
   If you have Funds Management scoped in your solution, the system enters the fund and function for each account assignment type while creating a purchase order. The account assignment type is maintained in the **Derivation of Fund and Function Assignment**. This derivation only attempts to approximate the possible fund and function.

   The fund and function information is passed on to the goods receipt from the associated purchase orders.

4. If you want to add further items or products that you could not find in any catalog, click **Add Row**, then select the **Item Type**, enter a **Product Description** for these items, the **Delivery Date** and the required **Quantity**.

   Note

   It is possible to edit the product category for the item with no product ID (free text item) added from catalog.

5. If you want to remove an item from the list, select the item and click **Remove**.

6. If you want to create an identical copy of an item already in the list, select the item and click **Copy**.

7. In step **3 Check Out**, enter or update the cost assignment and delivery details as required:

   - Depending on whether you create the shopping cart for yourself or for a project, select **Cost Center** or **Project** in the **Assign To** field. The invoiced values of your purchases are paid through the assigned cost center or project.

     Note

     The default cost center is the cost center to which you belong. You can change it as required. For more information, see Account Assignment in Purchasing.

   - Your name has been entered as **Recipient Name** in the **Deliver To** data.

     Note

     If you use the screen for the first time, the delivery address defaults to the recipient address. If this address is modified, the delivery address will default to the changed value when you log on the next time.

   - If the system has determined that an approval process is to be triggered for this shopping cart, the names of the approvers are displayed when you click **Show Approval Details**. You can enter additional information for the approver in the **Comments** field if required.

     Note

     You can find approvals details and the **Comments** field in **View All**

8. Save your entries.

9. To order the shopping cart, click **Finish**.

Result

The shopping cart is saved in the system with status **In Approval** (if the system has started an approval process) or **Requested**. Once its status changes to **Requested**, a purchase request is created automatically. If the purchase request is complete, the system creates a purchase order and sends it to the supplier. If any information is missing in the purchase request, a buyer has to add that information manually, create one or more purchase orders and send them to the suppliers. The shopping cart status then changes to **Ordered** or **Partially Ordered**.

You can track the status of your shopping cart from the **Self-Services** view by clicking **Track My Shopping Carts**. If the shopping cart has been created for a project, you can also access it in the **Project Management** work center by clicking **Track My Shopping Carts** under **Common Tasks** .

Alternatives

You can also create a shopping cart on behalf of a colleague. For more information, see Create a Shopping Cart on Behalf.

You can also copy a pre-existing shopping cart to create a new shopping cart.

Navigate to Home > Self-Services > My requests > Shopping carts (open, open for confirmation or completed), select the shopping cart and click **Copy**.

A new shopping cart will be created copying only items from reference shopping cart. The screen that opens is the **Go Shopping (Advanced)** screen.

If you do not know the exact details of the materials or services that you want to order yet, you can also add a limit item to your shopping cart.

Track the Status of a Shopping Cart

Overview

After you have created a shopping cart, you can track its status to see, for example, whether it has already been ordered, whether it is currently processed by your purchasing department, or whether it still needs to be approved. If an approver has not approved the shopping cart but sent it back to you for revision, you need to revise and reorder the shopping cart.

Procedure

1. Go to Home > Self-Services Overview > Track My Shopping Carts.

   Note

   If the shopping cart has been created for a project, you can also go to Project Management > Common Tasks > Track My Shopping Carts (provided that you have access to this work center).

2. The **My Requests** view opens. From here, you can search for your shopping cart:

   - **Shopping Carts – Open** lists all shopping carts that have not been ordered yet (**In Preparation**), that are still **In Approval**, that the approver has sent back for revision (**In Revision**), or that are currently processed by the purchasing department (**Requested**). It also lists the shopping carts where some or all items have been ordered (**Ordered** or **Partially Ordered**), and the shopping carts where some items have already been delivered and confirmed by a goods and services receipt (**Partially Delivered**).
   - **Shopping Carts – Open for Confirmation** lists all shopping carts where some or all items have been ordered (**Ordered** or **Partially Ordered**) and can be confirmed by a goods and service receipt once they have been delivered. It also lists the shopping carts where some items have already been delivered and confirmed by a goods and services receipt (**Partially Delivered**).
   - **Shopping Carts – Completed** lists all the shopping carts where all items have been delivered and confirmed by a goods and services receipt (**Delivered**) and shopping carts where all items have been **Canceled**.

Result

A list of shopping carts is displayed, which you can process further.

If a shopping cart has the **In Preparation** or **In Revision** status, you can select it and click **Edit** to make changes as required. You can also delete the shopping cart .

If a shopping cart is no longer in preparation or in revision, you can, for example, withdraw it from approval, cancel items requested in the shopping cart, or confirm the delivery.

Related Information

[Withdraw a Shopping Cart from Approval]
[Cancel an Item Requested in a Shopping Cart]
[Quick Confirm Delivery]
[Confirm a Delivery from a Shopping Cart]
[Confirm the Delivery of a Limit Item from a Shopping Cart]
[Cancel a Goods and Services Receipt for a Shopping Cart]
[Create a Goods Return for a Shopping Cart]
[Create a Shopping Cart on Behalf]

Creating a Project from a Sales Order

Overview

Work for services that you sell to a customer can be tracked internally in a customer project that is created directly from a sales order.

You enter service items in a sales order, and then click a button to create a customer project directly from the sales order. If required, you can change the project according to your needs. After the work has been performed, time and expenses can be reported back on the project. Afterwards, you can use project invoicing to invoice the customer.

Prerequisites

Note

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

Sales orders and selling project-based services are enabled in your solution configuration. To find this business option, go to the **Business Configuration** work center and choose the **Implementation Projects** view. Select your implementation project and click **Edit Project Scope**. In the **Scoping** step of the project, ensure that **Sell Project-Based Products and Services** is selected within **Product and Service Portfolio for Sales**.

Process Flow

The process for creating a customer project for the sales order is as follows:

1. You enter an account, and then one or more items. These items must have an item type that is relevant for project-based services:
   - Services – Fixed Price (Project)
   - Services – Time and Material (Project)
   - Expense – Fixed Price (Project)
   - Expense – Time and Material (Project)
2. You click **Create Project**, and the system displays a dialog box where you specify the project structure for the project. You can choose from one of the following structures:
   - An individual project task is created for each sales order item
   - A maximum of two project tasks are created: one task for time and material items, and one task for fixed price items

In addition, you specify the person responsible for the project and the responsible unit (cost center) for the project.

3. You confirm your entries, and the system automatically creates a customer project for this sales order. At this stage it is possible to display the project, but not to edit it. The project ID is taken from the number range used for customer projects. The system proposes the sales order number for the project name; it is possible to overwrite this. All project tasks are located directly below the project header.

   For project-based service items, the services and quantities of the sales order items create respective work packages in the corresponding project tasks. Project-based expenses are not considered automatically as expenses in the project tasks.

4. You then save the sales order. If necessary, you can edit or enhance the customer project, just like a project that has been created manually.

   > **Note**
   >
   > If you need to make any changes to the sales order after the customer project has been created, you need to enter these changes in the project as well.
   >
   > In particular, if you create a new sales order item, you need to assign it manually to the project. Therefore, we recommend that you clarify all details concerning the project beforehand, and that you create the project at the latest possible point in time, when no further changes of the sales order are foreseeable.

5. A notification is sent automatically to the person responsible for the project, stating that a customer project has been created for this sales order.

6. After the work has been performed, you can use project invoicing to invoice the customer as follows:

   - Fixed price: The item contains a fixed quantity and net value. The customer invoice is based on this quantity and value, regardless of whether more or less time or expenses than planned have been used to perform the service.

   - Time and material: The item contains an estimated quantity and net value. The customer invoice is based on the time and material used to perform the service.

Related Information

Sales Orders Quick Guide
Project Invoicing Quick Guide

Approve Time Recordings

Overview

Project managers can approve times confirmed for work performed on project tasks by team members. They can call a list of time confirmations that require approval and approve either single or multiple time records. In addition to the single record view, two aggregated views based on team member and project, or team member and project task are available.

Procedure

1. Go to the **Project Management** work center and under **Approvals**, choose the **Time Recordings** view.

   > **Note**
   >
   > The data displayed and the screen layout vary depending on the view you select in step 2. You can additionally refine the view by clicking **Advanced** and specifying various query parameters such as team member, selection period, or

project ID. The individual time recordings contained in each of the items listed in the Totals views can refer to different purchase orders, services, or tasks. You can save the new query or organize your queries as required.

2. Under Show, select a view depending on how you want to review and approve the time recordings for which you are responsible. The following views are available:
    - Projects Last Week — Totals lists the sum totals recorded per project by each team member for the previous week.
    - Project — Totals lists the sum totals recorded per project by each team member.
    - Tasks Last Week — Totals lists the sum totals recorded per task by each team member for the previous week.
    - Task — Totals lists the sum totals recorded per task by each team member.
    - All Time Recordings lists **individual** time confirmations.
3. Where relevant, under Group by, specify whether you want to group the data in the table, for example, by team member or by project.
4. Review and process the items in your list.

    Depending upon your selections, the table displays the most important time recording details, including team member, project or task, work duration recorded and the following three indicators:
    - Changed Time Recordings: If selected in one of the Totals views, this indicates that at least one of the items contained in the time recording was changed or cancelled after previous approval.
    - Different Billable Hours Indicator: If selected in one of the Totals views, this indicates that the number of hours billed is not identical to the number of hours recorded as worked for at least one of the items contained in the time recording.
    - Internal Comment: If selected in one of the Totals views, this indicates that an internal comment has been appended to a time recording.

    The details behind these indicators are displayed on the General and Notes tabs below. The General tab contains links to the individual fact sheets of the project, service, and task. The Notes tab contains a work description if one has been appended to the time recording and a history of any internal comments that have been entered.

    The table also displays the Country/Region (Time Recording), which is the employment country of the employee on creation of the entry, and theState (Time Recording). There are also two extension fields that you can rename and use as required.

    Note

    The fields can be made visible via personalization. To enable the fields, go to the Me Area > Start Personalization Mode and open the relevant UI Element and select the fields.

    You can view the reason why the project time recording needs approval in the field Need for Approval under the General tab. This field is also available on the Managing My Area > Common Tasks > Confirm Time Recording screen.
5. Select one or multiple rows in the table to process.

    Note

    If you have selected one of the Totals views, which display aggregated time recording values, you can view the details of the individual items contained in the time recording by clicking Open. Here you can then approve or reject individual items if required.
6. Click Approve or Reject for the time recordings you want to process.

> **Note**
>
> If you reject one or more time recordings, you can also enter an internal comment. This comment will be added to all records contained in an aggregated time recording. Bear in mind that in the Totals views, usually more than one time recording is contained.

Result

The time recordings you have approved or rejected are automatically removed from the list.

Create New Expense Report

Overview

The New Expense Report guided activity allows you to record your business expenses in the system, so you can be reimbursed by your company. The guided activity allows you to create reports for travel, weekly, or other expenses. To complete an expense report, you enter the details of the expenses incurred, attach your receipts, and review the details you entered. The report is then sent for review by an auditor, and approval by the appropriate manager. Once the report has been approved, the reimbursement is processed.

Procedure

1. In the Self-Services Overview you select Expenses. The New Expense Report guided activity opens.
2. To specify the type of expense report and to enter the general information associated with the expense report, use the value help to select the Type of Expense Report.
    - If you choose Business Trip from the drop-down list, the system automatically displays fields associated with the report type, including business purpose, dates and location, and mileage. Enter details in those fields, then click Next to go to the next step.
    - For some countries, you can choose Period-based report (receipt and mileage reimbursement) from the drop-down list. The system allows you to enter several trips as well as other business expenses. It automatically displays fields associated with the report type, including business purpose, dates, and mileage. Enter details in those fields, then click Next to go to the next step
    - If you choose Receipts only from the drop-down list, the system automatically displays fields associated with the report type, including business purpose and comments.

    Depending on your selection the entry screen is adapted.
3. For a business trip you must enter at least a Business Purpose, Start Date and Country/Region. It is possible to use the function Copy Data from Other Expense Report to fill in all data that match a prior trip.
4. To change the standard cost assignment defined in the employee master data for this expense report, click Edit Cost Assignment to open the cost assignment dialog.
5. With a click on Add Row two entry fields appear, where you can enter a percentage and an account assignment type such as cost center, project, or sales order. Use the value help to select the appropriate account assignment type from the list.
6. When you select an account assignment type, the system automatically offers you the corresponding entry fields for this type, so that you can enter further details of your cost assignment.

If you select the account assignment type Sales Order for example, you will be able to enter the Sales Order and Sales Order Item. If you select project task , you will be able to enter the project task. You can use the value help to select the project task. As a standard the value help shows all project tasks to which the employee is assigned directly or indirectly, including project tasks for the buying company. If you enter such a project task, the system automatically finds the corresponding intercompany project, purchase order, and purchase order item and displays these under Intercompany Information.

If you want to see a wider range of available project tasks, you have to use the Advanced search. Here you can delete the Employee ID and use only the Company ID to search all available project tasks.

7. Click Next to go to the Receipts step.
8. In the Receipts step under Expense Receipts, click Add Row to add a receipt. The system automatically assigns a receipt ID number in the ID field. In the Expense Type field, click the value help and choose a expense type. The system automatically displays fields associated with the expense type. Enter details in those fields. In the Receipt Amount field, enter the receipt amount and select a currency.
9. Go to the Attachments tab in the Receipts step if you want to add attachments for the individual receipts you have entered. Click Add.

   Note

   You need to decide how you want to attach your receipts first.

   - If you choose File, the Add File dialog box displays. Browse for the file you want to upload and click Add. Click Next to go to the next step.
   - If you choose Link, the Add Link dialog box displays. Enter the details associated with the link and select Add. Click Next to go to the next step.

10. In the Attachments step, on the General Attachments tab, you can add any other general attachments as required. Go to the Attachments Overview tab to display an overview of all attachments added.
11. After you have reviewed the details, expenses, and receipts you have entered, save your expense report to the system. Your new expense report is saved to the system, and sent for review and approval.

Example

Bob Menson, the Sales Manager at Akron Heating Technologies Inc., wants to record his weekly expenses for calendar week 47. In the New Expense Report guided activity, Bob selects Weekly Expenses as the type of expense report. He chooses to assign 100% of the costs of this trip to the Office New York (MC42110) cost center. Bob selects week 47 from the calendar display, and records that he traveled 160 miles in his private car. Bob then records all the details of each expense he incurred such as business entertainment, telephone, transport, and miscellaneous. He enters the total cost of each expense, the date, records any additional information and uploads any attachments or scanned receipts that are necessary. Finally, Bob reviews all the details of the expense report before submitting it to Peter Ming for approval. When Peter approves the expenses, Bob will receive the reimbursement to his personal bank account.

Withdraw a Shopping Cart from Approval

Overview

If, after you created a shopping cart, it turns out that you no longer need the items requested in the shopping cart and the shopping cart is currently in approval, you can withdraw the shopping cart from approval.

Prerequisites

The shopping cart has not been ordered yet. Its status is In Approval.

Procedure

1. Go to Home > Self-Services Overview > Track My Shopping Carts .

    Note

    If the shopping cart has been created for a project, you can also go to Project Management > Common Tasks > Track My Shopping Carts (provided that you have access to this work center).

2. The My Requests view opens. Search for your shopping cart.

3. Select the shopping cart and click Withdraw from Approval.

    Note

    Alternatively, if you want to review the shopping cart first before you withdraw it, you can also open the shopping cart by clicking the shopping cart ID, click View All and then Withdraw from Approval.

Result

The status of the shopping cart item changes back to In Preparation. You can edit it further and remove any items that you no longer need.

Cancel an Item Requested in a Shopping Cart

Overview

If, after you created a shopping cart, it turns out that you no longer need an item requested in the shopping cart, you can cancel the requested quantity for that item.

Prerequisites

The status of the item that you want to cancel is Requested, Ordered, Partially Ordered, or Partially Delivered.

Note

If the shopping cart is currently In Approval, it is not possible to cancel an item. However, you can withdraw the shopping cart from approval and then remove items from the shopping cart.

Procedure

1. Go to Home > Self-Services Overview > Track My Shopping Carts .

    Note

    If the shopping cart has been created for a project, you can also go to Project Management > Common Tasks > Track My Shopping Carts (provided that you have access to this work center).

2. The My Requests view opens. Search for your shopping cart.

3. Click the Shopping Cart ID.

The shopping cart opens.

4. Click **View All**.

5. Select the item that you want to cancel and click **Cancel Requested Quantity**.

   Note
   Instead of accessing the item from the shopping cart (by clicking the **Shopping Cart ID**), you can also cancel the item directly from the **Item Details** list in the **My Requests** view. To do so, select the shopping cart from the list, then select the item that you want to cancel from the **Item Details** list below the shopping carts list, and click **Cancel Requested Quantity**.

Result

The status of the shopping cart item changes to **Canceled**. The system cancels the open quantity for this item in the related purchase request. No further ordering or delivery is possible for this item. However, if the item has already been partially ordered, the delivery is still possible for the quantity that has already been ordered.

If a purchase order has already been created for the item that is now canceled, a buyer has to cancel the corresponding purchase order item manually and update any follow-up documents, such as goods and services receipts or supplier invoices. The buyer must then follow up with the supplier to cancel any deliveries or return any items already delivered. Alternatively, you can also return the items directly in the shopping cart by creating a goods return. For more information, see Create a Goods Return from a Shopping Cart.

Quick Confirm Delivery

Overview

Once the materials that you have ordered in a shopping cart have been delivered or the services have been completed, you can create a goods and services receipt to confirm the delivery. If an item has been delivered as requested, you can confirm this item with just a couple of clicks.

Prerequisites

The shopping cart item for which you want to confirm the delivery was delivered exactly as ordered.

Procedure

1. Go to **Home** > **Self-Services Overview** > **Confirm Deliveries**.

2. The **My Requests** view opens. All shopping carts that are currently open for confirmation are displayed.

3. Click the **Shopping Cart ID** of the shopping cart that you want to confirm.

4. The shopping cart opens. Click **View All**.

5. Select the item that you want to confirm and click **Quick Confirm Delivery** to create a goods and services receipt.

   Note
   Instead of accessing the item from the shopping cart (by clicking the **Shopping Cart ID**), you can also confirm it directly from the item details list in the **My Requests** view. To do so, select the shopping cart from the list, then select the item that you want to confirm from the **Item Details** list below the shopping carts list, and click **Quick Confirm Delivery**.

The system generates and posts a goods and services receipt. The data from the shopping cart is automatically transferred to the goods and services receipt.

Result

When the goods and services receipt is posted, it is added to the list of receipts in the **Receipts and Returns** view with status **Released**.

Once the goods and services receipt is released, the system sends the goods and services receipt to **Supplier Invoicing** for invoice verification, exception handling, and payment processes. For more information, see Supplier Invoice Processing with Reference and Exception Handling. It also forwards the data to **Financials** and posts the goods return receipt there.

> **Note**
>
> Before forwarding the data, the system checks whether the relevant accounting period in **Financials** is open. If the accounting period is closed, the system issues an error or warning message.

When all shopping cart items are confirmed, the shopping cart status changes to **Delivered** and the shopping cart is added to the **Shopping Cart – Completed** list in the **My Requests** view. If there are other shopping cart items yet to be confirmed, the shopping cart remains in the **Shopping Cart – Open for Confirmation** list with status **Partially Delivered**.

Alternatives

You can also create a goods and services receipts if the items that you have ordered have not been delivered as requested, for example, if only half of the ordered item quantity has been delivered, or if you want to confirm several items at a time. For more information, see Confirm a Delivery from a Shopping Cart.

Confirm a Delivery from a Shopping Cart

Overview

Once the materials that you have ordered in a shopping cart have been delivered or the services have been completed, you can create a goods and services receipt to confirm the delivery.

Procedure

1. Go to **Home** > **Self-Services Overview** > **Confirm Deliveries**.
2. The **My Requests** view opens. All shopping carts that are currently open for confirmation are displayed.
3. Click the **Shopping Cart ID** of the shopping cart that you want to confirm.
4. The shopping cart opens. Click **View All**.
5. Select the items that you want to confirm and click **Confirm Delivery** to create a goods and services receipt.

   The system generates a goods and services receipt. The data from the shopping cart is automatically transferred to the goods and services receipt.
6. Enter the **General Information** about the goods and services receipt:
   - The **Supplier** is automatically transferred from the purchase orders.

- The **Posting Date** is automatically set to the current date. If required, you can change it to an earlier date, but it is not possible to set it to a date that is still in the future.
- The **Delivery Note ID** is an ID provided by the supplier for the delivery.

7. Enter the item data:
   - Item Details
   - Quantities
   - Account assignment details
8. If you want to individualize the delivered materials, select the item and click **New Individual Materials**.

   The individual material details are displayed on the **Basic Data** tab page. You can update the **Individual Material Description**, enter an **Inventory ID**, and assign the individual material to another individual material (**Belongs to Individual Material**). If the individual material belongs to a fixed asset, the fixed asset is displayed. For more information, see Asset Procurement in Purchasing.

   Note

   When you click **New Individual Materials**, the number of goods and services receipt items created equals the delivered quantity confirmed in the goods and services receipt. If you want to create individual materials for an item, the delivered quantity must not be greater than `100`.

9. If you want to specify the items further, you can add notes and attachments on the **Notes** and on the **Attachments** tabs.
10. If you do not want to confirm an item that is listed in the goods and services receipt, select the item and click **Remove**.
11. Save your entries.
12. Click **Post**.

    Note

    If you do not want to post the goods and services receipt immediately, only save your entries. The status of the shopping cart does not change then, and the goods and services receipt is available in the **Receipts and Returns** view with status **In Preparation**. You receive a task in your worklist to complete it later. As long as the goods and services receipt is still **In Preparation**, you can also delete it if it turns out that you do not want to confirm the delivery after all. To do so, select the document from the **Receipts and Returns** list and click **Delete**.

Result

Once the goods and services receipt is posted, it is added to the list of receipts in the **Receipts and Returns** view with either of the following statuses:

- If it requires approval, the system sets the status to **In Approval** and sends a task to the designated approver.
- If no approval is required, the status automatically changes to **Released**.

  Note

  If the release process is canceled before the goods and services receipt switches to **Released**, its status changes to **Discarded**.

The system sends the goods and services receipt to **Supplier Invoicing** for invoice verification, exception handling, and payment processes. For more information, see Supplier Invoice Processing with Reference and Exception Handling. It also forwards the data to **Financials**, posts the goods return receipt there, and updates individual materials and fixed asset assignments if applicable.

> **Note**
> Before forwarding the data, the system checks whether the relevant accounting period in **Financials** is open. If the accounting period is closed, the system issues an error or warning message.

When all shopping cart items are confirmed, the shopping cart status changes to **Delivered** and the shopping cart is added to the **Shopping Cart – Completed** list in the **My Requests** view. If there are other shopping cart items yet to be confirmed, the shopping cart remains in the **Shopping Cart – Open for Confirmation** list with status **Partially Delivered**.

Alternatives

If the materials that you have ordered have been delivered or the services have been completed as requested and all items have been delivered, you can also confirm the delivery with just a couple of clicks. For more information, see Quick Confirm Delivery. If you want to confirm the delivery of a limit item, see Confirm the Delivery of a Limit Item from a Shopping Cart.

Confirm the Delivery of a Limit Item from a Shopping Cart

Overview

If you do not know the details of the material or service you want or the quantity that you need when you create a shopping cart, you can add a limit item to the shopping cart, which has a value limit assigned rather than a concrete price. Once the material has been delivered or the service has been completed, you know these details, so you can confirm them by creating a goods and services receipt.

Procedure

1. Go to **Home** > **Self-Services Overview** > **Confirm Deliveries**.
2. The **My Requests** view opens. All shopping carts that are currently open for confirmation are displayed.
3. Click the **Shopping Cart ID** of the shopping cart that you want to confirm.
4. The shopping cart opens. Click **View All**.
5. Select the items that you want to confirm and click **Confirm Delivery** to create a goods and services receipt.

   The system generates a goods and services receipt. The data from the shopping cart is automatically transferred to the goods and services receipt.
6. Enter the **General Information** about the goods and services receipt:
   - The **Supplier** is automatically transferred from the purchase orders.
   - The **Posting Date** is automatically set to the current date. If required, you can change it.
   - The **Delivery Note ID** is an ID provided by the supplier for the delivery.
7. The limit items are listed in upper table in the **Items** section of the screen.

   > **Note**
   > The limit items have been transferred from the shopping cart. At the time when the shopping cart was created, the item details and quantities were not defined yet. Now you know the details of the materials that have been delivered

or the services that have been completed, so you can specify them in the goods and services receipt.

Select the limit item in the upper table in the **Items** section and click **Add Row**.

A new item is added to the items list at the bottom of the **Items** section.

8. Enter the item data:

    - Item Details
    - Quantities
    - Account assignment details

    i Note

    Alternatively, you can also add items from a catalog.

9. If you want to specify the items further, you can add notes and attachments on the **Notes** and on the **Attachments** tabs.
10. If you do not want to confirm an item that is listed in the goods and services receipt, select the item and click **Remove**.
11. Save your entries.
12. Click **Post**.

    i Note

    If you do not want to post the goods and services receipt immediately, only save your entries. The status of the shopping cart does not change then, and the goods and services receipt is available in the **Receipts and Returns** view with status **In Preparation**. You receive a task in your worklist to complete it later. As long as the goods and services receipt is still **In Preparation**, you can also delete it if it turns out that you do not want to confirm the delivery after all. To do so, select the document from the **Receipts and Returns** list and click **Delete**.

Result

Once the goods and services receipt is posted, it is added to the list of receipts in the **Receipts and Returns** view with either of the following statuses:

- If it requires approval, the system sets the status to **In Approval** and sends a task to the designated approver.
- If no approval is required, the status automatically changes to **Released**.

    i Note

    If the release process is canceled before the goods and services receipt switches to **Released**, its status changes to **Discarded**.

The system sends the goods and services receipt to **Supplier Invoicing** for invoice verification, exception handling, and payment processes. For more information, see Supplier Invoice Processing with Reference and Exception Handling. It also forwards the data to **Financials** and posts the goods return receipt there.

i Note

Before forwarding the data, the system checks whether the relevant accounting period in **Financials** is open. If the accounting period is closed, the system issues an error or warning message.

When all shopping cart items are confirmed, the shopping cart status changes to **Delivered** and the shopping cart is added to the **Shopping Cart – Completed** list in the **My Requests** view. If there are other shopping cart items yet to be confirmed, the shopping cart remains in the **Shopping Cart – Open for Confirmation** list with status **Partially Delivered**.

Cancel a Goods and Services Receipt for a Shopping Cart

Overview

After you have posted a goods and services receipt for a shopping cart, it might become necessary to cancel it, for example, because you have found a data entry error in the document.

Note

You can cancel the complete goods and services receipt or individual items. It is, however, not possible to cancel only a partial quantity of an item.

Prerequisites

The shopping cart for which you want to cancel the goods and services receipt has already been confirmed, so its status is **Delivered** or **Partially Delivered**.

Procedure

1. Go to **Home** > **Self-Services Overview** > **Confirm Deliveries**.
2. The **My Requests** view opens. Select **Shopping Carts — Completed**.

   All shopping carts that have already been confirmed are displayed.
3. Click the **Shopping Cart ID** of the shopping cart for which you want to cancel the goods and services receipt.
4. The shopping cart opens. Click **View All**.
5. Select the items for which you want to cancel the goods and services receipt and click **Receipts and Returns**.
6. Select the goods and services receipt and click **Cancel Document**.

   The system generates a goods and services receipt cancellation. The data from the goods and services receipt is automatically transferred to the cancellation.
7. Enter the **Posting Date**:

   Note

   The **Posting Date** is automatically set to the date when the goods and services receipt was posted. You can adjust it if required.
8. If there are items on the list that you do not want to cancel, select them and click **Remove**.
9. If you want to specify the items further, you can add notes and attachments on the **Notes** and on the **Attachments** tabs.
10. Click **Post**.

Result

Once the cancellation is posted, it is added to the list of documents in the **Receipts and Returns** view of the **Goods and Services Receipts** work center with status **Released**.

The original goods and services receipt also remains in the system, but its status is updated to **Canceled** (if all items were canceled) or **Partially Canceled** (if only some items were canceled).

The shopping cart status changes back to **Ordered** or **Partially Ordered** (if all items were canceled) or **Partially Delivered** (if only some items were canceled).

The system sends the goods and services receipt cancellation to **Supplier Invoicing** for invoice verification, exception handling, and payment processes. For more information, see Supplier Invoice Processing with Reference and Exception Handling. It also forwards the data to **Financials**, posts the goods return receipt there, and updates individual material and fixed asset assignments if applicable. For more information on individual materials, see Asset Procurement in Purchasing.

> **Note**
>
> Before forwarding the data, the system checks whether the relevant accounting period in **Financials** is open. If the accounting period is closed, the system issues an error or warning message.

Alternatives

You can also cancel a goods and services receipt from the **Receipts and Returns**view of the **Goods and Services Receipts** work center. For more information, see Cancel a Goods and Services Receipt or Goods Return.

Create a Goods Return for a Shopping Cart

Overview

If a material that you have ordered in a shopping cart is damaged or the wrong material was delivered, you can return it to the supplier. If you have already confirmed the delivery, you can create and post a goods return with reference to the goods and services receipt that has been created for this material.

Prerequisites

The shopping cart for which you want to create a goods return has the status **Delivered** or **Partially Delivered**.

Procedure

1. Go to **Home** > **Self-Services Overview** > **Confirm Deliveries**.
2. The **My Requests** view opens. Select **Shopping Carts — Completed**.

   All shopping carts that have already been confirmed are displayed.
3. Click the **Shopping Cart ID** of the shopping cart for which you want to create a goods return.
4. The shopping cart opens. Click **View All**.
5. Select the item that you want to return and click **Receipts and Returns**.
6. Click **New Goods Return**.

   The system generates a goods return. The data from the goods and services receipt is automatically transferred to the goods return.

7. Enter the **Posting Date**:

   i Note

   The **Posting Date** is automatically set to the date when the goods and services receipt was posted. You can adjust it if required.

8. If there are items on the list that for which you do not want to create a goods return, select them and click **Remove**.
9. If the returned quantity for an item differs from the quantity proposed by the system, update the **Returned Quantity** to show how much is actually being returned.

   i Note

   If an individual material has been assigned to an item, the quantity is always 1 and cannot be changed.

10. If the return date for an item differs from the date proposed by the system, update the **Return Date** field to show when the item is actually being returned.
11. If you want to specify the items further, you can add notes and attachments on the **Notes** and on the **Attachments** tabs.
12. Save your entries.
13. Click **Post**.

    i Note

    If you do not want to post the goods return immediately, only save your entries. The goods return is then available in the **Receipts and Returns** view with status **In Preparation**. You receive a task in your worklist to complete it later. As long as the goods return is still **In Preparation**, you can also delete it if it turns out that you do not want to confirm the delivery after all. To do so, select the document from the **Receipts and Returns** list and click **Delete**.

Result

Once the goods return is posted, it is added to the list of returns in the **Receipts and Returns** view with status **Released**. The status of the corresponding goods and services receipt changes to **Goods Returned**. The shopping cart is added to the **Shopping Carts – Open for Confirmation** list with status **Ordered** or **Partially Ordered**.

The system sends the goods and services receipt cancellation to **Supplier Invoicing** for invoice verification, exception handling, and payment processes. For more information, see Supplier Invoice Processing with Reference and Exception Handling. It also forwards the data to **Financials**, posts the goods return receipt there, and updates individual material and fixed asset assignments if applicable. If, for example, you create a goods return for an item for which an individual material has been created, the individual material status changes to **Blocked** once the goods return is posted. The individual material can then no longer be assigned to another individual material, nor can it be used in a fixed asset. For more information on individual materials, see Asset Procurement in Purchasing.

i Note

Before forwarding the data, the system checks whether the relevant accounting period in **Financials** is open. If the accounting period is closed, the system issues an error or warning message.

Alternatives

You can also create the goods return from the **Receipts and Returns** view of the **Goods and Services Receipts** work center. For more information, see Create a Goods Return.

Project Period Planning

Overview

When planning resources (this can be work, materials, expenses, and revenues) for long-running project tasks their utilization might differ significantly during the specified execution time frame. Period planning helps you to specify the exact time frame during which the resource will be utilized and which cost will be related to them, as opposed to distributing the cost over the complete duration of the task with only one cost rate.

You can do period planning for all kinds of resources of a project task: work, materials, expenses, and revenues. This planning helps you to organize the budget for the project, as you can now determine the exact time period during which the cost will be incurred and also take a changing cost rate per period into account. If there are different cost rates for different time periods, the resource cost rate of the task is the average of the cost rates of all the defined time periods of the resource. You can find the cost rate per time period on the period plan screen. Additionally, it will allow you to track planned versus actual consumption per period maintained and thus getting a more accurate picture about the progress of a task.

For example, a task lasting 6 months may require 40 hours of junior consulting service, but the major work only needs to be done in the last month. Instead of splitting the work into several tasks, period planning can be used to specify when exactly during these 6 months the service is supposed to be rendered. The system will then distribute the planned cost accordingly and also allocate actuals to the specified periods.

You can perform period planning in Project Management work center, Projects view, on the Project Plan tab under the Work, Materials, Expenses, or Revenues tabs.

Procedure

1. In the Project Management work center, choose the Projects view.
2. Select the project for which you want to plan the resource utilization periods, and click Edit > Project Plan.
3. In the Project Plan tab, select the task for which resource utilization has to be planned, and click the relevant tab. Depending on the resource utilized, this may either be Work, Materials, Expenses, or Revenues tab.
4. You can either plan the resource on the selected tab or click Edit Period Plans, and in the screen that opens, add the new resource by clicking Add Row.
5. Now you can plan detailed time periods either manually by clicking on Add Row and maintaining the data yourself, or automatically based on the duration of the resource or task by clicking on Generate Period Plan. The cost and revenues for these resources are distributed in Financials based on the **start date** and the **end date** of the particular time period.

Approvals Quick Guide

In the Approvals view of the Project Management work center, you can monitor and manage time recordings and expense and purchase recordings for your projects.

In the Project Management > Time Recordings subview you can view, approve, or reject the times recorded against your projects by internal and external employees, and employees from other companies in the same corporate group, who are assigned to your projects, or to projects in which you are marked as a substitute for the project manager. When you create a project, you have the option of choosing whether time recordings should be sent to you for approval, or not. However, work recorded by externals or employees from other companies in the same corporate group is always sent to you for approval. Also, work recorded by a person who is not directly assigned to the project team, either as a team member or as part of an organizational unit, is always sent to you for approval.

In the Project Management > Expenses and Purchases view, you can view and process expenses and purchases recorded to your projects. Expense reports assigned to your projects are sent to you for approval, as well as shopping carts and purchase orders, which are assigned to your projects. You can approve or reject the recordings, or send them back for revision. You can also view the details associated with each expense and purchase approval.

Note

Approvals which you reject or send back for revision are sent to the Home > Work > Inbox view of the corresponding employee.

Business background

Project Status and Integration

Project Management offers an end-to-end integration with other business areas, such as financials for cost and revenue management, human resources (HR) for resource and time and labor management, customer relationship management (CRM) for project invoicing, and supplier relationship management (SRM) for project procurement. The integration of Project Management with other business areas gives you increased control and transparency in your projects.

For more information, see Project Status and Integration.

Approvals for Project Expenses and Purchases

The Project Management > Approvals > Expenses and Purchases subview view enables you to view and process expenses and purchases recorded to your projects. Expense reports assigned to your projects are sent to you for approval, along with shopping carts, purchase orders, and goods and service receipts. These can be approved, rejected, or sent back for revision. You can also view the details associated with each expense and purchase approval.

For more information, see Approvals for Project Expenses and Purchases.

Tasks

Process Time Recordings

1. In the Approvals > Time Recordings subview, select the time recordings you want to process or choose **Group By** and choose **Team Member** from the dropdown list to group multiple recordings by your team members.
2. Select the relevant rows in the worklist and choose **Approve** or **Reject** for the selected time recordings. If you want to reject time recordings, you must give a reason in the dialog box.
3. Approved time recordings are shown as actual work in the project. For rejected time, recordings a notification is sent to the Home > Work > Inbox of the team member. Additionally, in the team member's time sheet, the particular day (of the rejected time recording) is shown in red in the calendar and the rejection notes are shown in the detail of the time record.

Export Time Recordings to Microsoft Excel

You can export the time recordings to Microsoft Excel. For more information, see Export Business Data Using Microsoft Excel.

Note

You may observe data conversion in the **Duration** column of the exported excel for time recordings of duration more than 12 hours. This depends on the time format selected in your personalization settings. You can personalize your system settings, such as date and time formats in **My Settings** from the **Personalize** menu. If you have the time format set as “12-Hour Time”, then you will see a converted value in the **Duration** column of the exported excel. For example, 15:00 hours on the UI will show as 3:00 (15=12+3) in the excel. If the time format is “24-Hour Time”, then 15:00 hours will show as 15:00 hours itself.

Resource Search Quick Guide (Based on Commitment Quantity Specified Under Project Team and Staffing)

The **Resource Search** view allows you as Resource Manager to search for suitable resources (employees or service agents), who are available to staff projects within a given period. In conjunction with the **Resource Profiles** view, the search results provide detailed information about the remaining availability of resources for the following six calendar weeks, with additional six weeks in the hidden fields section. You can also view the Availability Calendar of selected resources in this view and edit their future scheduled commitment to current projects.

Business background

Resource Search

For more information, see Resource Search.

Working with the Availability Calendar

As a Resource, Project, or Line Manager, the **Availability Calendar** provides you with a graphical overview of the project commitments of selected employees in your company. The calendar allows you to analyze the availability and edit the project commitments of all resources staffed in projects, or available for project assignments. It also assists you in managing your key resources who are in greatest demand or already overbooked.

As an employee assigned to projects in your company, you can also use the **Availability Calendar** to view the time you have already worked on the projects you are involved in, and edit your future commitments for currently ongoing projects.

For more information, see Working with the Availability Calendar.

Business Scenario: Resource Management

The Resource Management business scenario is designed to meet the basic needs of a resource manager in a professional services company. Key capabilities include integrated access to data of internal employees and external service contractors, including information on skills and availability, and information specific to Project and Time and Labor Management. The main focus of the application is on creating an integrated database of resources to enable the resource manager to find the best candidates in terms of suitability and availability.

For more information about Business Scenario Explorers, see the Business Scenario Explorer Quick Guide.

Tasks

Search for a Suitable Resource

In the **Resource Search** view, you can search for suitable resources to staff your projects.

For information about this task, see here.

Maintain Commitments for a Resource

As a resource manager you can maintain the work commitments for a resource across various projects. You can choose to delegate a resource to a project, for a committed number of working hours in a particular duration. This can be done for any number of projects for that resource.

Once you enter and save this information, the resource will be added to the participant list of all the projects, with the commitments proposed by you.

You can maintain the work commitments as follows:

1. Search for the resource you want to maintain commitments for. For more information see Search for a Suitable Resource.
2. Select the resource and click **Maintain Commitments**.
3. In the screen that opens you can maintain information about the project, the start and end date for working on the project, the number of hours the resource is committed to work on the project and the service used when assigning the resource to the project.
4. Click **Save and Close** to return to the **Resource Search** view

Search for a Document

1. Enter a search term in the **Find** field and click **Go**

   → **Tip**

   You can find documents using the **Group By** criteria. This option allows you to quickly display a list of documents sorted by various basic criteria, such as the file type, as well as by keywords that you can define. You can create keywords for documents by editing the document properties.

   i Note

   When you enter a search term, the system searches both the document titles and document content for the entered term and displays the results in the list.

2. To use the advanced search option, choose **Advanced**. You can enter search criteria such as the **Author**, **Changed On** (date), **Document Language**, or specific **Keywords**.

   i Note

   Newly uploaded documents are first processed by the system and cannot be immediately found via the search function. This process takes approximately five minutes.

Create a Service Agent

If you want to staff your project with an external resource that is not available in the system yet, click the **New Service Agent** Common Task.

1. In the **New Service Agent** quick activity, enter the new service agent's first name and last name.
2. In the Supplier ID field, enter the ID of the company who will supply the service agent.

3. Enter further information as required, for example **Organizational Unit**, **Job**, **Profession** or **Gender**.

4. Click **Save and Close** to save the new service agent's details.

Work with the Availability Calendar

Select a Resource (or multiple Resources) and click **Show Availability**. The **Availability Calendar** opens, where you can view the availability and project commitments for all selected Resources, and also edit future project commitments for these employees. See **Working with the Availability Calendar** above, under **Business Background** for detailed information.

Determine Relevant Resources

In organizations such as Professional Service Providers, it is important for Resource Managers to be able to quickly identify all potential resources who are relevant for Resource Management and who can, for example, be assigned to internal and external projects. This allows the manager to calculate supply, availability, and utilization more accurately. Using a **Common Task** in this view, you can set particular jobs in your organization as not relevant in the context of Resource Management, meaning all employees with this job assignment will not be considered in any reporting of actual or forecasted utilization, nor forecasted demand.

Non-relevant jobs in a Professional Service Provider organization could be, for example, building maintenance, training positions or upper-level management.

i Note

Employees with jobs defined as not relevant for Resource Management can still be assigned to projects, but are excluded from any reporting on resource availability as described above.

When you need to set particular jobs as not relevant for Resource Management, start the **Determine Relevant Resources** common task.

1. On the **Determine Relevant Resources** screen, click **Add Row** then double-click **<Add>**. The **Job** dialog box opens.

2. Enter a job ID in the dialog box or select your job using the drop-down list and click **OK**.

3. Click **Save Draft** to save a draft version of this list of non-relevant jobs in the system. The red icon (**Rules are inactive**) is shown.

4. Click **Save and Activate** to activate the list of non-relevant jobs in the system. The green icon (**Rules are active**) is shown.

   All jobs listed and activated are now determined as not relevant for Resource Management in the system and are excluded from any future utilization reporting.

5. Click **Close** to return to the **Overview** view.

Export to Microsoft Excel®

You can export different types of data from the SAP Business ByDesign system to Microsoft Excel®.

For more information about this task, see Export Business Data Using Microsoft Excel®.

Service Agents Quick Guide

As a buyer or project manager who deals with external employees, it is essential that you have detailed information about your suppliers. It is also essential that you have information about the service agents who work for your suppliers and provide their services to you.

The **Service Agents** view allows you to view, create, and update the most essential service agent data. It provides an overview of service agent information, such as name and contact details. You can see for which supplier each service agent works, and see the relationships the service agent has with other business partners. You can create a user for the service agent, so he or she can access your system directly for tasks such as time entry. You can view organizational details, such as the organizational unit, the job title, the reporting line unit, and the manager.

You can access the **Service Agents** view from the following locations:

- **Business Partner Data** work center
- **Project Management** work center
- **Supplier Base** work center

Business background

Suppliers and Service Agents

You can view, create, and maintain information about your suppliers and service agents in more than one work center. The data that you create is shared by several work centers. You only need to maintain the information in one work center for it to be updated automatically in all relevant work centers.

For more information, see Maintenance of Suppliers and Service Agents.

Address Management

You can create, view, and update the details you need to communicate with your business partners. You can maintain detailed postal and communication data for persons and organizations.

For more information, see Address Management.

Business Partner Duplicate Check

The business partner duplicate check allows you to find business partners that exist more than once in the system, thus avoiding having redundant data in your system and helping you to reduce efforts and save costs when managing your business partner master data.

For more information, see Business Partner Duplicate Check.

Tasks

Create and Edit a Service Agent

1. In the worklist of the **Service Agents** view, click **New**, then choose **Service Agent**.

   → **Tip**

   You can also create a new service agent by starting the **New Service Agent** common task, which belongs to the **Business Partner Data**, **Project Management**, or **Supplier Base** work center.

2. Enter the service agent's name, address, and communication details and other service agent-specific data, such as the supplier that he works for and the organizational assignment.

   Note

   You can check if a service agent already exists in the system if you have chosen this option during scoping. When you enter the details of a service agent, click **Check For Duplicates**. The system also notifies you of potential duplicates when you save the details of a new service agent. You can view the potential duplicates listed.

3. Enter business information about the new service agent.

   a. In the **Business Details** section, enter information about the service agent that is internal to your company, such as function and department, if applicable. This might be appropriate if the service agent is working on site for you.

      If the service agent is working on site, enter the in-house address and communication information.

   b. In the **Business Address** and **Business Communication** sections, enter information about the service agent that is external to your company, such as phone, fax, and e-mail at the supplier's address, or the function and department within the supplier's company.

4. To enter additional information about the service agent, click **View All** to open the editor.

   Tip

   You can also add more information to a particular service agent by selecting the service agent in the worklist and clicking **Edit** → **General**.

   Note

   If you set the service agent's status to blocked, the system displays a warning message for the entire service agent account. This may affect purchasing, sales, and any related business partners, but you can still use the service agent in your business processes. However, this status automatically locks the user for that service agent if one has been assigned, and the service agent cannot access your system until you change the status.

5. Click **Save** to save the new service agent.

Assign Multiple Addresses to a Service Agent

1. In the editor of the **Service Agents** view, click **Addresses**.
2. Click **Add Row**.
3. Select the address type, and enter the address details.
4. If you require additional address fields, click **Additional Fields**.
5. Enter one or more addresses, if the service agent works for more than one supplier and has additional addresses, and save the address details.

   Tip

   You can also assign additional addresses to a particular service agent by selecting the service agent in the worklist and clicking **Edit** → **Addresses**.

Specify Relationships of a Service Agent

1. In the editor of the **Service Agents** view, click **Relationships** to enter your details about the relationships for a service agent.

2. Click **Add Row** and select the relationship type and the business partner with whom the service agent has a relationship.

   If your service agent is the service agent for more than one supplier (relationship type `Is Service Performer For`), select **Main** under **Details** for the main relationship for this service agent.

   > **Note**
   > The main supplier to which a service agent is assigned is also displayed in the worklist.

3. Save your data.

Create a User for a Service Agent

1. If a service agent requires a user to access your system, click **Request User**.

   The user is automatically created.

2. Contact an administrator to maintain the new user account, for example, to maintain the user's password and validity period. In the **Application and User Management** work center, the user for the service agent can also be locked or unlocked.

   The service agent can then access your system directly to maintain a time sheet, if required.

Edit the Time Sheet of a Service Agent

You can only click **Edit Time Sheet** in the worklist of the **Service Agents** view for a selected service agent if the following applies:

- You have assigned the service agent to a project.
- The service agent is not an internal employee.
- The purchase orders with time sheet recordings for projects are enabled in your solution configuration.

  To find this business option, go to the **Business Configuration** work center and choose the **Implementation Projects** view. Select your implementation project and click **Edit Project Scope**. In the **Scoping** step of the project, ensure that **Purchase Request and Order Management** is selected within **Purchasing**.

  In the **Questions** step, expand the **Purchasing** scoping element and select **Purchase Request and Order Management**. Select **Goods and Services Receipts** and answer the question related to the type of purchase order for services.

  > **Note**
  > Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

For more information about this task, see here.

Record Times from Microsoft Excel®

For more information, see here.

Export Service Agents Using Microsoft Excel®

For more information, see Export Business Data Using Microsoft Excel .

Project Invoice Requests Quick Guide

You can access the **Project Invoice Requests** view from the **Project Management** work center under **Invoice Preparation**.

In this view, you get an overview of all project invoice requests that have been created to invoice customers for time and expenses recorded against a project. You can edit, cancel, and delete project invoice requests.

Note

You can create a project invoice request for a project in the **Projects** subview of the **Project Management** work center. Alternatively, project invoice requests can be created from both sales orders and projects in the **Customer Invoicing** work center. For more information about creating a project invoice request, see Create a Project Invoice Request for a Customer Project.

Business background

Project Invoicing

Project invoicing is a process that allows you to invoice customers for project-based time and expenses or fixed-price services.

The process consists of the following steps:

- Project invoice preparation
- Creating a project invoice request
- Releasing a project invoice request

For more information, see Project Invoicing.

Project Status and Integration

Project Management offers an end-to-end integration with other business areas, such as financials for cost and revenue management, human resources (HR) for resource and time and labor management, customer relationship management (CRM) for project invoicing, and supplier relationship management (SRM) for project procurement. The integration of Project Management with other business areas gives you increased control and transparency in your projects.

For more information, see Project Status and Integration.

Order-to-Cash (Project-Based Products and Services)

The Order-to-Cash (Project-Based Products and Services) business scenario is used to manage the complete end-to-end process of selling project-based products and services to customers. This scenario integrates sales quotes and sales orders with project management allowing you to create customer invoices for time and expenses recorded against a project. Invoices can be created on a time and material basis, a fixed-price basis, or a combination of both. After the customer invoice has been issued, customer payments can be monitored. This scenario also supports the analysis of project profitability based on project costs and revenues.

For more information about Business Scenario Explorers, see the Business Scenario Explorer Quick Guide.

Tasks

Edit a Project Invoice Request

1. In the **Project Invoice Requests** view, select a project invoice request with the status **In Preparation**.
2. Click **Edit**.

   An editor screen opens which offers you the same entry fields as the **New Project Invoice Request** guided activity. For more information, see Create a Project Invoice Request for a Customer Project.

   > **Note**
   > You can also edit a unreleased project invoice request from the **Projects** view in the **Project Management** work center by selecting the project from the project list and choosing **Edit Project Invoice Request** from the context menu for the project.

For more information, see Project Invoice Requests Quick Guide and Editing a Project Invoice Request.

Release a Project Invoice Request

1. In the **Project Invoice Requests** view, select a project invoice request with the status **In Preparation**.
2. Click **Release**.

   The project invoice request is released and all time and expense items that were not assigned to the project invoice request or have a deferred quantity/amount will be made available for invoicing the next time you create a project invoice request for the project.

For more information, see Editing a Project Invoice Request.

> **Note**
> You can also release the project invoice request in the editor screen that opens when you edit the project invoice request.

Cancel a Project Invoice Request

1. In the **Project Invoice Requests** view, select a project invoice request with the status **Released** or **Invoiced**.
2. Click **Cancel**.

   The release of the project invoice request is canceled. If the project invoice request has not been invoiced yet, all time and expense items that were assigned to the project invoice request will be made available for invoicing again immediately. In case the project invoice request has already been invoiced, the time and expense items that were assigned to the project invoice request will not be made available for invoicing again until the customer invoice is canceled as well.

For more information, see Editing a Project Invoice Request.

Delete a Project Invoice Request

1. In the **Project Invoice Requests** view, select a project invoice request with status **In Preparation**.
2. Click **Delete**.

   The project invoice request is deleted and all time and expense items that were assigned to the project invoice request will be made available for invoicing the next time you create a project invoice request for the project.

For more information, see Editing a Project Invoice Request.

Not Invoiced Time and Expenses Quick Guide

This view provides you with an overview of how many time and expense items have been recorded to your customer projects, but have not been invoiced to the customer or not even assigned to the relevant sales order. To support customer invoicing, you as a project manager, can edit the time and expense items which are not invoiced yet and assign them to sales order items and specify which quantities or expenses shall be invoiced and which are to be written off.

You can access the **Not Invoiced Time and Expenses** view from the **Project Management** work center.

Business background

Project Invoicing

Project invoicing is a process that allows you to invoice customers for project-based time and expenses or fixed-price services.

The process consists of the following steps:

- Project invoice preparation
- Creating a project invoice request
- Releasing a project invoice request

For more information, see Project Invoicing.

Tasks

Edit Time and Expenses

Select the project for which you want to edit the time and expenses and choose **Edit Time and Expenses**.

The **Edit Time and Expenses** quick activity opens.

i Note

The **Edit Time and Expenses** button is enabled only for those customer projects that are integrated with a sales order.

i Note

Expense items falling into the restriction period of a project invoice request with status **In Preparation** are not shown in the **Not Invoiced Time and Expenses**. For more details see Project Invoice Requests Quick Guide.

Changes to quantities/amounts of these expense items are only possible in the open project invoice request under:

- **Items** → **Invoice Items** → **Time and Expense Items**
- or **Items** → **Time and Expenses** → **Time and Expense Items**

The **Time and Expense Items** table lists all time and expense items that have been recorded against the selected project. The following information about the item and expense item is displayed:

- Source

  The source of a time and expense item could be one of the following:

  - Time confirmations from the employee time sheet
  - Expense reports
  - Supplier invoices and credit memos
  - Goods and services receipts and returns
  - Goods issues and goods returns

- Product

  The product describes either the service performed or the expense reported.

- Date

  The date is the provision date of the service or the date of the expense.

- Employee/Party

  The employee/party is either the employee or the service provider who provided the service or the supplier who invoiced the expenses to the project.

- Source Document

  The source document shows the document type and document ID of the source document.

- Quantity and Expense Details

  This tab provides you with details about how much has already been invoiced or written off.

This quick activity allows you to do the following:

- **Assigning time and expense items to sales order items**

  Select one or several time and expense items and choose Assign Sales Order Item. Enter the Sales Order Item ID.

- **Blocking time and expense items for invoicing**

  Select the Blocked for Invoicing indicator in a time and expense item.

- **Selecting time and expense items for invoicing or for writing off**

  Distribute the Quantity Available to Be Invoiced to the Quantity to Be Invoiced and the Quantity to Be Written Off field. The remaining quantity will be deferred to the next project invoice request.

  Distribute the Expense Available to Be Invoiced to the Expense to Be Invoiced and the Expense to Be Written Off field. The remaining expense will be deferred to the next project invoice request.

- **Edit assignment rules for linking project tasks to sales order items**

  To manage assignment rules linking project tasks to sales order items, click Edit Assignment Rules. These rules are used to propose sales order items for project expenses.

Create a Project Invoice Request for a Customer Project

For information about this task, see Create a Project Invoice Request for a Customer Project.

Edit a Project Invoice Request

You can only edit unreleased project invoice requests. If there is an unreleased project invoice request, you can edit it starting from the following views:

- Customer Invoicing > Project Invoicing > Sales Orders
- Customer Invoicing > Project Invoicing > Projects
- Customer Invoicing > Project Invoicing > Project Invoice Requests
- Project Management > Projects
- Project Management > Invoice Preparation > Not Invoiced Time and Expenses
- Project Management > Invoice Preparation > Project Invoice Requests

To edit a project invoice request, proceed as follows:

- In one of the **Project Invoice Requests** views, select a project invoice request with the status **In Process** and choose **Edit**.
- In one of the other views, select a sales order or a project with an unreleased project invoice request and choose **Edit Project Invoice Request**.

This brings you to an editor screen which offers you the same entry fields as the **New Project Invoice Request** guided activity. If the project invoice request has been released or invoiced, the fields are for display only.

For information about the field in the project invoice request, refer to the Create a Project Invoice Request for a Customer Project step-by-step instruction.

Edit Assignment Rules for Sales Order Items

For information about this task, see Edit Assignment Rules for Linking Project Tasks to Sales Order Items.

Change Project Task Assignment of Time Confirmations

You can change the project task assignment of time confirmations in the **Not Invoiced Time and Expenses** view of the **Project Management** work center. The system processes these project task reassignments in the background as soon as the **Save** button is pressed. The system does not consider the approval settings of the target project task, for example, an approval process is never triggered. You can restrict the project tasks that are allowed as target in the configuration element **Time Confirmation Reassignment in Project Management**. Here you can also configure the view where the reassignment functionality shall be enabled.

Display of Failed Project Task Reassignments

You can now see if the change of the project task assignment of a time confirmation failed. When you click on the respective item, more details for the reassignment are shown similarly to the functionality in the **Time and Expenses** list.

Create a Project Invoice Request for a Customer Project

Overview

With the **New Project Invoice Request** guided activity, you can create project invoice requests for customer projects in which you invoice the customer for time and expenses spent on the project or for fixed price services.

You can create a project invoice request in one of the following views:

- Customer Invoicing > Project Invoicing > Sales Orders
- Customer Invoicing > Project Invoicing > Projects
- Project Management > Projects
- Project Management > Invoice Preparation > Not Invoiced Time and Expenses

Navigate to the view from which you want to start this activity. Select the project or sales order you are creating the project invoice request from and click New and choose Manual Project Invoice Request. The New Project Invoice Request guided activity opens.

If you are creating the project invoice request from a project in the Projects view of the Project Management work center, then select the project from the project list, and from the context menu for the project choose Manual Project Invoice Request. The New Project Invoice Request guided activity opens.

Note

- This step-by-step document describes how to create a project invoice request for **customer projects**. You can enter the Project Types activity in the Fine-Tune phase of your implementation project to check which of your project types represent customer projects.
- You can only have one unreleased project invoice request for a sales order and project. If there is an unreleased project invoice request for a project or sales order, the transaction New > Manual Project Invoice Request is not available. Instead, click Edit and choose Project Invoice Request which brings you to an editor screen where you are offered the same entry fields as in the New Project Invoice Request guided activity.

  If there is an unreleased project invoice request for a project in the Projects view of the Project Management work center, the Manual Project Invoice Request option in the context menu will be grayed out. You can edit the project invoice request by using the Edit Project Invoice Request option in the context menu of the project.

Prerequisites

- A customer project has been created and released.
- One or more sales orders for the same customer and within the same company have been created and released. All sales order items with project-based item types are assigned to project tasks of the customer project.

  For more information about sales order integration, see Project Invoicing.

Procedure

1. **Enter the general data**

   On the General Data step of the guided activity, enter general information about the project invoice request:

   a. Under Reference Information, do the following:

      - If you create the project invoice request from a sales order, the system displays the sales order in the Sales Order field and the assigned project in the Project field. Both fields are read only.
      - If you create the project invoice request from a project, the system displays the project in the Project field. This field is read only. The system defaults the most recent sales order that has been assigned to one of the project tasks of the project in the Sales Order field. You can enter a different sales order, if other sales orders are also assigned to project tasks of the selected project. The field is mandatory.

   b. Under General, do the following:

- In the **Invoice Date** field, enter the date on which you want the customer invoice to be created.

  This date must be within the current accounting period.

- In the **Currency** field, check and edit the currency, if required.

  The system derives this information from the referenced sales order.

- You can limit the number of time and expense items that are made available for inclusion in the project invoice request by specifying a period of time for which you want to invoice project expenses. This allows you to, for example, periodically invoice a customer for expenses incurred on a monthly basis.

  The system calculates which time and expense items belong to the specified date range based on the provision date of the time and expense items.

  > **Note**
  >
  > This specified date range equals the restriction period of the project invoice request.
  >
  > If the expense item has an expense period, then the period end date is used as provision date. But it is not necessary that the provision date lies within the specified date range. The expense period and the specified date range rather need to overlap.

  To improve the performance of project invoicing, the following rules apply in case of a large amount of non-invoiced time and expense items:

  i. If there are more than 5.000 non-invoiced time and expense items, the expense restriction period will be defined by the system so that only 5.000 items fall within this period. A message informs the user about this restriction.

  ii. If the user enhances the period so that more than 5.000, but less than 20.000 items, fall within this period, a warning asks the user to define a smaller period.

  iii. If the user enhances the period so that more than 20.000 items fall within this period, this change is rejected by the system.

  iv. If a project invoice request is based on an invoice schedule, and if there are more than 20.000 non-invoiced time and expense items, the project invoice request is not created automatically.

     Instead, the user is informed via the work list that the project invoice request cannot be created due to too many non-invoiced time and expense items. The user then needs to cancel the relevant invoice schedule item and create the project invoice request manually.

  From the **Restrict Time and Expenses** dropdown list, select a restriction period to limit the time and expense items that will be included in the project invoice request:

  - **For Last Week** – Time and expense items recorded during the previous calendar week. A calendar week runs from Monday to Sunday.
  - **Until End of Last Week** – Time and expense items recorded up until the last day of the previous calendar week
  - **For Last Month** – Time and expense items recorded during the previous month
  - **Until End of Last Month** – Time and expense items recorded up until the last day of the previous month
  - **No Restriction** – All time and expense items are available for invoicing
  - **By Specific Dates** – Time and expense items recorded during a specified date range that you enter in the **Time and Expenses From/To** fields

i Note

Except for the option No Restriction, a start date, an end date, or a start date and an end date are determined for the restriction period of the project invoice request.

There are two different situations:

- The expense item has only an expense date. This date is used as provision date. The expense item is relevant when its expense date falls into the restriction period of the project invoice request.
- The expense item has an expense period. The end date of this period is used as provision date. But independent from the provision date, the expense item is relevant when its expense period and the restriction period of the project invoice request overlap.

c. Under Organizational Assignment, check and edit the information, as required.

The sales unit, sales organization, and distribution channel are derived from the referenced sales order.

d. Under Bill-To, the system will consider the Bill-To party address from the sales order or from master data depending on your business configuration settings. You can choose if the system should consider Bill-To party address from sales order or from master data through business configuration option.

i Note

The system considers Bill-To party address from the sales order by default.

To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Customer Invoicing is selected within Sales.

In the Questions step, expand the Sales scoping element, select Customer Invoicing then select Miscellaneous Invoicing and review the question Do you want to redetermine the address of the Bill-To party from the master data at the time of invoice creation?

When you review the question, the bill-to address will be taken from the master data; otherwise, it will be taken from the sales order.

This scoping question is available, only if you have answered the following scoping question with yes. In General Business Data element, select Business Partners, then select Handling of Business Partners and answer the question Do you want to view the time dependent address maintained for accounts?.

e. On the Customer Information tab, you can add a note to the customer that will be included in the invoice.

f. On the Attachments tab, you can upload attachments or enter links to files that will be made available for inclusion in the invoice.

2. **Enter additional data**

   On the Additional Data step of the guided activity, check the involved parties and payment and tax exemption information, and edit it, as required.

   The system derives this data from the referenced sales order.

3. **Define invoice items**

   Before selecting which time and expense items you want to include in the project invoice request, you must define invoice items. This defines the content of the follow-on customer invoice. You do this on the Define Invoice Items step of the guided activity.

To let the system **propose invoice items** based on the items in the assigned sales order, choose Propose Invoice Items and select one of the following options:

- Using Sales Order Items

  The system creates one invoice item for every item of the assigned sales order.

- From Time and Expenses: Per Product and Sales Order Item

  The system creates one invoice item for every sales order item that has time and expense items assigned and then multiplies it for every confirmed service, reported expense, or supplied material that is assigned to the sales order item. If the project manager has properly assigned all time and expense items to sales order items in the Not Invoiced Time and Expenses view, the proposed invoice items include all time and expense items.

- From Time and Expenses: Per Employee/Party and Sales Order Item

  The system creates one invoice item for every sales order item that has time and expense items assigned and then multiplies it for every employee/party who confirmed a service, reported an expense, or supplied a material that is assigned to the sales order item. If the project manager has properly assigned all time and expense items to sales order items in the Not Invoiced Time and Expenses view, the proposed invoice items include all time and expense items.

- Using Same Option as in Previous Project Invoice Request

  The system uses the same option for the current sales order and project as was chosen while creating the previous invoice.

i Note

The system copies relevant information from the sales order items to the invoice items, for example:

- It copies the Sales Order Item ID as a reference into the invoice item.
- It derives the Invoicing Method from the Item Type of the sales order item.
  - If the Item Type specifies a project-based service or expense with **time-and-material** invoicing, the Invoicing Method is Time and Material.
  - If the Item Type specifies a project-based service or expense with a **fixed price**, the Invoicing Method is Fixed Price.

You can edit the proposed items, as required.

i Note

Copying of Texts

When a project invoice request is copied using the **Cancel and Copy** action, all associated texts will be copied from the cancelled project invoice request.

To create invoice items **manually**, choose Add Row and enter the following information:

- Product ID: Enter an invoicing product. You can enter a material or service for which sales has been activated in the product master data.
- Item Description: The description of the invoicing product is displayed here. You can overwrite the item description, if required.
- Invoicing Type: Select either Fixed Price or Time and Material as Invoicing Method
- Sales Order Item: Assign the invoice item to a sales order item.

> **i Note**
>
> The **Invoicing Method** must match the **Item Type** of the selected sales order.

4. **Select time and expenses**

   After you have created the invoice items, you need to assign time and expense items to the invoice items and adjust the quantities and amounts that you want to be invoiced for each item.

   You can do this on the **Select Time and Expenses** step of the guided activity.

   a. Do one of the following:

      - Click **Propose Invoice Item Assignments** and choose either **For all Time and Expense Items** or **For Selected Group of Time and Expense Items**.

        The system proposes assignments for you either for all time and expense items or the group of time and expense items you selected in the summarization table. You then edit the assignments, as required.

      - Assign time and expense items to invoice items manually.

   b. For each time or expense item that is assigned to an invoice item, adjust the amounts and quantities that are to be invoiced or written off.

   For more information, see [Selecting Time and Expenses in a Project Invoice Request](#).

5. **Refine invoice items**

   On the **Refine Invoice Items** step of the guided activity, you can review the project invoice request structure at a glance and do the necessary adjustments for each invoice item, for example:

   a. You can adjust the **Item Descriptions**.

   b. In certain circumstances, you can adjust the value or the unit of measurement of an invoice item's **Quantity**. To understand the significance of the quantity in invoice items, refer to the following:

      - Items with **Time and Material** invoicing method:

        The quantity field displays the total time (for services) or the total quantity (for expenses) over all time and expense items that you assigned to the invoice item. The quantity can be negative in case you assigned credit lines.

        - You **cannot** change the **quantity** manually.

        - You **can** change the quantity's **unit of measurement**. The system converts the quantity to reflect the new unit of measurement, for example, from 24 hours to 1 day.

      - Items with **Fixed Price** invoicing method:

        - **Quantity is unequal 1**:

          The quantity **is relevant** for the calculation of the net value.

          - You **can** manually change the **quantity**. For example, you can enter a negative quantity to credit the customer for that item.

          - You **can** change the **unit of measurement of the quantity**. The system does not convert the quantity but recalculates the net value of that invoice item.

        - **Quantity is equal 1**:

          The quantity **is not relevant** for the calculation of the net value. The amount is considered to be a **lump sum** for the service or expense.

Usually, you **cannot** change the quantity or the quantity's unit of measurement.

→ Tip

In case you need to credit the customer for a lump sum fixed price item, you can display the Debit/Credit field in the Items table using the personalization under Personalize > This Screen. For lump sum fixed price items, you can change the Debit/Credit field from **Debit** to **Credit**. This automatically switches the quantity from 1 to **–1** which turns the net value negative.

c. You can adjust the list prices and discount columns for each invoice item.

d. On the Revenue tab, you can do the following:

- Check that the correct project task has been assigned to each invoice item. The system proposes a project task to which the sales order item is assigned.
- The general ledger account in which the revenue is collected is determined by the system using the account determination logic that was defined in business configuration. If required, you can overrule this logic by entering a general ledger account in the GL Account field.
- Select or deselect if you want to grant Cash Discount.

  This information is derived from the referenced sales order.
- The system displays an overview of the net value and quantity history of the sales order item referenced by the selected invoice item. This allows you to check what value has already been invoiced for this sales order item in previous project invoice requests.
- If you selected a fixed-price invoice item in the upper table, you can also view the progress of work on the project task (and its subtasks) that is assigned to the sales order item.

e. On the Customer Information tab, you can add a comment for inclusion in the customer invoice for the selected invoice item.

f. On the Internal Comment tab, you can add an internal comment for the user creating the customer invoice.

g. On the Taxes tab, you can view taxation information for the selected invoice item.

i Note

The tax date of an invoice item is the date of the latest assigned time and expense item. If no time and expense items are assigned to the invoice item, the system will use the invoice date from step 1 as tax date. You can change this date, if required.

h. On the Attachments tab, you can add attachments for inclusion in the invoice for this invoice item.

After you have decided which time and expenses items you want to include in the invoice request and have made the necessary adjustments to the quantities and amounts, you can generate a detailed list containing the assigned items. This list can be attached to the follow-on customer invoice to provide the customer with detailed information about the time and expense items included in the invoice. You can create and download the itemized list when the customer project invoice request is in In Preparation, Invoiced and Released status.

To create an **itemized list** of all time and expenses items that have been included in the project invoice request, do the following:

- Go to Itemized List select New CSV or New PDF.
- Choose up to four different fields and these fields will be used to group the time and expense items in the itemized list.
- Select the fields you want to include in the list for each time or expense item.

ℹ Note

You cannot include Internal Comments in the itemized list as this may contain information which is not intended for the customer. However, you can include the Work Description from time confirmations or the Additional Remarks from expense report items.

- Click Create to generate the CSV or PDF format of the itemized list.

ℹ Note

If the project invoice request was created **automatically**, an itemized list that shows all invoicing-relevant time and expense items is attached to it **automatically** in the form of a PDF document. However, if you choose to create the project invoice request manually, then you have to trigger the creation of the itemized list manually.

To edit an existing itemized list, do the following:

- Go to Itemized List select View and Edit from the drop down list.
- Click Download to download it to your local computer.
- Edit the downloaded file on your local computer.
- Upload the changed CSV file or PDF document by choosing Replace. This replaces the previous list with the new list.

ℹ Note

There can only be one itemized list per invoice request. Once you create the itemized list, the itemized list doesn't update automatically when you change the invoice request. If you change the invoice request and want these changes to be reflected in the itemized list, you must create a new itemized list.

6. **Refine pricing**

On the Refine Invoice Items step, the total quantity, list price, and net value are displayed for each invoice item. The net value is displayed in the currency of the invoice request.

The pricing of the individual invoice items varies depending on the invoicing type:

- For time and material invoice items, the system calculates the price as quantity times list price of the referenced sales order item.
- For fixed price invoice items, the system calculates the price as quantity times list price of the referenced sales order item. If this sales order item has already been referenced in other customer invoices, the price is the difference between the list price in the sales order item and the sum of all previous invoice items that reference the sales order item.

You can view and edit detailed pricing information for individual invoice items or for the project invoice request as a whole.

a. You can change the quantity and the quantity's unit of measurement in one of the following cases, for example from days to hours. The system automatically converts the quantity value to the new unit of measurement.

b. In the Item Pricing table, check the total price for each invoice item and its pricing components. You can edit existing pricing components and create new components, if required.

Any manual changes you make on this step or on the previous step are marked as manual changes in the Manually Added/Changed column.

c. In the Total Pricing table, check the total value of the project invoice request.

If you have made changes to the item pricing, you can use the Update Pricing function to recalculate total pricing for the invoice request. You have the following options when using this function:

- **Keep Manual Changes**

  Recalculate total pricing based on any manual changes you have made. This means that any information that you have entered manually is not overwritten when the prices are recalculated.

- **Completely**

  Recalculate total pricing based on the system proposals. This option overwrites any manually entered information and, in effect, resets pricing information to the values calculated by the system.

d. To check whether there are any inconsistencies in the information you have entered in the guided activity, click **Check**.

The system checks the project invoice request and displays error messages if any inconsistencies are found. You can save a project invoice request that contains inconsistencies but you cannot release it. You can only release project invoice requests that are consistent.

e. To save the project invoice request, click **Finish**.

The invoice request guided activity uses the same pricing concept as is used for all sales documents. For more information, see Pricing in Customer Relationship Management.

Result

On the **Confirmation** step of the guided activity, you have the following options:

- If the project invoice request is incomplete and requires further editing, click **Close**.

  The project invoice request is given the status **In Preparation** and can be accessed from one of these views

  - **Customer Invoicing** > **Project Invoicing** > **Sales Orders**
  - **Customer Invoicing** > **Project Invoicing** > **Projects**
  - **Customer Invoicing** > **Project Invoicing** > **Project Invoice Requests**
  - **Project Management** > **Projects**
  - **Project Management** > **Invoice Preparation** > **Not Invoiced Time and Expenses**
  - **Project Management** > **Invoice Preparation** > **Project Invoice Requests**

- If you are finished creating the project invoice request and it does not contain any inconsistencies, you can click **Release Project Invoice Request** to release the project invoice request. The released project invoice request appears in the Invoice Request /Invoice Request (for Mexico) view of the **Customer Invoicing** work center, where a customer invoice can be created.

  Note

  When you release a project invoice request, the system removes the invoice items that have zero quantity and do not have expenses assigned.

- If you want another user to review the project invoice request before it is released, click **Send for further processing**. This allows you to create a business task to send to the other user.

Editing a Project Invoice Request

A project invoice request with status **In Preparation** (also referred to as an open project invoice request) can still be edited, especially with regard to the assigned expense items.

Generally, an expense item is shown in the list of available expense items when it falls into the restriction period of the open project invoice request. In detail, this means that its service/delivery/expense period (that could also just be a date) at least overlaps with the restriction period of the open project invoice request.

Additionally, the following events may lead to new entries or a change of quantities/amounts and/or sales order items of existing entries of the available expense items:

1. Editing the project invoice request manually

    a. Change of the expense restriction period

    When the expense restriction period is extended, so that an additional open expense falls within this period, any written-off quantity will be automatically assigned to the project invoice request provided that the sales order of the expense item corresponds to the sales order of the project invoice request and the expense item is not marked as blocked for invoicing.

    When the expense restriction period is reduced and an expense item does not fit into this period anymore, its quantities/amounts reopen for invoicing with the sales order item, invoicing task, invoicing product and invoicing product specification as maintained in the project invoice request.

    b. Deleting a project invoice request item or deleting the invoice item assignment of an expense item

    Quantities/amounts reopen for invoicing with the sales order item, invoicing task, invoicing product and invoicing product specification as maintained before in the project invoice request.

2. Releasing the project invoice request

    When the project invoice request is released, the quantities/amounts of the expense items that are neither invoiced nor written-off with this project invoice request reopen for invoicing with the sales order item, invoicing task, invoicing product and invoicing product specification as maintained in the project invoice request.

    When a partial quantity is invoiced or written-off, the deferred quantity/amounts of the assigned expense item is reopened as **To be Invoiced.**

    The assignment rules can be manually applied in **Project Management** → **Not Invoiced Time and Expenses**.

3. Cancelling the project invoice request

    When the project invoice request is canceled, the invoiced and written-off quantities/amounts of the assigned expense items reopen for invoicing with the sales order item, invoicing task, invoicing product and invoicing product specification as maintained in the project invoice request.

    Depending on the existence of an open project invoice request and its restriction period, the situation is as follows:

    a. There is no open project invoice request or there is an open project invoice request, but the expense item does not fall into its expense restriction period.

    The reopened quantities/amounts of the expense item are shown again in the **Not Invoiced Time and Expenses**.

    In case there were still open quantities/amounts of the expense item, the reopened quantities/amounts and the still open quantities/amounts are summarized whereas the sales order item, invoicing task, invoicing product and invoicing product specification remain unchanged.

    The assignment rules can be manually applied in **Project Management** → **Not Invoiced Time and Expenses**.

    b. There is an open project invoice request and the expense item falls into its expense restriction period

    The reopened quantities/amounts of the expense item are excluded from the **Not Invoiced Time and Expenses**.

    A reopened written-off quantity/amount is automatically assigned to the open project invoice request when the sales order of the reopened quantities/amounts correspond to the one used in the open project invoice request and the expense item is not marked as blocked for invoicing.

In case there were still open quantities/amounts of the expense item, the reopened quantities/amounts and the still open quantities/amounts are summarized whereas the sales order item, invoicing task, invoicing product and invoicing product specification remain unchanged.

If the to be invoiced quantity/amount is assigned to a project invoice request item, the reopened to be invoiced quantity/amount is added to the project invoice request as deferred quantity/amount.

Written-off and deferred quantities/amounts on the one hand and over-invoicing quantities/amounts on the other hand generated this way are offset against each other.

4. Deleting the project invoice request

   When the project invoice request is deleted, the quantities/amounts of the expense items reopen for invoicing with the sales order item, invoicing task, invoicing product and invoicing product specification as maintained in the project invoice request.

   The assignment rules can be manually applied in **Project Management** → **Not Invoiced Time and Expense**s.

5. Creation of a new project-related source document

   The creation of a new project-related source document leads to one or more new expense items. The assignment rules are applied to these new expense items.

   A written-off quantity/amount can be arisen due to:

   - Different billable hours maintained in the time recording
   - A work package or material of the corresponding project task is not marked as billable
   - % Billing is maintained or the **To Be Written Off** indicator is marked in the applied assignment rule.

   If there is an open project invoice request, this written-off quantity/amount is automatically assigned to the open project invoice request when the expense item falls into the expense restriction period of the open project invoice request and the sales order of the expense item determined by the applied assignment rule is the same as the one used in the open project invoice request.

6. Cancellation of a project-related source document

   The cancellation of a project-related source document may affect one or more expense items.

   Not invoiced or written-off quantities/amounts of the affected expense items are deleted. Already invoiced or written-off quantities/amounts of the affected expense items lead to new invoiced and written-off quantities/amounts as a copy of the original quantities/amounts with the opposite sign. In case the invoiced or written-off quantities/amounts originate from several project invoice requests, they are summarized.

   Depending on the existence of an open project invoice request and its restriction period, the situation is as follows:

   a. There is no open project invoice request or there is an open project invoice request, but the expense item does not fall into its expense restriction period.

      The new quantities/amounts of the expense items are shown again in the **Not Invoiced Time and Expenses**.

      The assignment rules can be manually applied in **Project Management** → **Not Invoiced Time and Expenses**.

   b. There is an open project invoice request and the expense item falls into its expense restriction period.

      The new quantities/amounts of the expense item are excluded from the **Not Invoiced Time and Expenses**.

      A new written-off quantity/amount is automatically assigned to the open project invoice request when the sales order of the new quantities/amounts correspond to the one used in the open project invoice request and the expense item is not marked as blocked for invoicing.

In case quantities/amounts of an expense item are already used in the open project invoice request, the new quantities/amounts and the used quantities/amounts are summarized whereas the sales order item, invoicing task, invoicing product and invoicing product specification remain unchanged. Due to the opposite sign of the new quantities/amounts this may lead to zero quantities/amounts.

If there is a to be invoiced quantity/amount that is assigned to a project invoice request item, the new to be invoiced quantity/amount with the opposite sign is added to the project invoice request as deferred quantity/amount. New over-invoiced quantities/amounts are deleted in this case.

Written-off and deferred quantities/amounts on the one hand and over-invoicing quantities/amounts on the other hand generated this way, are offset against each other.

As a result, there may be positive and negative quantities/amounts at the same time shown in one line. Then the quantities/amounts are read-only.

There are two options to go ahead:

- You do not have the need to adapt the quantities/amount. Then you can just release the project invoice request.
- You want to change the quantities/amounts. Then you can delete the invoice item ID. As a result, the **Quantity to Be Invoiced** /**Expenses to Be Invoiced** is deleted and the **Quantity to Be Deferred** /**Expenses to Be Deferred** is adapted accordingly. The quantities/amounts have the same sign and can be maintained now.

Selecting Time and Expenses in a Project Invoice Request

Overview

In the **Select Time and Expenses** step of the **New Project Invoice Request** guided activity, you assign time and expense items to invoice items and specify the quantities and amounts you want to invoice, write off, or defer to a later project invoice request.

Displaying Time and Expense Items

In the **Select Time and Expenses** step of the guided activity, all time and expense items that were recorded against the project during the specified restriction period are displayed. To help you process these items, a summarization function is provided which you can use to summarize the time and expense items by a selected criterion. The summarized information is displayed in the top half of the screen and the time and expense items relevant for the currently selected line of the summarization table are displayed under **Time and Expense Items**.

Summarized Items

The summarization options allow you to summarize time and expense items in the way that best suits your chosen invoicing method. You have the following options for summarizing information:

Summarize By

- **Invoice Item** - The invoice item to which the time and expense item is assigned. Time or expense items that are not assigned to an invoice item yet are summarized in a separate line marked as **Unassigned**.
- **Sales Order Item** - The sales order item to which the time or expense item is assigned. Time or expense items that are not assigned to a sales order item are summarized in a separate line marked as **Unassigned**. When you assign a time and expense item to an invoice item the system automatically assigns it to the sales order item assigned to the invoice item.

- Product - The service or material referenced in the time or expense item. Time or expense items that are not assigned to a service or material are summarized in a separate line.
- Employee/Party (Default Setting) - The employee responsible for or the party involved in the time or expense item.
- Project Task - The project task to which the time or expense item is assigned.
- Calendar Week - The calendar week in which the time or expense item was incurred or updated. This is calculated using the item's provision date.
- Source - The type of document from which the time or expense item originates, for example, a time confirmation or goods issue.

i Note

When you summarize time and expense items this does not affect the structure of your project invoice request. Instead, summarization is provided to give you different options for viewing and processing information. To get an overview of the invoice structure and the assigned time and expense items, summarize by Invoice Item.

By default, the summarization table displays the following information:

- Time Available to Be Invoiced, Time to Be Invoiced, and Time to Be Written Off

  These columns display the sums of the fields Quantity Available to Be Invoiced, Quantity to Be Invoiced, and Quantity to Be Written Off from the details table for all time and expense items that have a **time-based** unit of measure, for example times reported using the employee time sheet. Times are displayed in hours.

- Expenses Available to Be Invoiced, Expenses to Be Invoiced, and Expenses to Be Written Off

  These columns display the sums of the fields with the same name from the details table for all time and expense items that include expenses, for example expenses reported using the expense report. Expenses are displayed in the default currency of your company.

- Proposed Net Value

  The sum of the proposed net values of the time and expense items for each summarization line. The proposed net value is displayed for information purposes only and does not reflect the final value of the project invoice request. It is displayed in the currency of the project invoice request.

i Note

Time-based quantities are the most common and most important quantities used in project management. Therefore, the summarization table displays only the totals of time-based quantities. Other quantities of time and expense items, for example material quantities from supplier invoices, are not totalled in the summarization table. Nevertheless, they are included in the group formed by the summarization option. If you select a summary line in the summarization table, the system also displays the non-time based quantities in the details table.

Time and Expense Items

When you select a line in the summarization table, the Time and Expense Items table lists the time and expense items related to the selected line. For instance, if you have summarized the upper table by invoice item, and you select an invoice item line, detailed information for all time and expense items assigned to this invoice item is displayed in the lower table.

You can group time and expense items using the following options:

- None (Default Setting)
- Description - The description of the material or service referenced in the time or expense item.

- Project Task Name - The project task to which the time or expense item is assigned.
- Date - The provision date of the time or expense item.
- Employee/Party Name - The employee responsible for or the party involved in the time or expense item.
- Invoice Item ID – The invoice item to which the time or expense item is assigned. Time or expense items that are not assigned to an invoice item yet are summarized in a separate line.
- Source - The type of document from which the time or expense item originates, for example, a time confirmation or goods issue.
- Sales Order Item Description – The description of the sales order item to which the time or expense item is assigned. Time or expense items that are not assigned to a sales order item, are summarized in a separate line. When you assign a time and expense item to an invoice item, the system automatically assigns it to the sales order item assigned to the invoice item.

The Time and Expense Items table displays the following information for each time or expense item:

- The referenced **product**, **project task**, **provision date**, and **employee/party** information.

  Note

  You can personalize the project invoice to view the Product Specification and Invoice Product Specification.

- The **quantities** and **expenses** that are **available to be invoiced**, that you want **to be invoiced**, and that you want **to be written off**.
- The **proposed net value** in the currency of the project invoice request.

  For services and materials this is calculated by multiplying the quantity to be invoiced by the price from the sales order. For expense products and items without a product, the expense amount is used. This information does not necessarily reflect the final value of the project invoice request.

→ Tip

- **Time confirmations**: The work description of a time confirmation in the Time and Expense Items table is displayed in the Comments column. The work description is an optional description which describes the work performed by the employee. If the employee did not enter a work description but an internal comment, the column displays the internal comment.

  You can edit a work description by clicking Edit Comment.

  For all other types of comments, editing is not possible and the Edit Comment button is grayed out.

- For **source documents other** than time confirmations the system displays the following information in the Comments column:
  - **Expense reports**

    The system displays the Additional Remarks the employee entered in the receipt details.

  - **Invoice or credit memo from the supplier**

    The system displays one of the available text fields with the following priority:

    1. Remark from Supplier
    2. Internal Comment
    3. Approval Note

- **Goods or service receipt**

  The system displays one of the available text fields with the following priority:

  1. Purchasing Note
  2. Remark for Supplier
  3. Remark from Supplier
  4. Shipping Instructions
  5. Internal Comment

- **Goods issue and goods return**

  The system displays the Internal Comment.

- You can view further details for a time and expense item by selecting the item and clicking Item Details. This displays detailed information in a separate window, for example, all available text fields.

Assigning Time and Expense Items to Invoice Items

You can either assign time and expense items to invoice items manually or you can use the Propose Invoice Item Assignments function to have the system propose assignments for you.

- **Propose Invoice Item Assignments**

  The system assigns time and expense items to invoice items if the time and expense item and the sales order item of the invoice item reference the **same project task**.

  In addition, for invoice items with the invoicing type **Time and Material**, time and expense item and invoice item need to refer to the **same service**.

  If there are multiple invoice items that fulfill these conditions, the time and expense items remain unassigned.

  Note

  - No proposal is made for time and expense items that contain a reference to a material. These must be assigned to invoice items manually.
  - The system assigns only unassigned time and expense items and does not overwrite any existing assignments.
  - It is recommended that you check the assignments and remove or reassign time and expense items, as required.

- **Manual Assignment of Time and Expense Items to Invoice Items**

  To manually assign a time and expense item to an invoice item, under Time and Expense Items, enter an invoice item in the Invoice Item column for a time and expense item. Alternatively, you can select multiple time and expense items and click Assign Invoice Items. Any time and expense items that remain unassigned are not included in the current project invoice request. Instead, they are deferred to a later project invoice request and will be available for invoicing when you next create a project invoice request.

Note

The summarization table and the Time and Expense Items table contain all time and expense items that have been recorded against your project. To view which of these time and expense items have been assigned to invoice items and will be included in the project invoice request, select Invoice Item from the Summarize By menu and click each line of the invoice to view the time and expense items assigned to each invoice item.

Adjusting Quantities and Expenses of Time and Expense Items

When adjusting the quantities and expenses that you want to include in the project invoice request, you have the following options:

- **Adjusting Individual Time and Expense Items**

  You can edit the **quantity** and the **expense** that you want **to be invoiced** or **to be written off** for each time and expense item individually in the Time and Expense Items table. The system automatically updates the quantity and expense **to be deferred** with the remaining value, and updates the summarization line in the upper table.

  → **Tip**

  Overinvoicing: If you are required to invoice a customer for a fixed quantity or expense but this does not match the recorded time and expense, you can enter a quantity or expense that is higher than the quantity or expense available to be invoiced. To do this, the quantity or expense to be written off for this time and expense item must be zero. For example, you have agreed with a customer to invoice work on an 8 hours per day basis and an employee has worked 7 hours on a given day. It is then possible to invoice the customer for 8 hours when only 7 hours were recorded.

  It is not possible to overinvoice on the level of summarized quantities and expenses. This is only possible at time and expense item level.

- **Adjusting Summarized Quantities and Expenses**

  You can edit the summarized values for a selected line in the Summarized By table. Your changes are then distributed to the assigned time and expense items by the following rules:

  - If you increase the quantity or expense to be invoiced, the system distributes the change to the time and expense items in order of their provision date starting with **the oldest items first**.
  - If you enter a value to be written off, the system distributes the change to the time and expense items in order of their provision date starting with **the newest items first**.
  - The system distributes the change to time and expense items that are **assigned** to an invoice item before it distributes the change to time and expense items that are **unassigned**.

  Any remaining time and expense items are either completely or partially deferred to a later project invoice request.

  The system overwrites any manual changes you have made to quantities and expenses in the lower table with the following exceptions:

  - **Credit lines**: The system does not overwrite time and expense items that originate from a credit memo.
  - **Overinvoicing**: The system does not overwrite time and expense items for which you have manually entered a to-be-invoiced quantity or expense that is higher than the available-to-be-invoiced quantity or amount.

Change History

The change history contains a list of changes made to the business document along with detailed information such as the date each change was made, the user who made the change, and the attributes that were modified. You can filter the list of changes by the user who made the change and by the date of the change. You can also restrict the number of changes shown. The system displays no change history by default and you must filter the data before change information appears.

For more information, seeChanges View.

Pricing in Customer Relationship Management

Overview

Pricing is based on price master data such as price lists and discount lists, which are used to automatically calculate pricing within all business documents for sales and service processes. A predefined pricing procedure is used to determine the gross value the customer has to pay for certain products or services to be received on a certain day at a certain place. The pricing procedure consists of price components, such as list price, discounts, surcharges, freights, taxes, and costs. The order of these price components is essential for the calculation of the total value.

Price Components

SAP Business ByDesign contains a predefined set of price components, most of which you can activate through the business configuration. Price components can be:

- Automatically determined by the system and non-editable, for example, tax
- Automatically determined by the system and able to be overwritten by the user, for example, list price or automatically-determined product discounts
- Manually entered by the user, for example, a restocking fee or a manually-entered product discount

The manual behavior is influenced by the **Manual** flag in the business configuration for pricing. If the **Manual** flag is set, the system does not find the price component automatically and it must be added manually by the user.

The following sections show the set of price components that may display depending on your configuration.

List Price

This price component is naturally the first step of a pricing procedure, because many price components such as discounts or surcharges depend on it. To determine the net list price, the system checks all price lists that fit the parameters passed from the sales or service document. These parameters are customer, customer group, distribution chain, and date.

Price lists can be customer specific, distribution chain specific, and base price lists. The price lists are maintained as price master data, have a validity period, and need to be released before they are active.

Because the customer may have special prices, the system checks first for a customer-specific price list. If there is no customer-specific price found, then it checks for a distribution chain specific price list. Finally, if there is no distribution-chain-specific price, it checks for the base price list. You have to ensure that the system can find a price for all products or services you sell in the base price list at the very least. Prices can be manually revised within a sales or service document, allowing you to flexibly adjust your net prices.

i Note

An approval procedure can be activated for price lists and discount lists which is done in the business configuration in the scoping (under **General Business Data** > **Product and Service Pricing**). If this setting is active, the line manager automatically receives an approval task should his or her employee try to release a price or a discount list. The price list or discount list cannot be released and included in all business documents for sales and service processes until the line manager (or representative) approves the price list or discount list. If a manager is authorized to approve price and discount lists, he can directly release the price or discount list in the price master data view. This automatic approval is done without creating a business task if the manager himself releases the prices.

For more general information on Business Task Management, see [Business Task Management.]

Product Discount (%)

To determine the discount, the system checks all discount lists that fit the parameters passed from the sales or service document. The parameters are customer, distribution chain, customer group, product, and date. All found discounts are considered in the price calculation.

Discount lists can be Customer Specific Discount Product, General Customer Discount, Overall Customer Group Discount, and Customer Specific Discount Product Category discount lists.

Because the customer may have a special discount for a certain product, the system checks for a discount list with customer product discounts.

Discounts can always be revised manually within a sales or service document, allowing you to flexibly adjust discounts.

i Note

An approval procedure can be activated for price lists and discount lists which is done in the business configuration in the scoping (under **General Business Data** > **Product and Service Pricing**).If this setting is active, the line manager automatically receives an approval task should his or her employee try to release a price or a discount list. The price list or discount list cannot be released and included in all business documents for sales and service processes until the line manager (or representative) approves the price list or discount list. If a manager is authorized to approve price and discount lists, he can directly release the price or discount list in the price master data view. This automatic approval is done without creating a business task if the manager himself releases the prices.

For more general information on Business Task Management, see [Business Task Management.]

Working Condition (%)

This price component is important for service scenarios. If service performers work at nights or on weekends or public holidays, a surcharge can be invoiced to the customer.

Surcharge

Two different price components are available for surcharges. You can define surcharges as percentages or fixed amounts according to your needs. All surcharges can be used side by side.

Warranty/Goodwill

These price components are important within service scenarios. For example, in a service document, services or spare parts may be covered by a warranty. The warranty or goodwill discount will be calculated based on the Coverage field in the service document.

Quality Loss Fee

This price component is used for return scenarios. This element displays only if the Returns business topic is included in your business configuration. If your customer returns goods which are damaged or opened, you can manually define a deduction on item level.

Restocking Fee

This price componentis used for return scenarios. This element displays only if the Returns business topic is included in your business configuration. If your customer returns goods, you can manually define a restocking fee for each individual return document.

Migration Price

The migration price is needed for open sales and service documents that are migrated from a legacy system into SAP Business ByDesign. To ensure that prices are the same in both systems, there will not be any additional calculation of this price.

Total Item Net Value

This is calculated by adding all the item net values. This value cannot be edited.

Freight

This price component covers the freight amount determined automatically or entered manually. Depending on the business configuration settings it is possible to determine a fixed freight amount or to make the freight dependent on the net weight of the goods you sell.

Cost and Profit Margin

Cost displays only if profit margin is included in your business configuration. Cost is basically derived from financials and makes the calculation of the profit margin possible.

Overall Discount

The overall discount is an additional general discount applied to the total item net value. This can only be applied manually. The overall discount can be both percentage based (%) and value based ($).

Note

You must maintain the following business configuration setting to use this feature:

Go to **Business Configuration** > **Implementation Projects**. Select your implementation project and click **Edit Project Scope**. In the Scoping step of the project, ensure that **General Business Data** is the scoping element. In the Questions step, expand the **General Business Data** element and select **Product and Service Pricing** > **Sales Price Specifications**, and review the question: **Do you want additional discounts at document level?**

Total Net Value

This is calculated by adding all the item net values plus freight, without considering taxes. This value cannot be edited.

Total Given Discounts

This is calculated by adding all the relevant product discounts given. This value cannot be edited directly by the user. It can be influenced by editing the product discounts at item level.

Rounding Difference

This is a value that has been lost or gained through rounding. This value is used only for currencies that do not have low denomination coins such as 1c or 2c – for example, Swiss francs or Australian dollars. For these currencies, the price must be rounded to the nearest available value, such as 0c or 5c.

Tax

This price component covers all requirements in regards to taxation. All taxes are calculated according to legal requirements and the results of this calculation are put into this price component.

Total

This is calculated by adding the total net value plus tax.

Price Calculation

Pricing is centrally implemented in SAP Business ByDesign and linked to all relevant business processes. The procedure is predefined and you cannot modify the procedure or create a new one.

The pricing procedure controls which price components are automatically calculated for the relevant business documents, such as sales quotes, sales orders, and service orders. It contains the most commonly-used price components, including product prices, discounts, surcharges, and tax. These various kinds of price components can be combined and control the price calculation process.

The pricing procedure also contains the sequence in which the system takes these price components into account during pricing. It calculates the gross and net prices and taxes. The pricing procedure also determines:

- Which subtotals will be considered during pricing
- To what extent pricing can be processed manually
- Which method the system uses to calculate percentage discounts and surcharges
- Which requirements for a particular price component must be fulfilled before the system takes the element into account. For example, freights are not considered for service items.

i Note

For a sales order created as a follow-up of a contract that contains a price agreement for a material, the price agreement will not be considered in the price calculation of the sales order.

Currency and Quantity Conversion

During the price calculation, currency conversion occurs if the currency of the price master data differs from the document currency, depending on the exchange rates maintained as master data. The document currency is defaulted from the account master sales data.

In addition, during the price calculation, quantity conversion occurs if the unit of measure requested in the document differs from the price unit maintained in the price list. A prerequisite is that the quantity conversions are maintained in the product or service master data. For example, product master data maintains a quantity conversion “1 pallet = 20 each”, the price list specifies a price unit of “$50/1 each”, and the sales order requests 5 pallets - in this case, the 5 pallets are converted to 100 units and price is calculated at $5000.

Scales

You can define scales for prices which depend on different quantities. The scale you use determines how values are calculated. For example, you can use a scale to define that a single boiler costs $500, but if you buy at least 10 boilers the price decreases to only $450 per unit. You can also define scales for freights, which depend, for example, on the sales order value.

You can also define scales for product discounts.

There is also an additional feature where the system proposes the values for scales for every additional line that is added by the user while maintaining scales. The following example explains the logic for calculation of the proposed value for scales:

Example

Logic for determining the proposed scale value during price or discount scale maintenance.

Value of Scales	Percentage	Calculation of Percentage	
0	0	0	0
10	– 10%	11/10 =1.1	10*1.1 = 11
20	– 11%	11/10 = 1.1	11*1.1 = 12.1
30	– 12.1%	12.1/11 = 1.1	12.1*1.1 = 13.31
40	– 13.31%	13.31/12.1 = 1.1	13.31*1.1 = 14.641
50	– 14.641%	14.641/13.31 = 1.1	14.641*1.1 = 16.105
60	– 16.105%	16.105/14.641= 1.1	16.105*1.1 = 17.716

Related Information

[Configure Price Strategy]
[Price Agreements for Customer Contracts]
[Gross Pricing]