Project Management

SAP

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1 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.

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2 Business Background

2.1 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.

2.2 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
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. ⚠️ *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 or time confirmation 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.

> ℹ️ 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
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.

1 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.

2.3 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

> **i** 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.

> **i** 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 price list 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.

> **i** 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 price list
4. Service cost rate

> **i** 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
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.	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. 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.	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. Price from fixed source of supply	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.
4. Price from contract	
5. Price from price list	

> **i** 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.

> **ℹ** 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.

See Also

Project Cost and Revenue Management   [page 14]

2.4 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.
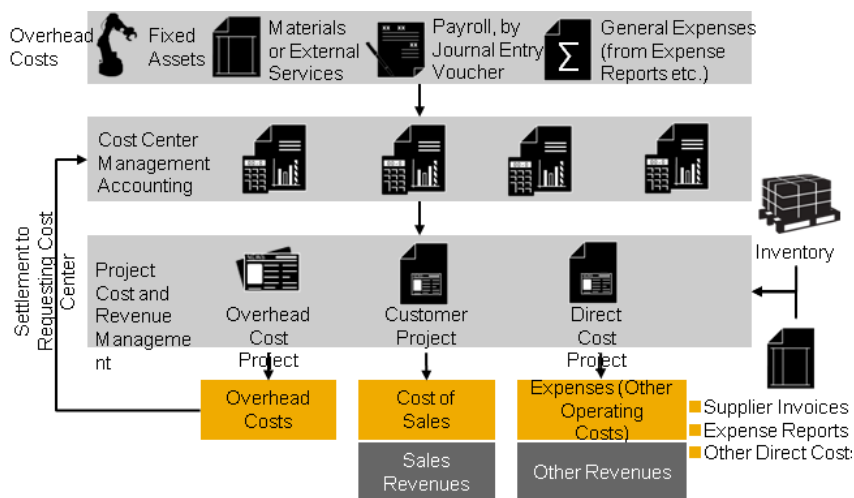
Process Variant Types in Project Cost and Revenue Management

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** 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**.

See Also

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

2.5 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.

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.

2.6 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

> ⚠
> - 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 [page 87] 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

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 Quick Guide for Not Invoiced Time and Expenses.

- 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 Order 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.

    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

➡ 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.

ⓘ 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

> ℹ The automatic retry functionality is available only for new execution.

> ⚙ 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:

> ℹ 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).

> **i** 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 .

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

See Also

Project Invoice Requests Quick Guide

2.7 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 [page 31]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.

> **i** 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

> ⚠ 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.

   > ℹ 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.

See Also

2.8 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.

> ℹ 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

> ⚠ 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.

    > ℹ 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*.

See Also

Project Invoicing   [page 18]
Invoice Schedule

2.9 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 [page 226].

- **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 [page 227].

- **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.

  > **i** 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 [page 229].

> ➡ 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.

2.10 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.

> **i** 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.

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.

> **i** 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.

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.

  > **i** 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.

2.11 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.

2.12 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.

Schedule Type	Definition	Example
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** 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** 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

Item Type	Price per period (flag in the contract item)	Schedule Type
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

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

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 – however with the following maximum number of dates:

- For yearly recurrence patterns: 10 invoice dates
- For monthly recurrence patterns: 24 invoice dates
- For weekly recurrence patterns: 26 invoice dates
- For daily recurrence patterns: 31 invoice 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.

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.

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 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.

> 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)

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** 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**
> - 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.

> **i** 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. Every night a regular job runs automatically. The job automatically creates **project invoice requests** three days before the invoice date. If a milestone is assigned to an invoice date, the job creates a **project invoice request**, when the milestone meanwhile was completed. The invoice date gets the status *Project Invoice Requested*.

> **i** 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.

> **i** 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.

> **i** 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*.

> **i** 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

> **i** 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*.

> **i** 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.

> **i** 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** 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** 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 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. Every night a regular job runs automatically. The job automatically creates **project invoice requests** on the next day. If a milestone is assigned to an invoice date, the job creates a **project invoice request**, when the milestone meanwhile was completed. The invoice date gets the status *Project Invoice Requested*.
6. For each project invoice request, a business task is created for the *Work* view in the *Customer Invoice* work center.

   > ℹ 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.

   > ℹ 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*.

> ℹ 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*.

See Also

2.13 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.

> **i** 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)

  > **i** 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.

See Also

Earned Value Analysis (Report)

2.14 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.

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i
- *% 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.

3 Project Management

3.1 Projects View

3.1.1 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 [page 46].

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 [page 135].

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 [page 71].

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 [page 72].

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 [page 8].

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   [page 8].

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   [page 11].

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   [page 14].

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   [page 16].

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   [page 28].

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   [page 30].

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 and expense confirmations 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 projects.

For more information, see Project Management.

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, see Order-to-Cash (Project-Based Products and Services).

Tasks

Create a New Project

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

   ➡ 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   [page 87].
   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 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 .

> 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   [page 93].

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.

> 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.

   1. 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.

   2. 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.

> → 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*.

> ▪
> **1** 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 [page 90].

Track the Status of a Shopping Cart

For information about this task, see here [page 92].

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 [page 95].

New Expense Report

For information about this task, see here [page 96].

3.1.2 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 [page 42].

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 [page 74].

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 [page 77].

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 [page 79].

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 [page 81].

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.

For more information, see Materials in Projects.

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*.

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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.

   ➡ 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:

   1. Enter a preferred service agent or supplier (if known), the requested amount of work, and the *Delivery From/To* dates.

   2. 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 [page 107].

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).

> **ℹ** 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.

> **ℹ** 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.

3.1.3 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

Mass Data Runs (MDR)

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

       > **i** 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*:

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.

> **i**
> - 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

3.1.4 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.

> ⚠ Since your company has selected the *Manage and Control Projects* implementation focus, there will be slight differences between your solution and the standard as outlined below. For more information, see What Works Differently in Manage and Control Projects.
>
> If your system has not been deployed, all information is shown because there is no scoping-relevant filter.

> ⚠ Since your company has selected the *Buy, Sell, and Administrate* implementation focus, there will be slight differences between your solution and the standard as outlined below. For more information, see What Works Differently in Buy, Sell, and Administrate.
>
> If your system has not been deployed, all information is shown because there is no scoping-relevant filter.

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 .

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.

For more information, see Order–to-Cash (Sell-from-Stock).

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.

For more information, see Order-to-Cash (Standardized Services).

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.

For more information, see Order-to-Cash (Project based Product and Services).

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.

For more information, see Order-to-Cash (Third-Party Order Processing — Material).

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.

For more information, see Order-to-Cash (Make-to-Order).

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, see Customer Contract Management.

Tasks

Create a Sales Order

1. Choose the *Sales Orders* view.
2. Click New and choose *Sales Order* or click *New Sales Order* under *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

   > ⅈ 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.

   > ⅈ 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.

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.

   > ⅈ 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.

> **i** 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.

> **i** 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.

6. Enter the product or service details under Items .

> **i** You can also enter kits as items.

1. 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.

> **i** 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.

> **i** 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.

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

> **i** • 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.

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

> **i** 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.

4.   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

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i 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.

    ➡ 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.

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7. 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   [page 65].

> **i** 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).

8. 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** 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** 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.

> **→** 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 [page 31].

Create a Tax Exemption Certificate

For information about this task, see here.

Update a Sales Order

1. Choose the *Sales Orders* view.
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.

  > **i** 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 :
   1. Click Add Row to create a new row in the table.
   2. 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.
   3. 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.
   4. 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.
   5. Repeat the steps outlined above to enter additional items.

      > **i** 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.

   6. 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.

Cancel a Sales Order

1. Choose the *Sales Orders* view.

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:
     1. To do this choose the *General* tab page and choose a value from *Reason for Rejection*.
     2. 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:
     1. To do this choose [Items] and select the item that should be canceled.
     2. On the *Details* tab page of the item choose a value from *Reason for Rejection*.
     3. Repeat the steps for all items that you want to cancel and save the sales order.

> **i** 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.

> **i**
> - 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.

Delete a Sales Order

1. Choose the *Sales Orders* view.
2. Select a sales order in the list that you want to delete and click `Delete` .

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

Reverse a Sales Order

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. Choose the *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** 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** 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.

3.1.5 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.

- *In Approval*

  The project invoice request is waiting for approval.

- *In Revision*

  The project invoice request has been sent back by the approver for revision.

- *Approved*

  The project invoice request has been approved.

- *Approval Rejected*

  The project invoice request has been rejected by the approver.

- *Withdrawn from Approval*

  The project invoice request has been sent for approval but has been withdrawn.

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 [page 18].

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, see Order-to-Cash (Project-Based Services).

Tasks

Create a Manual Project Invoice Request

> **i** 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 [page 136].

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 [page 136] step-by-step instruction.

> **i** 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   [page 136] 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].

   > ℹ️ 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* or *Invoiced*.
2. Click [Cancel].
   The project invoice request is canceled and the invoice request items are 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 will be made available for invoicing when you next create a project invoice request for the project. If you cancel a

project invoice request for which a customer invoice has already been created, the customer invoice is canceled and a credit memo is sent to the customer.

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.

   > ⓘ
   > - 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.

> **i** 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.

> **i** 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.

Change the Fulfillment Status of individual items in a Sales Order

In the **Sales Orders** view, you can manually change the fulfillment status of individual items in a sales order. The fulfillment status of a sales order item can be set to *Finished* when no more work, which is performed for the linked project task is expected to be invoiced via this sales order item (the work might be invoiced via another sales order item).

To change the fulfillment 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 Fulfillment*.

The fulfillment status is set to *Finished*.

> **i** If you later decide that there is further work to be done for the project task linked to this sales order item, which is to be invoiced via this sales order item, you can change the status back to *In Process* by selecting the sales order item and selecting *Revoke Finish Fulfillment* from the *Change Status* menu. If the linked project task was completed meanwhile, the finish fulfillment cannot be revoked. If necessary, the completion of the project task is revoked.

3.1.6 Business Background

3.1.6.1 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, or released.
- 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, or released, 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
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.

3.1.6.2 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
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 [page 87].

> **i** 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.

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.

> **i** 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.

> **i** 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.

> **1** 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.

3.1.6.3 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, and Move Down, Outdent, 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, and Indent, Move Left, Move Right) to change the project structure.

> **➡** 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 recording type selected during project creation, all time recordings 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 recording 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 PoC*.

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.

> **i** 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 four pieces of information: a service (what is to be done), a team member (who should do it), an amount of planned work (how much needs to be done), and an amount of remaining work (how much is remaining).

As soon as the project status is started or released and the team members do their time recordings, the actual work and remaining work are updated by the system. The actual work is read-only and is filled from the time recordings. If the planned work is changed and there are not yet time recordings, 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 already time recordings, 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 of the actual work, the remaining work and changes made to the actual and remaining work, click Display Time Confirmations .

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 for 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.

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.

The estimated work effort is considered in the project cost estimate.

Materials Tab

You can plan materials in required quantities for the project header or for phases 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.

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   [page 81]

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. 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 the project header or project task level is affected when the status of the project header or task has been either closed, completed or 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** 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.

> **i** 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.

> **i** 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.

> **i** 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.

> **i** 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.

3.1.6.4 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

> ■ Phases and tasks with duration of zero are represented by a blue diamond (phases) and a gray diamond
> �𝟏 (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 yellow bar.

> ■ 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.

3.1.6.5 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.

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

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.

> **i** 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.

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* ◀.

3.1.6.6 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 orders.

- 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, and project stock 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, project stock orders, purchase orders, goods and service acknowledgments, and invoices.

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* ◀

> ℹ Some of the fields are not visible by default, but they are available as extensibility features.

Service	Material
Planned Quantity — shows the total planned quantity per service.	Planned Quantity — shows the total planned quantity per material.
Actual Quantity — shows the quantity of work that has been recorded by all team members assigned to the service.	Actual Quantity — shows the quantity of material that has already been used.
Remaining Quantity — shows the difference between the planned and actual quantity of service. Note that the Remaining Quantity can be changed manually.	Remaining Quantity — shows the difference between the planned and actual quantity of material.
Externally Requested Quantity — shows the quantity of work that has been requested from external resources.	Externally Requested Quantity — shows the quantity of material that has been requested from external resources.
Outstanding Delivery — shows the quantity of work that has been requested by a project manager but not yet delivered.	Outstanding Delivery — shows the quantity of material that has been requested by a project manager but not yet delivered.
Reassigned Quantity — shows the quantity that was originally requested for the current project or project task, but manually reassigned to another project or project task.	Reassigned Quantity — shows the quantity that was originally requested for the current project or project task, but manually reassigned to another project or project task.
Unstaffed Work — shows the quantity of work that has been planned but not yet assigned to any team member.	n/a

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:

- If for a purchase request no purchase order exists, the requested quantity of the purchase request is used.
- If one or more purchase orders exist, the sum of the ordered and open quantity of the purchase orders is used.

You can create both purchase requests and project stock orders from Product Overview tab.
You can create purchase requests from *Task Overview* using *Create Purchase Request*.

Tasks Overview

You can have an overview of the project tasks such as *Project Task Type*, *Duration*, *Person Responsible*, *Status*, *Earliest Start Date* and *Earliest Finish Date* under *Tasks Overview*. Under Details, you can view information on the services and materials planned for the selected task. This includes product type, if product type is from stock, product specification, planned worked/quantity, actual work/quantity and remaining work/quantity.

In tasks overview you can select services and materials related to the task and create purchase request for them by clicking Create Purchase Requests . You can then select if you want to create the purchase request for *All Services and Materials*, for *All Services* or for *All Materials.*

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	The 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. **i** 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.

> **i** 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*.
- **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 .

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.

Purchase Requests

If you require external support for a service or material, you can directly create a purchase request for the selected product in this view.

> ℹ️ 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

Types of Purchase Requests

Purchase Request type	Description
Purchase request for the whole project	In this type of purchase request, the quantity of service or material to be requested from an external supplier is displayed for the project header task as a whole.
Purchase request for the released project tasks	In this type of purchase request, the quantity of service or material to be requested from an external supplier is displayed task wise for each of the released tasks.
Purchase request for the service/supplier	In this type of purchase request, the quantity of service to be requested is displayed for each external supplier as a single task.

You can enter details, such as a preferred 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 requested amount of work or requested amount of material, the delivery location, attachments, and notes. 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 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 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 on 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, 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* ◢.

> **ℹ** 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, for example, if you prefer that they send supplier invoices, you can deselect the checkbox in the purchase order, or you can order the services using a shopping cart with reference to the project.

> **ℹ** For purchase orders resulting from purchase requests from a project the *Time Recording Required* checkbox is always checked and cannot be changed, you must create then a PO directly or create the request from a shopping cart.

If the *Evaluated Receipts Settlement* checkbox is selected in the purchase order, supplier invoices are automatically created by the system 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*, *Requested 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.

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.

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** 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)
Approval rejected	Rejected
Sent back for revision	In revision

For more information on the approval process, see Setting Up Approvals and Approval for Project Purchase Request [page 233]

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 *Ordered quantity* is also available.

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 working 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.

3.1.6.7 Configuration: Project Types

Overview

⚠️ 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 ID. The separator will be inserted between the prefix and the project ID.	Select one of the predefined separator.

Controls and Settings	Explanation	Task

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 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
		Select the process variant type that specifies how the project costs are posted.

Controls and Settings	Explanation	Task
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)*.
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.

3.1.7 Tasks

3.1.7.1 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.

> Since your company has selected the *Buy, Sell, and Administrate* implementation focus, there will be slight differences between your solution and the standard as outlined below. For more information, see What Works Differently in Buy, Sell, and Administrate.
>
> If your system has not been deployed, all information is shown because there is no scoping-relevant filter.

Procedure

1. Go to ▶ *Home* ❯ *Self-Services Overview* ❯ *Go Shopping* ◢.

   > **i** 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.

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*.

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.

     > **i** The default cost center is the cost center to which you belong. You can change it as required.

   - Your name has been entered as *Recipient Name* in the *Deliver To* data.

     > **i** 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.

     > **i** You can find approvals details and the *Comments* field in View All

8. Save your entries.

9. To order the shopping cart, click Finish .

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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 [page 92] 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.

3.1.7.2 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.

> ⚠️ Since your company has selected the *Buy, Sell, and Administrate* implementation focus, there will be slight differences between your solution and the standard as outlined below. For more information, see What Works Differently in Buy, Sell, and Administrate.
>
> If your system has not been deployed, all information is shown because there is no scoping-relevant filter.

Procedure

1. Go to ▶ *Home* ❯ *Self-Services Overview* ❯ *Track My Shopping Carts* ◢.

   > ℹ️ 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. For more information, see Create a Shopping Cart [page 90] and Create a Shopping Cart on Behalf. 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. For more information, see:

- Withdraw a Shopping Cart from Approval [page 98]
- Cancel an Item Requested in a Shopping Cart [page 98]
- Quick Confirm Delivery [page 100]
- Confirm a Delivery from a Shopping Cart [page 101]
- Confirm the Delivery of a Limit Item from a Shopping Cart [page 103]
- Cancel a Goods and Services Receipt for a Shopping Cart [page 104]
- Create a Goods Return for a Shopping Cart [page 106]

3.1.7.3 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

> 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.

   > **i** 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.

See Also

Business Scenario: Sell Project-Based Services

3.1.7.4 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.

   > **i** 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*: 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.

5. Select one or multiple rows in the table to process.

> **i** 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.

> **i** 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.

3.1.7.5 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*. 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 ⟩.

   > **ℹ** 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.

3.1.7.6 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.

> ⚠️ Since your company has selected the *Buy, Sell, and Administrate* implementation focus, there will be slight differences between your solution and the standard as outlined below. For more information, see What Works Differently in Buy, Sell, and Administrate.
>
> If your system has not been deployed, all information is shown because there is no scoping-relevant filter.

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* ▌.

   > ℹ️ 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 ⬛.

   > ℹ️ 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.

3.1.7.7 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.

> ⚠️ Since your company has selected the *Buy, Sell, and Administrate* implementation focus, there will be slight differences between your solution and the standard as outlined below. For more information, see What Works Differently in Buy, Sell, and Administrate.
>
> If your system has not been deployed, all information is shown because there is no scoping-relevant filter.

Prerequisites

The status of the item that you want to cancel is *Requested*, *Ordered*, *Partially Ordered*, or *Partially Delivered*.

> ℹ️ 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 [page 98] and then remove items from the shopping cart.

Procedure

1. Go to ▶ *Home* ❯ *Self-Services Overview* ❯ *Track My Shopping Carts* ❯.

   > ℹ️ 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 .

   > ℹ️ 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 [page 106].

3.1.7.8 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.

   > **ℹ** 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.

> **ℹ** 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 [page 101].

3.1.7.9 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.

   > **i** 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 `.

> **ℹ** 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** 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.

> **ℹ** 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 [page 100]. If you want to confirm the delivery of a limit item, see Confirm the Delivery of a Limit Item from a Shopping Cart [page 103].

3.1.7.10 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.

   > **i** 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** 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 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 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 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*.

3.1.7.11 Cancel a Goods and Services Receipt for a Shopping Cart

Overview

After you have posted a goods and services receipt for a shopping cart   [page 101], it might become necessary to
cancel it, for example, because you have found a data entry error in the document.

> 🔷 ⅈ 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*:

   > ￭
   > **i** 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.

> ￭
> **i** 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.

3.1.7.12 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 [page 101], 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** 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** 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** 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** 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.

3.1.7.13 Project Period Planning

Overview

During the execution of a project, requirements of work, expense, materials, and revenues might vary from one time period to another. Period planning helps you determine the exact time frame during which these resources will be utilized.

For example, a project lasting 6 months may require 10 hours of a junior consultancy service. Period planning helps you determine when exactly during this period the service is needed therefore helps in determining when exactly the cost will be incurred.

You can do period planning for tasks and also for individual items within a task. This planning helps you organize the budget for the project, as you can now determine the exact period during which the cost is incurred. 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.

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, 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 the Work , Materials , Expenses , or Revenues tab.

4. Click Plan Period , and in the screen that opens, click Add Row .

5. Enter the data for the various fields provided in the resource table (this resource can be work, materials, expenses, or revenues). You can also view the data saved here under the relevant tab. The aggregate value of work, expenses, materials, or revenue, which is entered for each of the period plans will also reflect here.

   You can optionally plan periods for individual items in the task by entering a *Start Date* and *End Date* for the item. If you enter these dates, the expenses or revenues for the item are distributed based on these dates and not based on the earliest start and finish dates of the task.

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

6. For the selected resource, you can create a period plan in the *Period Plan* table.

   > The start and end dates of the period plan should be within the start and end dates entered under the relevant tab, as well as the earliest start and finish dates of the task.

7. To create a period plans based on the duration of the resource or task, automatically, click Generate Period Plan .

3.2 Approvals View

3.2.1 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.

> **i** 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   [page 8].

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   [page 27].

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.

3.3 Resources View

3.3.1 Resource Search Quick Guide

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   [page 115].

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   [page 116].

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, see Resource Management.

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   [page 126].

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   [page 126].

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

> ➡ 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 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 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 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® [page 127].

3.3.2 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 [page 121].

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 [page 122].

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 [page 124].

Tasks

Create and Edit a Service Agent

1. In the worklist of the *Service Agents* view, click New ▮ , then choose *Service Agent*.

    > ➡ 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.

    > 1 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.

    1. 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.

    2. 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.

> ➡️ You can also add more information to a particular service agent by selecting the service agent in the worklist and clicking Edit ◼️ ⯈ *General*.

> ℹ️ 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.

> ➡️ 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.

   > ℹ️ 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.

> **i** 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 [page 129].

Record Times from Microsoft Excel®

For more information, see here [page 132].

Export Service Agents Using Microsoft Excel®

For more information, see Export Business Data Using Microsoft Excel [page 127] .

3.3.3 Business Background

3.3.3.1 Resource Search

Overview

In the Resource Management *Resource Search* view, you can start your search for resources by entering certain key words in the *Find* field. To refine the search, you have to open the advanced search section and enter search terms in the individual search fields.

Features

The Resource Search function has the following features:

- **Identify All Resources Participating in Certain Projects**
  If you have to staff a project, you might want to check for resources that have taken part in similar projects. To do so, in the *Project ID* field of the advanced search section enter the project IDs for those projects that are similar to the project you need to staff. Participants of all projects specified are listed.

- **Identify All Resources with a Specific Skills Profile**
  In the *Skills Details* field of the advanced search section, enter all the skills for which you want to search, each separated by a space. You receive all resources that have those keywords maintained in the *Skills Details* field of the *Resource Profile*. If you want to search the attached resumes as well, you have to enter the same keywords additionally in the *Search Attachments* field. Both search fields mentioned above support full-text search: you can search on all words entered in the *Skills Details* field of the *Resource Profile* as well as the complete attached documents can be searched. You can directly enter more than one keyword separated by space into the search fields.

- **Identify All Resources of a Supplier**

If you want to staff a project with resources of a certain supplier, enter the supplier name in the *Supplier* field of the advanced search section. If you want to search for several suppliers, click *More Options* next to the field.

- **Identify All Resources with a Specific Job**
  If you need to staff a project with resources who have a certain job, enter the job name In the *Job* field of the advanced search section. If you want to search for several jobs, click *More Options* next to the field.

- **Identify All Resources Available as of a Certain Date**
  If you want to search for resources who are available on a certain date, for example, the date on which the project you need to staff begins, enter this date in the *Earliest Availability* field of the advanced search section. The system displays all resources for whom no earliest availability information has been maintained and all resources whose earliest availability date falls before or on the date you entered. A search on the individual weekly or monthly remaining availability (that is, a search for resources who are, for example, available for two days in a certain week) is not possible.

  > **i** The *More Options* icon is not evaluated for this field.

- **Search by Region**
  If you want to search for resources in a specific region, enter the postal code of the region in the *Postal Code* field of the advanced search area. If the postal code in your country is region-oriented, you can also use parts of the postal code to search within a larger area of the region. Combinations of search conditions are possible by using different search fields in parallel.

- **Assign Resources to Projects**
  You can assign resources directly to your projects. For each resource you assign to a project, you can enter information such as the start and end date of the project assignment and the work committed. These three pieces of information are important because they are used to calculate the resource's availability. For the defined time frame of the project assignment, the resource's availability is reduced by the amount of committed work.

- **Export Resource Lists to Microsoft Excel®**
  You can export the resource list to Microsoft Excel to forward the returned resources to a project manager for a staffing decision.

See Also

Resource Search Quick Guide   [page 109]

Working with Resource Profiles

3.3.3.2 Working with the Availability Calendar

Overview

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.

Relevance

In your company, the *Availability Calendar* is relevant for all Line Managers, Resource Managers, Project Managers, and Resources (employees) who are (or can be) assigned to projects.

- **Resource Manager**: Uses the calendar to create supply/demand estimates, for staffing tasks, for finding and brokering resources, and for editing future commitments to projects for these employees; also uses the calendar to identify short and midterm capacity shortages, to display utilization of key resources that are in the greatest demand or overbooked, and to ensure the highest utilization of resources as possible

- **Line Manager**: Uses the calendar to monitor the availability and utilization of his or her direct reports and edit future commitments to projects for these employees

- **Project Manager**: Uses the calendar to manage projects in all respects – staffing, budget, resources, quality, and time-lines; also edits future commitments to projects for employees working on projects that he is responsible for

- **Employee**: Uses the calendar to plan his/her project related work, monitor his/her utilization, and reduce bench time; by editing the calendar, the employee can balance future project commitments and adjust his or her work levels to optimize utilization.

Prerequisites

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

You must have included the business packages *Project Management* and *Time and Labor Management* in your scoped Business ByDesign solution during Business Configuration to use the full functions offered by the Availability Calendar. If you have scoped only one of these packages, the calendar is available, but with the following restrictions:

- If Time and Labor Management is not included in your solution, the calendar cannot display daily work schedules of employees, and employees' availability for any given day/date would be empty.

- If Project Management is not included in your solution, the calendar displays employees' availability but a Resource Manager is not able to use the data in the calendar to assign employees to projects. In this situation, however, a Line Manager can still use the calendar to monitor the availability of his or her direct reports.

Features

Accessing the Availability Calendar

The Availability Calendar can be accessed from multiple contexts for the different roles:

- **Resource Manager**: Selects one or more resources (multi-selection possible) in the *Resource Search* view of the *Resource Management* work center and clicks <kbd>Show Availability</kbd>. The Availability Calendar shows the availability and project commitments of all resources the Resource Manager has selected.

- **Line Manager**: Views the calendar by selecting *My Team*, under *My Department* in the *Managing My Area* work center. The calendar shows availability project commitments of all resources in his or her teams and displays the data according to employee name, team, or organizational unit. In this way, Line Managers can also view resources from multiple organizational units for which they are responsible.

- **Project Manager**: Accesses the calendar in the *Project Management* work center, by choosing the *Projects* view, selecting a project, clicking <kbd>Edit</kbd> and then choosing *Team and Staffing*. The calendar is then displayed

by clicking Show Availability . In this case, the calendar shows the availability and project commitments of all resources in the selected project.

- **Employee**: Clicks *My Availability* in the *Project Team* work center to view and maintain his or her own availability and project commitments in this view of the calendar.

Resource Commitments: Availability Calendar Handling

text

- Work actually performed in the project by the Resource and recorded on the Resource's timesheet. This is display-only data and refers only to the past.
- Scheduled future commitments of Resources assigned to projects. These can be edited to ensure they reflect the reality of the project.

Clicking Today displays the current day, week, or month and positions it on the left-side of the display, as the first column entry.

Four key data elements are displayed in the calendar providing an overview of resource commitment for a specified project:

➡ *Total Commitment*: Total amount of hours/days allocated to the Resource for the project

Scheduled Commitment: Sum of project hours scheduled for the Resource between today's date and project end date

To Be Rescheduled: Remaining Commitment minus Scheduled Commitment. Any value not equal to zero indicates the number of hours/days that require rescheduling. A minus value means that the number of hours/days scheduled must be reduced, indicating for example, that the employee has worked more hours/days in the past than scheduled. A positive value shows that the number of hours/days scheduled must be increased, indicating for example, that the employee has worked less hours/days in the past that scheduled.

The **To Be Rescheduled** data is only valid if the employee has completed his time recording. Missing time recordings obviously distort the remaining commitments for the Resource, causing the **To Be Rescheduled** figure to be unrealistically high.

Remaining Commitment: Total Commitment minus the sum of work already performed in the project, as reported on the Resource's time-sheet

The following examples illustrate how these figures are calculated:

Example 1: A Resource is allocated 120h to a given project. One week into the project he has worked and entered 20h hours on his time-sheet. Therefore:

Total Commitment = 120h

Scheduled Commitment = 100h

To Be Rescheduled (Remaining Commitment – Scheduled Commitment) = 0h

Remaining Commitment = 120 – 20 = 100h

Example 2: A Resource is allocated 120h to a project running for 4 weeks. For weeks 1 and 2 of the project he is scheduled to work 40h. For weeks 3 and 4, the commitment is 80h. After two weeks, he has worked and entered 60h on his time-sheet for this project. Therefore, at the end of week 2:

Total Commitment = 120h

Scheduled Commitment = 80h

To Be Rescheduled (Remaining Commitment – Scheduled Commitment) = 60 - 80 = -20h

Remaining Commitment = 120 – 60 = 60h

In this second example, the employee must reduce the scheduled commitment for the last 2 weeks by 20 h to rebalance his overall commitment to this project.

Example 3: A Resource is allocated 100h to a project. At the half-way point of the project, the employee was committed to have worked 50h. However, he has only worked (and entered on his time-sheet) 40h. Therefore:

Total Commitment = 100h

Scheduled Commitment = 50h

To Be Rescheduled (Remaining Commitment – Scheduled Commitment) = 60 - 50 = 10

Remaining Commitment = 60h

Editing Resource Commitments to Projects

The Resource Manager enters only two key data in his resources' Availability Calendars, both derived from the project plan: the start/end date of the project assignment and the sum of the committed hours/days. The system then automatically distributes this initial commitment evenly over the project time-line. However, this linear distribution of project commitment across the committed project time-line may not be the situation in reality. The Availability Calendar permits you as a Project/Resource/Line Manager or Resource (employee) to edit these initially **linear** distributions of project commitments and manually create a **non linear** commitment distribution across the project time-line.

Clicking Reset Commitment allows you to overwrite any remaining non linear commitments with linear commitments for the (future) project period yet to be completed. This overwrite is non reversible.

The following examples illustrate where a **non linear** distribution of commitment is required in the calendar:

- **Before project commencement, handling of uneven commitment distribution:**
  Project Lead and Resource (in alignment with Resource Manager and Line-Manager) agree on commitment on project on a total of 250 hours(h). It is already known that the employee works 120h for specifications and 80h for test. The projects starts runs from 6th of June to 2nd September. non linear commitment distributed in the Availability Calendar is as follows: 6th June – 1st July –> 120 Hrs Specification; 15th August – 26th August for 80h test

- **Project has started, uneven distribution due to vacation:**
  Resource wishes to take vacation in CW25 for a week (40h). The vacation is recorded and approved in CW23, and is displayed in the calendar as 5 days of absence in CW25. The commitments during the Specification Phase (CW23–26) are distributed to take this vacation into account: commitment in CW25 is reduced to zero and is increased in CW24 and CW26 by 15h.

- **Project mid-point, handling delays:**
  Resources are needed at a later or (earlier) point of time based on delays or shifts in the project plan. For example, at the end of calendar week (CW) 32 it becomes clear that testing cannot start as scheduled and a delay of one week is required. Resource Manager/Resource/Project Manager redistributes the CW33–35 commitment in the Resource's calendar to accommodate this one week delay.

- **Project mid-point, increase of commitment required:**
  Resource confirms during CW26 that he or she requires an additional 3 person days (PDs) in CW27 due to unforeseen problems in the project. As a result, the specification phase must be extended into CW27. The Project Manager negotiates with the Resource Manager/Line Manager and agrees an additional 3 PDs (24h) of commitment. The Resource Manager firstly increases the total commitment of the resource to the project by 3 days. The system then distributes this added commitment evenly across the remaining project period (between system date and end of commitments date). In a final step, the Project Manager (or Resource) edits the commitment in the Resource's Availability Calendar and manually adds the three extra days in CW27.

Common Calendar Elements

The view of the Availability Calendar varies depending on the role of the employee accessing it, and from where it is accessed in the system. However, the following are common functions available in all views of the calendar for all roles:

- Monthly, weekly, and date range view options for selected resources
- Today option to jump to today's date in the calendar. Today's date is highlighted as the default when the calendar is opened
- Resource availability shown in hours
- Monthly view with a previous and next month option (previous month option is disabled if the current month is the chosen view)
- Days of the week are displayed alongside the calendar date
- Resource availability are displayed in hours
- Navigation possible from the calendar entry of a selected employee to that employee's Resource Factsheet.
- Percentage Utilization displayed for the selected time period
- Selection of a group of consecutive cells for a Resource. On selecting the cells, the *Selection* section of the calendar shows the start and end dates of the selected period and the total availability of the Resource in the selected period. The *Bookings* section of the calendar provides details of the different project assignments of the user in this period (not in the employee view of calendar). Details of leave requests that are pending approval also appear in this detailed area for line managers.

- Selection of individual resources and viewing of project commitments for the entire month/view/chosen dates.
- Navigation possible from the calendar to the factsheet of the project to which a selected employee is assigned.

> **i** This navigation is not available in the employee view of the calendar.

- Remaining Availability (Target Hours minus Commitments) displayed in each cell in the calendar, irrespective of the cell color. For the *Overbooked* category, where Commitments exceed Target Hours for the selected Resource, the cell value is negative

Managing My Area Calendar View

In addition to the common calendar elements as described above, the availability calendar view for the line manager in the *Managing My Area* work center provides additional functions similar to those available in the team calendar. A hierarchical view of organization units can be displayed, together with all the resources belonging to an organizational unit. A flat list view of all employees ("By Team or "By Name") is also available, as in the other views of the calendar. Line Managers can also approve leave requests that are displayed in details area for every Resource that is selected in the calendar.

Calendar View in Employee Resource Factsheet

The Resource Factsheet contains an embedded version of the Availability Calendar for employees selected from the *Resource Profiles* and *Resource Search* views. Managers can open the factsheet by clicking on the *Employee ID* in the list of resources in these views.

See Also

Resource Search Quick Guide   [page 109]

3.3.3.3 Maintenance of Suppliers and Service Agents

Overview

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.

You can access the *Suppliers* view from the following locations:

- *Business Partner Data* work center
- *Supplier Base* work center
- *Payables* work center

You can access the *Service Agents* view from the following locations:

- *Business Partner Data* work center
- *Supplier Base* work center
- *Project Management* work center

Suppliers and Service Agents

The *Suppliers* view provides you with an overview of the suppliers who are currently in your system. You can create and maintain all details about your suppliers or bidders, such as address, communication, and purchasing data.

The *Service Agents* view provides you with an overview of your service agents, including such information as the name and contact details. You can see which supplier each service agent works for and see the relationship the service agent has with the supplier and other business partners.

Prerequisites

Configuration Settings

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

You have checked and adapted the predelivered settings for supplier-specific data.

To find this activity, 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 *Suppliers* activity from the activity list.

See Also

Suppliers — Configuration Guide

Additional Identifiers for Business Partners

3.3.3.4 Address Management

Overview

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.

Postal Data

You can maintain general postal address data for a business partner. You have to select the country before the address details can be added.

The layout of the postal address fields is country-specific.

> **i** The country-specific layout is not available for all countries.

You can maintain further postal address details for organizations and persons in the additional fields, such as:

- P.O. box number
- Time zone
- Address lines

> ℹ️ We recommend that you create a separate address entry for a P.O. box address that contains P.O. box data only.

> ℹ️ In human resources, address data is time-dependent, allowing you to maintain accurate address details for employees. Private address data maintained in human resources is protected in other application areas.

Communication Data

You can maintain communication data for a business partner. The fields available for communication data vary depending on whether you maintain data for persons or organizations.

> ℹ️ Maintaining communication data is optional.

You can enter communication details, such as:
- Phone number
- Fax number
- E-mail address
- Web site address (organization only)
- Mobile phone (person only)

You can also specify the business partner's language and preferred method of contact.

Multiple Addresses

You can maintain multiple addresses for a business partner. You must specify the main address when you assign more than one address to a business partner.

If you enter multiple addresses for accounts, you can specify the ship-to, bill-to, dunning-to, and remittance advice to addresses. For suppliers, you can specify the ship-from, invoicer, payee, and remittance advice to addresses.

You can specify business and personal addresses for contacts and service agents. You can add further details to a business address, such as the building, floor, room, and further in-house mail details. If you want to select a business address for a contact or service agent, you have to assign the relevant business partner organization first whose address is then used as the business address.

Additionally you can also maintain validity period for the address of an account master data.

> ℹ️ The time dependent address can be created and maintained through migration or service.

Deletion of Addresses

You can delete the address of a business partner. The deletion of a business partner address will not lead to errors in business documents, since business documents always refer to a copy of the business partner address that they use.

Credit Card Holder Addresses for Accounts

In some countries, the authorization check of a credit card service provider includes an address check. In this case, a credit card holder address is required. The clearing house checks the address of the payer against the address of the credit card holder that is stored at the credit card service provider. If the addresses do not match, the credit card payment fails.

You can maintain a credit card holder address or copy one of the existing addresses of the account to the credit card holder address.

> ⓘ In the quick activity you can only copy the main address of the account to the credit card holder address.

Additional Features

The features listed below and other features are available if they have been activated in the *Mashup Authoring* view. For more information, see the Mashup Authoring Quick Guide in the Help Center.

- Map/Directions
  You can view an address on a map.
- Reverse Phone Look-Up
  You can enter the phone number of a supplier, an account, or a contact to display the details of the person or organization to which this number belongs.

3.3.3.5 Business Partner Duplicate Check

Overview

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.

You can use the duplicate check when performing the following activities:

- When creating a new business partner in a business partner view
- When creating business partners from Microsoft Excel®
  For example, the duplicate check is available when creating accounts using Microsoft Excel. For more information, see Create Accounts Using Microsoft Excel®.

The duplicate check is available in various business processes where business partners, accounts, suppliers, or any other types of business partners and their respective business partner roles are used.

The check is carried out when you create a new business partner. While saving the data the system checks whether the business partner already exists. Each check is carried out for business partners with any kind of status.

> ⓘ The check will also list business partner data that you might not be able to access due to missing access rights. The main address is only displayed if you have authorization to access it.

You have the following options when checking for duplicate business partners:

- The duplicate check is carried out automatically when you save the data you entered.
- You can also carry out the duplicate check manually by clicking Check for Duplicates .

> ⓘ The check is always done by comparing existing business partner data with the data of a business partner you are about to create.

Prerequisites

Configuration Settings

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

To deactivate the duplicate check and to select the type of check you want to use, you have selected the required functions 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 *Business Partners* is selected within *General Business Data*.

In the *Questions* step, expand the *General Business Data* scoping element and select *Business Partners*. Select *Handling of Business Partners* and answer the questions related to the duplicate check for business partners.

Features

Searching for Duplicate Business Partners

The search for duplicate business partners is carried out based on the following search criteria:

- Name of a business partner and related data
  - First name, last name, and date of birth of a person
  - Name and additional name of an organization
- Address data
  - Postal address data such as country, city, postal code, street, and house number
- Communication data
  - Phone, fax, mobile number, and e-mail

> **i** The system carries out a fuzzy search that finds business partners even when the data you enter contains typographical errors or is incomplete.

The duplicate check result displays the following information about potential duplicate business partners:

- ID
- Name
- Address
- Status
- Ranking information about the probability of a match with a potential duplicate business partner in percent
- An indication of whether the related role of the current view has already been assigned to the business partner in question
  For example, when checking for duplicate suppliers in the *Suppliers* view, the *Existing as Supplier* check box is selected if the business partner has been created as a supplier.

i You can choose one of the following profiles for the duplicate check during scoping:

- Strong check if you want to search for duplicate business partners with high similarity only
  If you select this type of check, business partners will be displayed as duplicates if the similarity is at least 85 %.
- Medium check if you want to search for duplicate business partners with medium to high similarity
  If you select this type of check, business partners will be displayed as duplicates if the similarity is at least 80 %.
- Weak check if you want to search for duplicate business partners with low to high similarity
  If you select this type of check, business partners will be displayed as duplicates if the similarity is at least 70 %.
  You can also deactivate the duplicate check.

Handling Duplicate Business Partners

In the duplicate check result, you can do the following:

- Ignore the duplicate business partners and save your entries
- Create the new business partner based on the data of the duplicate business partner
  Depending on whether the existing business partner has already been created with a certain role, you can use the existing data or create the new business partner with the new role.

3.3.4 Tasks

3.3.4.1 Search for a Suitable Resource

Overview

In the *Resource Search* view, you can search for suitable resources to staff your projects. The details below provide an outline of this task.

Prerequisites

Go to the *Resource Management* work center or the *Project Management* work center and choose the *Resource Search* view.

Procedure

1. To search for a suitable resource, enter search criteria such as:
   - A particular skill
   - Organizational information
   - Name of the resource
   - Project name

   If necessary, click *Advanced* to apply additional search criteria.
2. After selecting a resource from the returned list, click:

- **View** to display detailed information about the resource.
- **Assign to Project** to directly assign the resource to a certain project. To do so, you need to enter the Project ID of the required project. Furthermore, you need to specify the Assignment Period by entering the required start and end date of the assignment. Finally, you need to enter the Committed Work, either in working days or hours. This value indicates the time confirmed for the resource to work on the selected project.

You can also export the resource list to Microsoft Excel® to forward the list, for example, to a requesting project manager via e-mail.

> **i** For more information about exporting data to Excel, see here [page 127].

Result

You receive a list of potential candidates for project staffing purposes based on your search criteria.

3.3.4.2 Export Business Data Using Microsoft Excel®

Overview

You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.

Prerequisites

- You have installed the latest **Add-In for Microsoft Excel®**. Depending on your solution set-up, you can do this from the:
  - *Self Services Overview* in the *Home* work center
  - *Download Center* in the **Application and User Management** work center
  - *Download* link that is available directly on the user interface
- The settings for your browser must be set correctly. You can review the information about computer settings by clicking *Check My Computer Settings* on the logon screen.
- You must be authorized to perform an export to Microsoft Excel®.

Procedure

1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
   - For a report, you can either export a chart or a table. To do so, select the report, and click *Switch to Chart* or *Switch to Table*.
   - For a worklist, select the worklist and click *Go*.
3. Click **Export**, then choose *To Microsoft Excel*.
4. **Optional: Personalizing your excel export**

1. To select the columns in your exported excel, do the following:

   a. In the title bar, click *Personalize* ▸ *This screen* ▸

   b. In the side panel, select *Display Settings*.

   c. In the Display Settings dialog box, you can export all the columns in the view by selecting *All* in the *Export Columns* field

   > **ℹ** The default value for this field is *Visible*, which exports only the currently displayed columns.

2. To select the language for your excel export, do the following

   a. In the Display Settings dialog box, set the *Language Selection* field to *Show* and click OK

   b. Click Save .

   c. Click Export ▮ , then choose *To Microsoft Excel®*

   d. Select a language in the dialog box that opens.

   > **ℹ** The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.

5. Select the template in the dialog box that is displayed.

   > **ℹ**
   > - If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.
   > - If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.
   > - If there is more than one template in the system for this export scenario, the *Template List* dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.

6. Click *Download*.

7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click *Open* or *Save* depending on what you want to do with the exported data.

   Depending on whether you click *Open* or *Save*, there are two possible results:

   - If you click *Open*, a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.

   - If you click *Save*, a *Save As* dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully.
     You can later navigate to the location where you have saved the template and open it .

3.3.4.3 Edit Time Sheet

Overview

In the *Time Sheet*, you can record the hours you have worked and leave you have taken, post working time to different projects and project tasks, and then submit the time sheet for approval. For detailed information about all of the functions available in the time sheet, see The Time Sheet.

Procedure

1. You are in the *Home* work center in the *Self-Services Overview* view. Under *Time*, click *Edit Time Sheet*.
2. Select the view best suited to your time recording needs if this has not already been preset.
   - Select the *Day* view to record time on a daily basis, typically if you want to confirm partial-day times for the tasks and activities you have worked on each day.
   - Select the *Week* view to record time on a weekly basis, typically at the end of the week when you want to confirm partial-day times for tasks and activities you worked on during the week.
   - Select the *Month* view to record time on a monthly basis, typically at the end of the month when you want to confirm partial-day times for tasks and activities you worked on during the month. You may also find this view useful when you want to release all times in one go rather than having to release every single entry individually.
   - Select the *Worklist* view when you have worked on several different tasks or activities during the relevant time frame and therefore want to report your times accordingly.
   - If you are recording project times for a project that has been flagged as billable in *Project Management*, the *billable hours* are displayed in addition. If you are recording project times for a project task of a partner company (buying company), the *Purchase Order* is displayed.
3. Optional: You can add and remove columns to the time sheet by clicking *Personalize* at the top of the screen and selecting or deselecting fields as required. Save your selections and exit.
4. Record time against projects and project tasks or against time types (non-project time recording) in one of the following ways:

> **i** You can use the `Manage My Worklist` function to control the visibility of work packages (project tasks and services) and time types in both the worklist and the time sheet. Employees can also assign themselves to work packages to which they are not directly assigned. You access the worklist functions by clicking `Manage My Worklist:`
>
> - To show or hide entries in the time sheet, select the relevant row, click `Actions ▮` and choose the required Show or Hide action. Alternatively, you can toggle the display by clicking the icon in the *Visibility* column.
> - Work packages or time types that you add to the worklist are displayed in parallel in the time sheet and vice versa.
> - To add a task that is not currently displayed, click *Add Work Package*. The *Add Work Package* dialog box opens, where you can select the required task and service. Entry of a service is not mandatory.
> - If you need to record work done for a project task to which you are not already specifically assigned, when you select the work package, the system will automatically find the relevant **service** if the following condition is fulfilled: there is one unassigned service in the project task you have entered and you are not assigned to any other work packages belonging to the task.

> **i** If a service agent has started working on a project task, but is not yet assigned to it, the service agent can manually enter the ID of the task and record time against it. This task is displayed in the worklist, value help, and time sheet every time the service agents logs on to the system to edit the time sheet. If the service agent deletes the task, it stops displaying in the worklist, value help, and time sheet.

- For project task and sales order confirmation time recording:
  a. Enter a task for the project or sales order in one of the following ways:

  > **i** The field *Category* is hidden and can be personalized.

  1. In the *Category* cell, select *Project Task Confirmation* or *Sales Order Confirmation* and enter the ID of the *Task* directly or click the value help icon.

     > **i** The *Sales Order Confirmation* option in only visible if it is scoped in business configuration.

     The *Select: Task* screen is displayed.
     The value help displays all tasks on which you are staffed directly, as well as any that you have added using the *Manage My Worklist* function. In addition, it displays the header tasks for projects to which you are indirectly assigned, for example, through your organizational unit.
  2. Select a task from the list.
     The corresponding project or sales order confirmation is automatically entered in the *Task* and *Activity* columns of the time sheet.

  b. Proceed to step 5.

- For intercompany project time recording:
  a. In the *Task* cell, click the value help icon.
     The *Select: Task* screen is displayed. Project tasks of the partner (buying) company are automatically available for selection in addition to other project tasks to which the employee is assigned.

b. Select a task from the list.

The corresponding project and service are automatically entered in the *Project* and *Activity* columns respectively of the time sheet.

The purchase order item to which the work package belongs is determined by the system and displayed in the *Details* area under *Purchase Order* when you enter times. The system finds the purchase order item by searching in the following sequence:

1. Employee, service, and project task

2. Header task of the project, service

3. Cost center, service

> **i** The approval process for intercompany project task confirmation is specified differently for employees and service agents: Project task confirmations by service agents are always submitted for approval, whereas employees' confirmations are only subject to approval if this is explicitly specified for the project.

- **For non-project time recording**, that is, to post time against a time type:

  a. In the *Activity* cell, click the value help icon. The *Select: Activity* screen is displayed listing the time types against which you can post time.

  b. Select the required time type and click `OK`.

  If you need to record time against a time type that is not displayed, click `Manage My Worklist`. The worklist opens in the *Time Type* view. Click `Add Row` and select the required time type.

5. Record your working hours by entering the start and end times or the duration and click `Save`.

> **i**
> - The time entry options available depend on which view you have selected. In the *Days* view, you can enter both start and end times and/or the number of hours. In the *Tasks* view, you specify or select the duration. You can overwrite the value help provided with any required number of hours and minutes, for example, `02:45`.
>   You can enter start and end times in addition in the details section below.
> - If you specify start and end times, the *Hours* field updates automatically. You can overwrite this entry but only if you need to enter a shorter duration. You cannot overwrite the entry with a longer duration. However, if you have already saved a time entry and later overwrite the start and end times, the Hours entry is not automatically updated to reflect the change. It is only updated when you release your time recording.

6. Edit the details of the time record as required. For example, you can set the *Work Package Completed* indicator for tasks that you have finished. This indicator is used for information purposes only in Time Recording. It can be deselected again if required. This information is passed to project management.

7. If you are recording project times for a customer project, the billable hours displayed below the table are defaulted from the hours you enter. You can overwrite this entry if you need to specify that the number of hours billed differs from the number of hours worked. An icon appears beside the field to indicate that different billable hours have been recorded. To revert to the default hours, simply clear the field and press `Enter`.

8. If you are recording time for a sales order, the *Service Confirmation Quantity* displayed below the table are defaulted from the hours you enter.

9. If required, enter a work description and/or an internal comment in the fields provided. The work description is available externally, for example, for project invoicing purposes and is displayed, for example, in the Microsoft Excel® template if you export your project times to Microsoft Excel. Internal comments are for internal use only and are mainly used in the approval process for communication between project manager and team member.

10. To release your recorded times, click Release ▮ and choose *All* or *Selected Period.* The *Released successfully* message is displayed.

> ℹ️ **Note about unpaid break deduction for employees with a work schedule assigned:** Unpaid breaks defined in the employee's work schedule are only deducted when the employee times are released, and not while they have inactive status. For example, an employee's work schedule specifies an unpaid break from 13:00 to 14:00. The employee records working time from 07:00 to 16:00. The time sheet displays 9 hours for the inactive record and deducts the one-hour break only when the times are released.

Result

- If you have recorded time against a project and if approval is required, an approval task is routed to the project manager.
- If you have recorded time against a project task for a partner company, the relevant notifications for further processing are automatically sent to Project Management, Accounting, and Purchasing.
- If you have recorded time against a time type, depending on configuration settings, the time administrator might receive an approval task, a notification or nothing. In the status column, an icon and text indicate both the release status and the approval status of the recorded time.
- If you have recorded time against a sales order, a Service Confirmation is created automatically.

Follow-Up Activities

If you have recorded time against a customer project, for example, you can run the activity report for the project, export the details to Microsoft Excel and print the report out for sign-off. To run the report, click View Activity Report and specify your selection. Note that when you record times for a customer project, only the **billable hours** entered are uploaded and displayed in the activity report, and not the recorded hours. For more information, see View Activity Report.

See Also

The Time Sheet

Create a Leave Request

Cancel a Leave Request

Approve Time Recordings   [page 95]

Upload Times Using Microsoft Excel

3.3.4.4 Record Times from Microsoft Excel®

Overview

You can record times by entering them in a predefined Microsoft Excel template and uploading them to the SAP Business ByDesign system.

Prerequisites

You have installed the latest **Add-In for Microsoft Excel**. Depending on your solution set-up, you can do this from the *Self Services Overview* in the *Home* work center, from the *Download Center* in the *Application and User Management* work center, or from the *Download* link that is available directly on the user interface.

Also, the settings for your browser must be set correctly. You can check this by clicking *Check My Computer Settings* on the logon screen.

> The scope of users' uploading privileges varies depending on the users' authorizations. The following describes which privileges are assigned to which users:
>
> - Project managers can perform an upload for all service agents.
> - Line managers can perform an upload for all employees in their department.
> - Time administrators can perform an upload for all employees in their company.

Steps

In the SAP Business ByDesign system, go to the *Service Agents* view, which can be accessed from the following locations:

- *Business Partner Data* work center
- *Project Management* work center
- *Supplier Base* work center

Click Actions , then *Record Times from Microsoft Excel*.

Get the Template

1. Select the template.
   Choose the template in the required language and click *Download*.

   > You can choose any language that you have selected during scoping. If you have selected only one language during scoping, you will not get a selection of language versions to choose from.

2. Decide what you want to do with the template. Choose one of the following options:
   - If you want to use the template only once, you can open the template without saving it. Click *Open*.
   - If you want to save the template so that you can use it again, choose a location to save the file to, enter an appropriate file name, and click *Save*. Then click *Open*.

   > If you have previously downloaded and saved this template on your computer, navigate to the location where you have saved the template, and open it.

Log on to the solution from Microsoft Excel

1. In the *SAP Add-In* ribbon in Microsoft Excel, click *Logon*.

   > If the *SAP Add-In* ribbon is not displayed, check to make sure that the **Add-In for Microsoft Excel** has been installed correctly (see **Prerequisites** in this document).

   A dialog box opens where you can enter the logon details. The system URL is proposed automatically. The system URL is the URL of the system that you are working with.

2. Enter your user ID and your password, and click *Logon*.

i After initial logon to the system, the ribbon text is changed from *SAP Add-In* to the name of your solution.

Enter Details in the Microsoft Excel Template

i Note the following:

- The Microsoft Excel template is presented with a number of rows where you can enter or copy your data. If you need more, add the number of rows you need before you start entering or copying your data.
- Ensure that mandatory fields (those marked with an asterisk) are filled.
- To help you fill in the details:
  - Some fields have dropdown lists.
  - In some fields you can search the system for data, for example, countries. Place the cursor on the field, and click *Lookup* in your solution's tool bar or ribbon to search the system. A search field is available in the *Lookup* dialog box that appears. When you start to type text in the search field, the relevant entries are filtered in the *ID* and *Description* columns, meaning that you do not have to scroll through the whole list. If the *Lookup* button is not active in the ribbon or toolbar, then it is not possible to perform a search.

Enter the country code in the field labeled *Country*. In the appropriate columns, enter the project time data such as the start and end times, duration, service, project task, purchase order, different billable duration, work description, and internal comment.

i The *Premium Pay* column does not apply to service agents.

Save Your Data

1. After you have finished entering all the data, save the Microsoft Excel file.
2. Click Save Data to .
   A dialog box opens, informing you that the data is being saved to the solution.
   After the upload, a message informs you that your data has been saved in the solution.

   ⚠ If you do not provide all the required information, or if you provide incorrect information, some records will not be saved. Error messages will highlight the problems so that you can correct them and save the data again.

3. You can then log off by clicking Logoff .

Result

The new times are saved in the SAP Business ByDesign system and added to the list in the *Service Agents* view.

If you need to make changes to these times, you can change them in the Microsoft Excel template and upload them again to the SAP Business ByDesign system.

i If the uploaded record has been changed in the system, for example by a time administrator, you cannot overwrite this change with a new upload.

3.4 Invoice Requests View

3.4.1 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.

> **i** 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 [page 136].

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 [page 18].

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 [page 8].

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, see Order-to-Cash (Project-Based Products and Services).

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 [page 136].

   > ℹ️ 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.

Delete a Project Invoice Request

1. In the *Project Invoice Requests* view, select a project invoice request with the 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 when you next create a project invoice request for the project.

3.4.2 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.

i

- This step-by-step document describes how to create a project invoice request for **customer projects**. You can enter the *Project Types* [page 87] 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 [page 18].

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.

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 Sunday to Saturday.
- *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

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 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 [page 143] 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 [page 143] 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.

> 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.

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*. Invoice requests can contain invoice items based on time and material, fixed-price invoice items, or a combination of both.

- *Sales Order Item*: Assign the invoice item to a sales order item.

> 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 [page 146].

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.

    ➡ 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** 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** 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** 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** 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 [page 150].

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 view of the *Customer Invoicing* work center, where a customer invoice can be created.

  > ℹ 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.

3.4.3 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 [page 18].

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** The *Edit Time and Expenses* button is enabled only for those customer projects that
> are integrated with a sales order.

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 or credit memos
  - Goods or service receipts
  - 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
  [page 136].

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 [page 136] 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.

3.4.4 Business Background

3.4.4.1 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 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** 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.

  > **i** 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.

- **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.

> • 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.

> 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.

  > ➡ **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.

3.4.4.2 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 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 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 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, 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.

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.

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:

> 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

Value of Scales	Percentage	Calculation of Percentage	
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

Value of Scales	Percentage		Calculation of Percentage
60	− 16.105%	16.105/14.641 = 1.1	16.105*1.1 = 17.716

See Also

Configure Price Strategy

Price Agreements for Customer Contracts

Gross Pricing

3.5 Change Management View

3.5.1 Change Management Quick Guide

In the *Change Management* view of the *Project Management* work center, you can view and track the progress of your projects and make changes to the original project plan using baselines and snapshots. A baseline is the primary reference point against which changes in your current project(s) are measured and allows you to track deviations from your initial project plan. In the *Baselines* subview, you can create a baseline from a project, update existing baselines, and submit revised baselines for approval or activate them manually. A snapshot allows you to freeze a project at a certain point in time for documentation purposes and deviation analysis. You can create a snapshot in the *Snapshots* subview. In the *Snapshot Runs* subview, you can choose your settings and rules so that the system will automatically create snapshots at regular intervals.

Business Background

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 [page 30].

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 and expense confirmations 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 projects.

For more information, see Project Management.

Tasks

Create a Baseline from a Project

1. In the ▶ *Project Management* ❯ *Projects* ❮ view, select the relevant project from the list and choose Edit ▮ and *Project Plan* to open the project editor.
2. Choose New ▮ , then choose *Baseline from Project*.
3. In the dialog box, enter the baseline name and, if necessary, select the *Submit for Approval* check box.

   > ▪ If you do not select the *Submit for Approval* checkbox here, you can submit the
   > **i** baseline for approval at a later date from the *Baselines* subview.

4. Choose Save and Close to return to the *Projects* worklist.
5. Choose the *Refresh* icon to refresh the worklist, and to see the baseline listed in the *Details* area of the *Projects* worklist.

Update the Baseline

In the ▶ *Project Management* ❯ *Projects* ❮ view, select the relevant project from the list and choose Edit ▮ and *Project Plan* to open the project editor.

1. In the *Projects* worklist, select the relevant project with the baseline you want to update.
2. In the *Details* area, choose the link for the baseline.
3. Choose View All to open the project baseline editor.

   > ▪ You can edit the baseline directly if its status is *In Progress* . If the baseline status
   > **i** is *Active*, choose Edit to open the baseline. The system then creates a new
   > baseline version which can be edited.

4. Choose Expand to see the entire project structure.

5. In the *Gantt Chart* subview of the *Project Plan* view, select a project task in the graph area of the Gantt Chart to move, enlarge, or shorten it.

6. In the *Details* area, choose the `Work` tab and increase the amount of planned work for the selected task, and choose `Save`. The baseline has been updated.

Submit the Baseline for Approval

1. In the project baseline editor, choose *Approval*, then choose *Submit* to submit the baseline for approval.

2. Enter a comment, if required, and choose `OK`. The baseline has been submitted for approval to the responsible cost center manager.

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

- If the *Project Baseline Approval* business option is selected in your solution configuration then, the baseline is submitted to the cost center manager for approval.
  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 *Change Management* and answer the questions related to *Approval for Project Baseline*.

- If the *Multi-Step Approval for Project Baseline* business option is selected in your solution configuration then, the approver for the project baseline is determined by the settings made in the *Approvals Processes* view of the *Application and User Management* work center.
  For more information on the approval process see Approval for Project Baseline [page 223].
  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 *Change Management* and answer the questions related to *Multi-Step Approval for Project Baseline*.

- By default, the self-approval of a project baseline by the project manager or any of the project manager's substitutes in the project is allowed. If you do not want this feature you have to select the *Self-Approval for Project Baseline* business option in you 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 and Execution* is selected within *Project Management*. In the *Questions* step, expand the *Project Management* scoping element and select *Project Planning and Execution*. Select *Change Management* and answer the questions related to *Self-Approval for Project Baseline*.

3. Choose `Save` and `Close` to return to the *Projects* worklist.

i When the baseline is approved its status will change from *In Planning* to *Active*.

4. To with withdraw a baseline from approval, select the baseline, click `Approve ▮▮` and then choose *Withdraw from Approval*.

Create Snapshot Run Definition

1. To create a snapshot run definition, go to the ▶ *Project Management* ⟩ *Change Management* ⟩ *Snapshot Runs* ◥ view.

2. Click *New* to open the *New Snapshot Run* quick activity.

3. Under *General Data*, enter a run ID and description for the snapshot run.

4. In the *Project Type* dropdown list, specify the appropriate project type to which the run will apply.

   > **ℹ** It is recommended that you keep the *Personal* checkbox selected so that the run will only apply to projects for which you are responsible. This is the default and also the recommended setting.

5. Click | Save and Close | to return to the *Snapshot Runs* subview

Schedule Snapshot Run Definition

1. Go to the ▶ *Project Management* ⟩ *Change Management* ⟩ *Snapshot Runs* ◥ view.

2. To schedule snapshot run definition click the *Refresh* icon, and in the worklist select the newly-created snapshot run definition.

3. Choose | Status ▮ | from the *Group By* field, then choose | Actions ▮ | and *Set to Active* to activate the run definition.

   > **ℹ** Only active snapshot run definitions can be scheduled. Only snapshot run definitions with a status *in preparation* or *obsolete* can be deleted.

4. Click | Schedule | to open the *Schedule Jobs* quick activity.

5. Enter the details for scheduling the snapshot run definition, including the recurrence details, if necessary.

6. Choose | Save and Close | ,to return to the *Snapshot Runs* subview.

Monitor Scheduled Snapshot Run Definitions

1. Go to the ▶ *Project Management* ⟩ *Change Management* ⟩ *Snapshot Runs* ◥ view.

2. In the worklist, select the newly created snapshot run definition.

3. Select the *Application Log* tab to inspect details of the jobs that have been run.

   > **ℹ** The application logs are kept for four weeks and are then automatically deleted.

3.6 Document Center View

3.6.1 Document Center Quick Guide

The *Document Center* in the *Project Team* work center allows you to store the files directly in your work center. When you upload a document, picture, or other file to the document center, you can easily share it with your colleagues to

collaborate with them. Version tracking and a check in/check out policy ensure that the files are always up to date, and searching and linking functions allow you to easily find and share your files with colleagues.

Business Background

Document Center

You use the *Document Center* to upload and store documents, pictures, or other file types directly in your work center. Files uploaded to the document center can be viewed, edited, and deleted by anyone from directly within the work center. The document center ensures that your documents are up to date by offering exclusive editing rights using a check-in/check-out policy.

For more information, see Document Center [page 162].

Tasks

Upload a Document

1. Click New
2. Click Browse and locate the document you wish to upload.
3. Enter the *Document Name*. To enable versioning of the file, select the *Versioning Enabled* checkbox.
4. Enter a *Detailed Description* or any additional information that is required, such as the *Author*, the *Document Language*, or any relevant *Keywords*.
5. Click Save and Close .

Edit a Document

1. If versioning is enabled for the document you wish to edit, select the document and click Check Out . If versioning is not enabled, select the document and click Download .

   ➡ To edit only the document properties, such as the *Detailed Description*, *Author*, *Document Language*, or *Keywords*, click Edit Properties .

2. The system prompts you to download the document for editing on your local computer. Click Save to save the document to your computer for editing.

   ℹ To edit the document, you must have the necessary editing software installed on your local computer.

3. When you have finished editing the document, save your changes, select the document you have checked out in the document center, and click Check In .
4. Click Browse and locate the document on your local computer.
   If versioning is enabled for this document, select the *Version Type* based on the scope of your revisions. If your changes are major and significant, select *Major Revision*. This revision will then be represented as an increase in the first number of the version number, for example, Version 2.0. For minor changes, select *Minor Revision*. Minor changes are represented in the second number of the version number, for example, version 2.1.
5. Click OK to save your changes and upload the new version of the document.

Search for a Document

1. Enter a search term in the *Find* field and click `Go`

    > ➡ 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** 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** Newly uploaded documents are first processed by the system and cannot be immediately found via the search function. This process takes approximately five minutes.

3.6.2 Business Background

3.6.2.1 Document Center

Overview

You use the *Document Center* to upload and store documents, pictures, or other file types directly in your work center. Files uploaded to the document center can be viewed, edited, and deleted by anyone from directly within the work center. The document center ensures that your documents are up to date by offering exclusive editing rights using a check-in/check-out policy.

If you want to collaborate with your colleagues on the document, or if you wish to store the history of the changes to a file, select *Versioning Enabled* in the document properties. When versioning is enabled, A major revision is represented by an increase of the first digit in the version number of the document. Within a major version of a document, there can be several minor versions, which are represented by the second digit in the version number. For example, the first draft of a product specification would be version 1.0. Minor changes to this document made by colleagues while the product is still in the planning stages would be marked as versions 1.1, 1.2, etc. Major changes such as corrections after production has started justify a new version number, for example 2.0.

The typical use of the Document Center is described in the steps below:

1. A new document is uploaded to the Document Center. To enable collaboration with colleagues and to track the version history of the document, the person uploading the document selects *Versioning Enabled* from the document properties.
2. The document is shared with colleagues using link to the document from.
3. To edit the document, a colleague first checks out the document by clicking `Check Out`.
4. After editing and saving the document, the colleague checks in the new version of the document by clicking `Check In` and uploading the new version of the document.

3.7 Templates View

3.7.1 Templates Quick Guide

In the ▶ *Project Managment* ▶ *Templates* ◤ view, you can create and edit project templates. You can create a new template, or you can create a template by copying an existing template or project. Using a template reduces the workload and time it takes to set up a new project, and enables you to set up new projects quickly and easily. You can also use a template for a consistent format across several projects. Templates contain information about the duration of project tasks, as well as work packages, checklists, and attachments assigned to project tasks.

Business Background

Project Templates

Project templates help project managers set up new projects. You can create templates from an existing project and then easily reuse the structure in similar projects.

For more information, see Project Templates [page 164].

Tasks

Create a Template from a Project

1. Choose New ▮, then choose *Template* to open the *New Template* quick activity.
2. In the *Source* field, select `Existing Project` from the dropdown list and choose Next .
3. In the worklist, select the existing project that you want to copy into a template.
4. Enter the template details including the template name and ID.

   > **ℹ** The initial status of a template is *Inactive*. Change the status to *Active* if you want to make the template available to be copied.

5. Choose Next , then Close to return to the worklist.

The template is saved and added to list in the *Templates* view. To view the template from this list, choose Show ▮, then *My Templates* .

3.7.2 Business Background

3.7.2.1 Project Templates

Overview

Project templates help project managers set up new projects. You can create templates from an existing project and then easily reuse the structure in similar projects.

You can also use a template for a consistent format across several projects. Templates contain information about the duration of project tasks, as well as work packages, checklists, and attachments assigned to project tasks.

You can create and access project templates from the ▶ *Project Management* ❯ *Templates* ❯ view. From the *Show* field, you can use the options from the dropdown list to view your templates. The `My Active Templates` option lists all the current (active) templates for which you are defined as the person responsible. Only these templates can be used as a source for creating new templates. The `My Templates` option lists all templates, both active and inactive, for which you are defined as the person responsible. The `All Templates` option displays all templates that are available in the system, regardless of their status or who are defined as the persons responsible.

You can create a new template by copying from a source, that is, an existing template or project.

If you are the person creating a template, the system proposes that you are the person responsible but you can change this, if necessary. You also have the option of specifying default time recording requirements when you create a new template. This is useful if a project is created based on this template as it means that time recordings against the entire project will be sent to the project manager for approval. The initial status of a new template is *Inactive*, but you should change this status to *Active* if you want to use this template for copying purposes. You can delete a template or stop using it by changing the status back to *Inactive*.

3.8 Reports View

3.8.1 Overview of Reports in Project Management

Overview

This document lists the reports that are available in Project Management by business function along with the relevant variables in this area. The embedded reports available in this area are also listed.

Reports

Business Function	Reports
Projects - Performance Analysis	Project Performance Overview [page 170] Project Performance by Project Structure [page 171]

Business Function	Reports
Projects - Resource Analysis	Project Product Data [page 197] Team Member Work Analysis [page 172] Project Time Recordings [page 173] Revenue by Team Member [page 187]
Projects - Cost and Revenue Analysis	Project Costs and Revenue Details by Project [page 174] Project Costs and Revenues by Project Structure [page 178] Project Cost Estimate [page 181] Project Costs — Line Items [page 183] Customer Project Overview [page 169]
Projects - Trend Analysis	Work Trend Analysis [page 185] Milestone Trend Analysis [page 186] Earned Value Analysis [page 191]

Common Variables

The following list provides selected variables that are associated with reports in this area.

Name	Description
Actual Work	Shows the time recorded via the time sheet by the team member.
Remaining Work	Shows the estimated amount of work that is still required; it is calculated by the system (Planned Work – Actual Work), but it can be overwritten by the project manager in the project editor and by the project team member in the Project Team work center.
Forecast Work	Shows the sum of the actual work and the remaining work.
Baseline Work	Shows the planned work of the baseline.
Work Deviation %	Shows the difference between the baseline work and the forecast work, in percentage.
Work Deviation (in hours)	Shows the difference between the baseline work and the forecast work, in hours.

Embedded Reports

The following reports are available as embedded reports:

Name	Associated Work Center
Project Plan/Actual Work Analysis	Project Management
Plan/Actual Costs	Project Management
Project Performance Overview Graph	Project Management

See Also

Reports View

Overview Of Data Sources In Project Management [page 166]

3.8.2 Overview of Data Sources in Project Management

Overview

This document lists the data sources that are available in Project Management, including the associated access contexts. Common characteristics and key figures available for reporting are also listed. You can also find additional information for selected data sources.

Available Data Sources

Data Source Name	Data Source ID	Description	Access Context
Revenue Contribution	PROCPUI03	Provides information on quantities, amounts, revenue contribution, and work progress, based on project time and expenses.	Project Management Company
Customer Projects	PROCPIU02	Provides customer project-related key figures from sales orders, invoice requests, and invoices including work progress, quantities, amounts, and net values.	Project Management Company
Project Snapshots	PROPRJU01	Provides information about work and dates for snapshots.	Project Management Project Participation Management
Projects	PROPRJU02	Provides information about work and dates for projects.	Project Management Project Participation Management
Projects, Baselines: Tasks and Staffing	PROPRJU04	Provides task-related data (including phases, tasks, and milestones) and staffing data for projects and baselines.	Project Management Project Participation Management
Projects, Baseline, and Snapshots	PROPRJU05	Provides all relevant data for tasks, staffing, and confirmations of projects, baselines, and snapshots.	Project Management Project Participation Management
Project Expense	PROPEVU01	Provides details about the overall project cost with focus on time and expenses recorded by the employees.	Project Management Management Company

Selected Data Sources

Additional information is available for the following data sources:

Available Key Figure Groups

Key Figure Group Name	Key Figure Group ID	Description
Revenue Contribution	PROCPIU03_STR_01	Provides information on quantities, amounts, revenue contribution, and work progress, based on project time and expenses. These key figures can be used with the data source PROCPIU03 - Revenue Contribution.
Customer Projects	PROCPIU02_STR_01	Provides customer project-related key figures from sales orders, invoice requests, and invoices including work progress, quantities, amounts, and net values. These key figures can be used with the data source PROCPIU02 - Customer Projects.
Snapshots: Milestone Dates	PROPRJU01_STR_01	Provides the milestone dates of project snapshots. The milestone dates represent the latest finish dates of the milestones.
Projects and Baselines: Work, Dates and Deviations	PROPRJU04_STR_01	Provides work and schedule information for projects and baselines. Additionally, the work and schedule deviations are included. The work deviation compares the forecast work of the project with the baseline work. The schedule deviation compares the forecast finish date of the project with the baseline finish date.
Projects and Baselines: Work, Dates and Deviations	PROPRJU04_STR_02	Provides work and schedule information for projects and baselines on task level. Additionally, the work and schedule deviations are included. The work deviation compares the forecast work of the project with the baseline work. The schedule deviation compares the forecast finish date of the project with the baseline finish date.
Projects and Baselines: Work and Deviations	PROPRJU04_STR_04	Provides work information for projects and baselines on task / service level, including actual, remaining, forecast, and baseline work. Additionally, the work deviations are included. The work deviation compares the forecast work of the project with the baseline work.
Projects: Work	PROPRJU04_STR_05	Provides work information for projects including planned, actual, remaining work, and unstaffed work.
Projects: Time Recordings	PROPRJU05_STR_01	Provides information about time recordings and includes the actual work that was recorded against projects.
Projects and Baselines: Work and Deviations	PROPRJU05_STR_02	Provides work information for projects and baselines on task / service level, including actual, remaining, forecast, and baseline work. Additionally, the work deviations are included. The work deviation compares the forecast work of the project with the baseline work.
Snapshots: Work	PROPRJU05_STR_05	Provides work information for project snapshots including actual, remaining, and forecast work. Additionally, the baseline work is included.

Common Characteristics and Key Figures

The following list provides selected characteristics and key figures that are associated with data sources in this business area.

Common Characteristics

Name	Description	Associated With
Project	Provides project header data.	Project Management
Status	Shows the status of the project or the project task.	Project Management
On Hold	Shows whether the project or project task is on hold.	Project Management
Person Responsible	Shows the person responsible for the project or the project task.	Project Management
Risk	Shows the risk level of the project or the project task.	Project Management

Common Key Figures

Name	Description	Associated With
Actual Start Date	Shows the date of the earliest recorded time confirmation via the time sheet; the field is editable for the project manager in the project editor.	Project Management
Actual Finish Date	Shows the date of the latest recorded time confirmation via the time sheet; the field is editable for the project manager in the project editor.	Project Management
Forecast Start Date	Shows the latest start date of the project; it is read-only.	Project Management
Forecast Finish Date	Shows the latest finish date of the project, it is read-only.	Project Management
Baseline Start Date	Shows the latest start date of the baseline, it is read-only.	Project Management
Baseline Finish Date	Shows the latest finish date of the baseline, it is read-only.	Project Management
Schedule Deviation	Shows the difference between the planned finish date in the project baseline and the forecast finish date.	Project Management
Actual Work	Shows the time recorded via the time sheet by the team member.	Project Management
Remaining Work	Shows the estimated amount of work that is still required; it is calculated by the system by subtracting the amount of actual work from the planned work, but it can be overwritten by the project manager in the project editor and by the project team member in the *Project Team* work center.	Project Management
Forecast Work	Shows the actual work plus remaining work; it is calculated by the system.	Project Management
Baseline Work	Shows the planned work of the baseline.	Project Management
Work Deviation	Shows the difference between the work planned in the baseline and the forecast work for the project.	Project Management

3.8.3 Customer Project Overview

Overview

Provides customer project-related key figures from sales orders and invoices including quantities and net values.

Prerequisites

The report is available for customer projects only. At least one of the following conditions must be fulfilled:
- Time and expenses have been recorded to the project.
- Invoice requests or invoices related to the project have been created.

Views

The following views are available with this report:
- Net Values from Sales Orders and Project Invoices
- Quantities from Sales Orders and Project Invoices

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

Analyzing the Report

This report shows an analysis of ordered or invoiced quantities or net values by project.

Additional information is available for the following:
- *Net Value — Ordered*
  Shows the net value of all sales orders that are assigned to a project or project task
- *Net Value — Invoiced*
  Shows the invoiced net values
- *Quantity — Ordered*
  Shows the quantities of all sales orders that are assigned to a project or project task
- *Quantity — Invoiced*
  Shows the invoiced quantities for services and materials.
- *Quantity — Written-Off*
  Shows the quantities from services and materials which have been written-off

- *Quantity — Not Yet Invoiced*
  Shows the quantities from services and materials that are confirmed but not yet invoiced or written-off

To further analyze data in this report, you can drag characteristics to rows and columns.

From this report, you can navigate to:

- *Project Overview*
- *Project Cost and Revenue by Project Structure*
- *Project Costs — Line Items*
- *Project Profitability by Project Structure*
- *Project Performance by Project Structure*

3.8.4 Project Performance Overview

Overview

Shows work and schedule deviations for multiple projects. For the calculation of the deviations, the project data is compared with the baseline data. The program can be added to group multiple projects.

Prerequisites

The following prerequisites should be fulfilled so that the report shows meaningful data:

- The project is started or released
- Work, dates, and durations have been planned in the project
- An active baseline exists (note: this is mandatory when a project is started or released)
- Time recordings have been made so that values for actual work exist

Views

The following views are available with this report:

- Project Performance Overview – Overview
- Project Performance Overview – Work
- Project Performance – Work
- Project Performance – Work and Schedule

Prerequisites

- The project is started or released
- Work, dates and durations have been planned in the project
- An active baseline exists (note: this is mandatory when a project is started or released)
- Time recordings have been done so that values for actual work exist

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

Analyzing the Report

This report shows and analysis of the actual, forecast, and baseline work, as well as the actual, forecast, and baseline start finish dates, as well as schedule deviations by Project, Status, On Hold, Person Responsible, Risk.

To further analyze data in this report, you can drag characteristics to rows and columns.

For the work and schedule Deviations, the system provides a visual color coding so that you can see at one glance whether a deviation is still acceptable (green indicator), critical (yellow indicator) or not acceptable (red indicator). This supports the project manager in making a decision on whether or not to take action. The default rules for the coloring of the columns work deviation (%) and schedule deviation are as follows:

Schedule Deviation

- Schedule Deviation >= 0 days: Green
- Schedule Deviation < 0 days: Yellow
- Schedule Deviation <= -10 days: Red

Work Deviation

- Work Deviation >= 0%: Green
- Work Deviation < 0%: Yellow
- Work Deviation <= -30 %: Red

> **i** In some cases, an *X* will be shown for the *Deviation* columns, indicating that the calculation is not possible. This generally occurs when a value is either 0 or blank, thereby producing non-meaningful deviation numbers.

3.8.5 Project Performance by Project Structure

Overview

Shows work and schedule deviations for a single project by project task by comparing the project data is compared with the baseline data.

Views

The following views are available with this report:

- Project Performance by Project Structure – Overview
- Project Performance by Project Structure – Work
- Project Performance by Project Structure – Schedule
- Project Performance by Project Structure – Work and Schedule

Prerequisites

- The project is started or released
- Work, dates and durations have been planned in the project
- An active baseline exists (note: this is mandatory when a project is started or released)
- Time recordings have been done so that values for actual work exist

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

Analyzing the Report

This report shows and analysis of the actual, forecast, and baseline start and finish dates, as well as the actual work, remaining work, forecast work, and baseline work, including work deviations, by project task. The status, person responsible, and risk is also shown.

To further analyze data in this report, you can drag characteristics to rows and columns.

3.8.6 Team Member Work Analysis

Overview

Shows an overview of all staffed project team members and their respective actual, remaining, forecast, and baseline work for which the user signed in is the task responsible. The information is shown by task or service for multiple projects.

> **i** For employees that are not assigned to the project team, the 'Employee' column shows 'Not Assigned'. If you want to see who these employees are that were not assigned to the project team, you can navigate to the report 'Project Time Recordings' that shows all employees who recorded time to the project.

Views

The following views are available with this report:

- Team Member Work Analysis
- Team Member Work Analysis by Service
- Team Member Work Analysis by Task

Prerequisites

- The project is started or released

- Work has been planned in the project
- Team members have been staffed to project tasks (work packages)
- An active baseline exists (this is mandatory when a project is started or released)
- Times have been recorded so that values for actual work exist

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

Analyzing the Report

This report shows an analysis of the actual work, remaining work, baseline work, and forecast work, as well as the work deviations, by employee, project, project task, and service.

To further analyze data in this report, you can drag characteristics to rows and columns.

See Also

Reports View

3.8.7 Project Time Recordings

Overview

Shows the times recorded by day, week, or month by each project team member responsible for a task, for multiple projects.

Prerequisites

- The project is started or released
- The project team members have recorded times for which the user signed in is the task responsible, so that values for actual work exist

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

Analyzing the Report

This report shows and analysis of the actual work by Employee, Project Task, or Calendar Day.

To further analyze data in this report, you can drag characteristics to rows and columns.

See Also

Reports View

Overview of Reports in Project Management   [page 164]

Overview Of Data Sources In Project Management   [page 166]

3.8.8 Project Cost and Revenue Details by Project

Overview

Shows the planned and incurred costs and revenues, margins, and variances for multiple projects. For customer projects, it also shows the deferred costs and revenue, the estimated costs, and the net revenue in the sales order.

Prerequisites

- If you want to see key figures *ITD Encumbrance Amount* and *Total Encumbrance Amount*) in the report, select the *Financial Planning* business option in scoping. To find this option, go to the *Business Configuration* work center and select the *Implementation Projects* view. Select your implementation project and click Edit Project Scope . In the *Scoping* phase, select ▶ *Financial and Management Accounting* ❯ *Management Accounting* ❯ *Financial Planning* ◢. Select and answer the question under *Group: Financial Forecast*. Following this, configure the fine-tuning activity *Financial Forecast*. For more information, see Configuration: Financial Forecast.

Views

The following views are available with this report:

- *Cost Details*
  Shows detailed information on project costs for analysis purposes. This view is required mainly in the case of customer projects where there can be deferred costs posted to the project.
- *Cost Overview*
  Shows basic cost information including planned and incurred costs and cost variances since the start of the project and for the current period.
- *Cost and Revenue Variances*
  Shows an overview of costs, revenues, and variances at the sales order level.
- *Profit Totals*
  Shows profit information including planned and incurred margins.
- *Revenue Details*
  Shows detailed information on project revenue for analysis purposes. This view is required mainly in the case of customer projects where there can be deferred revenues posted to the project.
- *Revenue Overview*

Shows an overview of the revenue, including variances.

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

Additional information is available for the following selected variables:

- *Project*
  You can enter one or more projects, or leave this variable blank to see all projects that match your other selection values.

- *Person Responsible*
  You can enter one or more employee IDs of the persons responsible for the projects.

- *Project Status*
  The project status is defaulted to Released, In Planning, and Started.

- *Responsible Unit*
  The cost center in charge of fulfilling the project. You can enter one or more responsible units.

- *Requesting Unit*
  The cost center that requested the project. You can enter one or more requesting units.

> **i** You can add product category for project, responsible unit, requesting unit, and product using *Add Fields*.

For more information about common variables, see Overview of Reports in Financial Management.

> **i** If you run this report from the *Managing My Area* work center and you are not the manager of the financial department, the system only reports on the costs and revenues of projects for which you are responsible and further projects for which you are authorized.

Analyzing the Report

The default view of the report shows basic key figures for the projects, such as planned and incurred costs since the start of the project and for the current period.

> **i** ITD stands for Inception to Date, which means from the start of the project to the selected period.

Depending on the view, the report shows the following key figures:

- *Total Planned Cost*
  The total planned cost for the project (without a time restriction)

- *Total Planned Margin*
  Total Planned Revenue – Total Planned Cost

- *Total Planned Margin %*
  (Total Planned Revenue – Total Planned Cost) ÷ Total Planned Revenue x 100

- *Total Planned Revenue*
  Total revenue planned for the project

- *ITD Cost of Sales*
  Cost posted on the project since the start of the project
- *ITD Deferred Cost*
  Deferred costs since the start of the project
- *ITD Deferred Revenue*
  Deferred revenue since the start of the project
- *ITD Planned Cost*
  Planned cost since the start of the project
- *ITD Planned Revenue*
  Planned revenue on the project since the start of the project
- *ITD Incurred Cost*
  Total cost incurred on the project (COGS + Deferred) since the start of the project
- *ITD Incurred Cost Variance*
  ITD Planned Cost – ITD Incurred Cost
- *ITD Incurred Cost Variance %*
  (ITD Planned Cost – ITD Incurred Cost) ÷ ITD Planned Cost x 100
- *ITD Invoiced Revenue*
  Total Revenue (Net Revenue + Deferred) since the start of the project
- *ITD Invoiced Revenue Variance %*
  (ITD Planned Revenue – ITD Invoiced Revenue) ÷ ITD Planned Revenue x 100
- *ITD Revenue*
  Net revenue since the start of the project
- *ITD Revenue Variance %*
  (ITD Planned Revenue – ITD Revenue) ÷ ITD Planned Revenue x 100
- *ITD Incurred Margin*
  ITD Invoiced Revenue – ITD Incurred Cost
- *ITD Incurred Margin %*
  (ITD Invoiced Revenue – ITD Incurred Cost) ÷ ITD Invoiced Revenue x 100
- *Incurred Margin Variance %*
  Total Planned Margin % – ITD Incurred Margin %
- *Period Planned Revenue*
  Planned revenue on project in current period
- *Period Planned Cost*
  Planned cost on project in current period
- *Period Cost of Sales*
  Cost posted on project in current period
- *Period Deferred Revenue*
  Deferred revenue in current period
- *Period Incurred Cost*
  Total cost incurred on project (COGS + Deferred) in current period
- *Period Incurred Cost Variance*
  Period Planned Cost – Period Incurred Cost
- *Period Invoiced Revenue*
  Total revenue (Net Revenue + Deferred) in current period
- *Period Revenue*
  Net revenue in current period

- *Period Invoiced Revenue Variance %*
  (Period Planned Revenue – Period Invoiced Revenue) ÷ Period Planned Revenue x 100
- *Sales Order Cost Estimate*
  Cost estimate defined for sales order item
- *Sales Order Net Value*
  Net value from the sales order
- *ITD Encumbrance Amount*
  The total encumbrance amount as on or before the selected period in the report
- *Total Encumbrance Amount*
  The total encumbrance amount, irrespective of the time selections in the report

The report shows the following characteristics:

- Accounting Period/Year
- Company
- Country
- Customer
- Customer Group
- Functional Area
- G/L Account
- G/L Account (Origin)
- Person Responsible
- Primary Cost Object Type
- Product
- Product Category
- Profit Center
- Program
- Project
- Project Status
- Project Type
- Project Task
- Region
- Requesting Unit
- Responsible Unit
- Sales Order
- Sales Order (Item)
- Sales Unit
- Segment

To further analyze data in this report, you can drag characteristics to rows and columns.

From this report, you can navigate to:

- **Project Overview**
- **Project Cost and Revenue Details by Project Structure**
- **Project Plan Values**
- **Projects – Line Items**

- Sales Accrual

  > **i** Navigation to Sales Accrual is enabled only for Deferred Cost/Revenue.

See Also

- Reports View
- Overview of Reports in Financial Management
- Overview of Data Sources in Financial Management

3.8.9 Project Cost and Revenue Details by Project Structure

Overview

Shows the planned and incurred costs and revenues, margins, and variances for the project tasks of a single project displayed as a hierarchical structure. For customer projects, it also shows the deferred costs and revenue, the estimated costs, and the net revenue in the sales order.

Views

The following views are available with this report:

- Cost Details
  Shows detailed information on project costs for analysis purposes. This view is required mainly in the case of customer projects where there can be deferred costs posted to the project.
- Cost Overview
  Shows basic cost information including planned and incurred costs and cost variances since the start of the project and for the current period.
- Cost and Revenue Variances
  Shows an overview of costs, revenues, and variances at the sales order level.
- Profit Totals
  Shows profit information including planned and incurred margins.
- Revenue Details
  Shows detailed information on project revenue for analysis purposes. This view is required mainly in the case of customer projects where there can be deferred revenues posted to the project.
- Revenue Overview
  Shows an overview of the revenue, including variances.

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

> ℹ **i** You can add product category for project, responsible unit, requesting unit, and product using *Add Fields*.

For more information about common variables, see Overview of Reports in Financial Management.

> ℹ **i** If you run this report from the *Managing My Area* work center and you are not the manager of the financial department, the system only reports on the costs and revenues of projects for which you are responsible and further projects for which you are authorized.

Analyzing the Report

The default view of the report shows basic key figures for the project, such as planned and incurred costs since the start of the project and for the current period.

> ℹ **i** ITD stands for Inception to Date, which means from the start of the project to the selected period.

Depending on the view, the report shows the following key figures:

- Total Planned Cost
  The total planned cost for the project (without a time restriction)
- Total Planned Margin
  Total Planned Revenue – Total Planned Cost
- Total Planned Margin %
  (Total Planned Revenue – Total Planned Cost) ÷ Total Planned Revenue x 100
- Total Planned Revenue
  Total revenue planned for the project
- ITD Cost of Sales
  Cost posted on the project since the start of the project
- ITD Deferred Cost
  Deferred costs since the start of the project
- ITD Deferred Revenue
  Deferred revenue since the start of the project
- ITD Planned Cost
  Planned cost since the start of the project
- ITD Planned Revenue
  Planned revenue on the project since the start of the project
- ITD Incurred Cost
  Total cost incurred on the project (COGS + Deferred) since the start of the project
- ITD Incurred Cost Variance
  ITD Planned Cost – ITD Incurred Cost
- ITD Incurred Cost Variance %
  (ITD Planned Cost – ITD Incurred Cost) ÷ ITD Planned Cost x 100
- ITD Invoiced Revenue
  Total Revenue (Net Revenue + Deferred) since the start of the project
- ITD Invoiced Revenue Variance %
  (ITD Planned Revenue – ITD Invoiced Revenue) ÷ ITD Planned Revenue x 100
- ITD Revenue

Net revenue since the start of the project

- ITD Revenue Variance %
  (ITD Planned Revenue – ITD Revenue) ÷ ITD Planned Revenue x 100
- ITD Incurred Margin
  ITD Invoiced Revenue – ITD Incurred Cost
- ITD Incurred Margin %
  (ITD Invoiced Revenue – ITD Incurred Cost) ÷ ITD Invoiced Revenue x 100
- Incurred Margin Variance %
  Total Planned Margin % – ITD Incurred Margin %
- Period Planned Revenue
  Planned revenue on project in current period
- Period Planned Cost
  Planned cost on project in current period
- Period Cost of Sales
  Cost posted on project in current period
- Period Deferred Revenue
  Deferred revenue in current period
- Period Incurred Cost
  Total cost incurred on project (COGS + Deferred) in current period
- Period Incurred Cost Variance
  Period Planned Cost – Period Incurred Cost
- Period Invoiced Revenue
  Total revenue (Net Revenue + Deferred) in current period
- Period Revenue
  Net revenue in current period
- Period Invoiced Revenue Variance %
  (Period Planned Revenue – Period Invoiced Revenue) ÷ Period Planned Revenue x 100
- Sales Order Cost Estimate
  Cost estimate defined for sales order item
- Sales Order Net Value
  Net value from the sales order

The report shows the following characteristics:

- Accounting Period/Year
- Company
- Country
- Customer
- Customer Group
- Functional Area
- G/L Account
- G/L Account (Origin)
- Person Responsible
- Primary Cost Object Type
- Product
- Product Category

- Profit Center
- Program
- Project
- Project Status
- Project Type
- Project Task
- Region
- Requesting Unit
- Responsible Unit
- Sales Order
- Sales Order (Item)
- Sales Unit
- Segment

To further analyze data in this report, you can drag characteristics to rows and columns.

From this report, you can navigate to:

- **Project Task Overview**
- **Project Plan Values**
- **Projects – Line Items**
- **Sales Accrual**

> **i** Navigation to Sales Accrual is enabled only for Deferred Cost/Revenue.

See Also

- Reports View
- Overview of Reports in Financial Management
- Overview of Data Sources in Financial Management

3.8.10 Project Plan Values

Overview

Shows the estimated costs and revenues for the project tasks of a single project based on the planned work, the planned materials, the planned expenses, and the planned revenues.

The planned costs for projects can include expenses for travel costs and entertainment, complementing the work planning and helping you keep your projects under budget. You are able to track expenses for items such as:

- Lodging
- Meals
- Rental cars
- Entertainment
- Office supplies and books

Expenses that were entered in different currencies are displayed in a single currency in the report.

The project estimate is displayed in a flat list showing the planned cost and revenue for each project task.

Prerequisites

You must have authorization for the company to which the project belongs or be the project lead for that project.

Views

The following views are available with this report:

- Project Estimate
  Shows the estimated project costs and revenues for each project task.
- Project Estimate – Details
  Shows additional information including the resource, the supplier, the total planned quantity, the cost rate, and the error status.

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

For more information on common variables, see Overview of Reports in Financial Management.

Analyzing the Report

Depending on the view, the report shows the following key figures:

- Total Planned Cost
- Total Planned Revenue
- Total Planned Quantity
- Cost Unit
- Cost Rate

Depending on the view, the report shows the following characteristics:

- Project Task
- Project Estimate Item Type
- Product
- Expense/Income Group
- Resource
- Supplier
- Error Status
  If the Error Status key figure is 1 and the background color is red, this means that an error occurred in valuation and a BTM task has been generated in the *Cost and Revenue* work center. The task explains the cause of the error and how to correct it.
  An error will occur for example if a G/L account or currency conversion rate is missing.

Overhead is displayed as separate cost items.

To further analyze data in this report, you can drag characteristics to rows and columns.

From this report, you can navigate to:

- Project task overview
- Product overview

See Also

- Reports View
- Overview of Reports in Financial Management
- Overview of Data Sources in Financial Management

3.8.11 Projects – Line Items

Overview

Shows the line items for projects of all project types. For customer projects the report also lists the line items of assigned sales order items.

You use this report to analyze project costs and revenues at the level of individual journal entries.

The entries in the report include:

- Distributions
- Service Cost Allocations
- Time or expense recordings
- Supplier invoices
- Overhead
- Revenue

You can choose to display the accounts structured on an open item basis only or all accounts with project costs or revenues.

Views

The following views are available with this report:

- *Project – Line Items*
  Shows the basic line item details.
- *Distribution, Absorption, Resources*
  Shows the line item details including the offset cost center and offset resource.
- *Materials and Services*
  Shows the line item details including the offset business residence and offset material.
- *Offsetting Objects*
  Shows the line item details including the offset cost center and offset project.

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

Additional information is available for the following selected variables:

- *Project*
  You can select multiple projects to see the details for those projects.
- *G/L Account (Origin)*
  You can specify a G/L account for the origin of the costs.

For more information on common variables, see Overview of Reports in Financial Management.

Analyzing the Report

The report shows the following key figures:

- *Valuation Quantity*
- *Amount in Company Currency*
- *Amount in Transaction Currency*
- *Actual Cost*
- *Actual Revenue*
- *Margin*
- *Margin %*
- *Actual Entry Quantity*
  Actual quantity entered for a project

The report shows the following characteristics:

- Debit/Credit
- G/L Account (Origin)
- Business Transaction
- Posting Date
- Journal Entry ID
- Source Document ID
- Accounting Period/Year
- Created By
- G/L Account
- Offset Business Residence
- Offset Cost Center
- Offset Material
- Offset Project
- Offset Resource
- Person Responsible
- Profit Center

- Project
- Project Task
- Requesting Cost Center
- Responsible Cost Center
- Segment
- Service
- Transaction Currency
- Valuation Quantity Type

To further analyze data in this report, you can drag characteristics to rows and columns.

From this report, you can navigate to:

- **G/L Accounts – Line Items**
- **Journal**
- **Cost Center Overview**
- **Source Document**

> **i** By default, the **Projects – Line Items** report is always executed for the **current accounting period only**. This will also be the case if you navigate to this report from any of the project overview reports without specifying an accounting period.
>
> This may result in an apparent discrepancy between the **Projects – Line Items** report and the overview report if the data in the two reports is based on different periods.
>
> To ensure that the **Projects – Line Items** report is based on the same accounting period as the overview report from which you are navigating, do **either** of the following:
>
> - Add the **Accounting Period/Year** characteristic to the rows and columns in the overview report before navigating to the **Projects – Line Items** report.
> - Go to the variable screen of the **Projects – Line Items** report and change the value of the *Accounting Period/Year* variable there.

See Also

- Reports View
- Overview of Reports in Financial Management
- Overview of Data Sources in Financial Management

3.8.12 Work Trend Analysis

Overview

Shows the progress of forecast and actual work over time for a single project using data obtained from snapshots. The current active baseline is also shown for reference purposes. For each date when a snapshot was created, the report shows the actual and forecast work of the snapshot. For each date when a baseline version was activated, the report shows the baseline work that was valid at that date.

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

Analyzing the Report

This report shows and analysis of the actual work, forecast work, and baseline work by project.

To further analyze data in this report, you can drag characteristics to rows and columns.

See Also

Reports View

3.8.13 Milestone Trend Analysis

Overview

Shows the progress of milestones over time for a single project. The report is created using the data obtained from snapshots. For each snapshot creation date, the report shows all project milestones with their latest finish date.

> **i** In case several snapshots exist for the same day, the most current snapshot is used.

Prerequisites

The following views are available with this report:
- The project contains one or more milestones.
- Project snapshots have been created at regular time intervals, for example, weekly, biweekly, or monthly.

  > ➡ You can schedule automatic creation of snapshots using snapshot runs.

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

Analyzing the Report

This report shows and analysis of the milestone date (the latest finish date of the milestone) for each milestone.

See Also

Reports View

3.8.14 Revenue by Team Member

Overview

Shows information on quantities, amounts, revenue contribution, and work progress, based on time and expenses recorded to a project. The key figures specific to this report such as Net Value Invoiced (Time and Expenses), Net Value Written-Off (Time and Expenses), and Net Value Delivered (Time and Expenses) provide detailed information on revenue share that each team member has contributed with his work. This information could be useful for bonus calculation or employee assessment.

Prerequisites

The report is available for customer projects and sales order items of type *Time and Material*. Time and expenses must have been recorded to the project

Views

The following views are available with this report:

- Revenue by Team Member

Features

Analyzing the Report

When the report is started the following selection criteria are shown by default:

- *Project*
- *Team Member*
  The following parties are taken over in the given order:
  ○ Source Document Service Agent
  ○ Source Document Employee Responsible

- *Source Document Provision Date*
  The date when the expense is incurred. This date is provided by the source document

When the report is started the following characteristics are shown by default:

- *Project*

- *Team Member*
  The following parties are taken over in the given order:
  - ○ Source Document Service Agent
  - ○ Source Document Employee Responsible
- *Source Document Provision Month/Year*
  Month and year that corresponds to the Source Document Provision Date

When the report is started the following key figures are shown by default:

- *Net Value Invoiced (Time and Expenses)*
  The net value of time and expenses that have been invoiced
- *Net Value Written-Off (Time and Expenses)*
  The net value of time and expenses that have been written-off
- *Net Value Delivered (Time and Expenses)*
  The net value of time and expenses that have been delivered but not written-off

> **i** This key figure is the total of **Net Value Open (Time and Expenses)**, **Net Value Deferred (Time and Expenses)**, **Net Value Invoice Requested (Time and Expenses)**, and **Net Value Invoiced (Time and Expenses)**.

Important additional characteristics that are available by default:

- *Source Document ID*
  The original ID of the project related expense document
- *Source Document Provision Date*
  The date when the expense is incurred. This date is provided by the source document
- *Source Document Provision Year*
  The year that corresponds to the Source Document Provision Date
- *Source Document Provision Week/Year*
  Week and year that correspond to the Source Document Provision Date
- *Source Document Posting Date*
  The date used to post the source document in the default set of books

> **i** In case of intercompany time confirmations or time confirmation for service agents the source document posting date is the posting date of the related goods and services receipt

- *Customer Invoice ID*
- *Customer Invoice Item*
- *Customer Invoice Posting Date*
  The date used to post the customer invoice in the default set of books.

Important characteristics that can be added by Add Fields

- *Source Document Accounting Period/Fiscal Year*
  Accounting period and fiscal year that correspond to the Source Document Posting Date
- *Project Expense List Item ID*
  The unique identifier across all expense types (e.g. time confirmation, expense report) for a project related expense item
- *Project Expense List Item Version*
  The version of the business transaction for accounting for a specific project expense list item
- *Transaction Date*

The following dates are taken over in the given order:

- Last change date of the project expense list item version in case customer invoice is available

- Creation date of the project expense list item version

- Creation date of the project expense list item

- *Project Expense List Item Version Posting Date*
  The date used to post the project expense list item version in the default set of books

- *Project Expense List Item Version Accounting Period/Fiscal Year*
  Accounting period and fiscal year that correspond to the Project Expense List Item Version Posting Date

- *Customer Invoice Period/Fiscal Year*
  Accounting period and fiscal year that correspond to the Customer Invoice Posting Date

- *Effective Posting Date*
  The following posting dates are taken over in the given order:
  - Customer Invoice Posting Date

  - Project Expense List Item Version Posting Date

  - Source Document Posting Date

- *Effective Accounting Period/Fiscal Year*
  The following accounting periods and fiscal years are taken over in the given order:
  - Customer Invoice Accounting Period/Fiscal Year

  - Project Expense List Item Version Accounting Period/Fiscal Year

  - Source Document Accounting Period/Fiscal Year

Additionally the following key figures are available:

1. Related to Sales Order

   - *Sales Order Item Quantity*
     Sales Order Item Net Value

   - *Sales Order Item List Price*
     The list price of the sales order item for one quantity

   - *Sales Order Item Net Value*

2. Related to Source Document

   - *Source Document Total Quantity*

   - *Source Document Billable Quantity*

   - *Source Document Total Amount*

3. Related to Project Expense List

   a. The assigned quantity of the source document total quantity depending on the progress in the invoicing process

      - *Quantity – Not Yet Invoiced*

      - *Quantity Assigned to Project Invoice Requests (Source Document)*

      - *Quantity Invoice Requested (Source Document)*

      - *Quantity Invoiced (Source Document)*

      - *Quantity Open (Source Document)*

      - *Quantity Written-Off (Source Document)*

   b. The assigned amount of the source document total amount depending on the progress in the invoicing process

- *Amount – Not Yet Invoiced*
- *Amount Assigned to Project Invoice Requests (Source Document)*
- *Amount Deferred (Source Document)*
- *Amount Invoiced (Source Document)*
- *Amount Open (Source Document)*
- *Amount Written-Off (Source Document)*

c. The net value determined for the assigned source document quantity with its respective amount
- *Net Value Open (Time and Expenses)*
  The net value of time and expenses that have not yet been assigned to a project invoice request
- *Net Value Deferred (Time and Expenses)*
  The net value of time and expenses that have been postponed to the next project invoice request
- *Net Value Invoice Requested (Time and Expenses)*
  The net value of time and expenses that have been assigned to a project invoice request but have not been invoiced yet
- *Net Value Not Yet Invoiced (Time and Expenses)*
  The net value of time and expenses that have been delivered but not yet invoiced. They may have already been assigned to a project invoice request

> **i** This key figure is the total of **Net Value Open (Time and Expenses)**, **Net Value Deferred (Time and Expenses)**, and **Net Value Invoice Requested (Time and Expenses)**.

4. Related to Project Invoice Request and Customer Invoice
- *Project Invoice Request Item Net Value*
- *Customer Invoice Item Net Value*

5. Related to Project
- *Planned Work (Project Task incl. Subtasks)*
- *Planned Work (Project Task)*
- *Actual Work (Project Task incl. Subtasks)*
- *Actual Work (Project Task)*
- *Remaining Work (Project Task incl. Subtasks)*
- *Remaining Work (Project Task)*
- *Work PoC (%)*

From this report, you can navigate to the following:
- *View Project Overview*
- *View Contact Data*
- *View Invoice*
- *Team Member Work Analysis*

3.8.15 Earned Value Analysis

Overview

Shows the progress of a project in terms of scope, schedule, and costs. By tracking the planned value, actual costs, and earned values of a project a performance trend can be generated. The report is created using the baseline and snapshot data.

Views

The following views are available with this report:

- Earned Value Analysis
  Shows a tabular list of all available snapshot versions and their respective cost values.
- Earned Value Analysis Chart
  Shows a graphical presentation of all cost values and their deviations.

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*).

Analyzing the Report

After you have selected the mandatory fields *Project* and *PoC Type*, and have chosen a set of books, the report initially displays the key figures PoC, Baseline Planned Cost, Actual Cost, Planned Value, Earned Value, Cost Variance, Cost Performance Index, Schedule Variance, Schedule Performance Index, Estimate at Completion, and Estimate to Completion by default.

> **i** If you do not select an entry for the *Set of Books* field, the system uses the default set of books of the company of the cost center responsible in the project.

In addition, you can select:

- Planned Work
- Remaining Work

You can filter the data with the following characteristics:

- Baseline Version
- Reporting Date
- Snapshot Version

To further analyze data in this report, you can also drag the following characteristics to rows and columns:

- Baseline
- PoC Type
- Project
- Snapshot

See Also

Reports View

3.8.16 Customer Projects

Overview

This data source (`PROCPIU02`) provides customer project-related key figures from sales orders, invoice requests, and invoices including work progress, quantities, net values, and amounts.

You can use this data source to create reports that give you a complete picture regarding the status of customer projects with focus on their invoicing progress.

The data source contains the following information:

- Sales order information, including quantities and net values
- Project information, including work progress
- Invoice information, answering the following questions:
    - What has already been invoiced?
    - What has not yet been invoiced?
    - What has been written-off?

The report is available for customer projects only. At least one of the following conditions must be fulfilled:

- Time and expenses have been recorded to the project.
- Invoice requests or invoices related to the project have been created.

Characteristics

The following characteristics are defined for this data source. The characteristics are categorized by dimensions which allow you to find them more easily.

Project

Technical Name	Name	Description
PROJECT_UUID	Project	Shows the ID and the name of the project.
PERS_RESP_UUID	Person Responsible	Shows the person who is responsible for the project or an individual project task.
PROJECT_STATUS	Project Status	Shows the status of the project.
ON_HOLD	On Hold	Shows if a project is set on hold to postpone it temporarily. This is possible for projects of any status.

Technical Name	Name	Description
RESPBL_UNIT	Responsible Unit	Shows the cost center that is in charge of fulfilling the project.
PRO_TASK_UU ID	Project Task	Shows the element within the project structure. A project task can represent the project header or a phase, task, or milestone.
COMPANY_UUI D	Company	Shows the ID and the name of the company to which the project belongs.
RISK	Risk	Shows if the project or project task is on risk.
PROGR_UUID	Program	Shows the ID and the name of the program.

Sales Order

Technical Name	Name	Description
SALES_ORDER	Sales Order	Shows the ID and the description of the assigned sales order.
CUSTOMER_UU ID	Customer	Shows the ID and the name of the assigned customer.
SO_ORD_RES_ UUID	Sales Order Responsible	Shows the ID and the name of the person who is responsible for the assigned sales order.
SO_ORD_STAT US	Sales Order — Invoice Status	Shows the invoicing status of the sales order.
SO_ORD_ITM	Sales Order Item	Shows the ID and the description of the sales order item.
ORDRD_PROD_ UUID	Sold Product	Shows the service or expense listed in the sales order.

Invoice

Technical Name	Name	Description
ID	Invoice Request ID	Shows the ID of the invoice request.
INV_REQ_STA TUS	Invoice Request Status	Shows the status of the invoice request.
CPIR_ITEM_U UID	Invoice Request Item	Shows the ID and the description of an invoice request item.
INV_METHOD	Invoicing Type	Indicates if the item is invoiced based on confirmed time and material or based on a fixed price.
INV_PROD_UU ID	Invoiced Product	Shows the service, expense, or material assigned to an invoice.

Time and Expenses

Technical Name	Name	Description
TEAM_MEMBER	Team Member	Shows the name of the team member who provides the service.
SUPPLIER	Supplier	Shows the employer of the team member if externally hired.

Technical Name	Name	Description
SERV_PROVI_DATE	Service Provisioning Date	Date on which the service has been provided.
PROD_CONFIRMED	Confirmed Product	Shows the service, expense, or material recorded against the project.
EDIR_OTC	Source Document Item Type	Shows the document type that was used to record time or expenses against the project, for example, time or service confirmation, goods receipt, or supplier invoice.
EDIR_ITEM_ID	Source Document Item ID	Shows the ID of the source document that was used to record time or expenses against the project.

Units and Currencies

Technical Name	Name	Description
REQ_QTY_UNIT	Quantity Unit - Ordered	Shows the unit of the ordered quantities.
INV_REQ_QTY_UNIT	Quantity Unit - Invoice Request	Shows the unit of the quantities in the invoice request.
INVD_QTY_UNT_C	Quantity Unit - Invoiced	Shows the unit of the invoiced quantities.
PSTPND_QTY_UNIT	Quantity Unit - Deferred	Shows the unit of the deferred quantities.
WRTNOFF_QTY_U	Quantity Unit - Written-Off	Shows the unit of the written—off quantities.
OPEN_QTY_UNIT	Quantity Unit - Open	Shows the unit of the open quantities.
AMT_NET_CUR	Net Value Currency - Ordered	Shows the currency of the ordered net values.
INV_REQ_NET VALUE_CURR	Net Value Currency - Invoice Request	Shows the currency of the net values in the invoice request.
INV_NAMT_CURR_C	Net value Currency - Invoiced	Shows the currency of the invoiced net values.
OPEN_AMT_CURR_C	Amount Currency - Open	Shows the currency of the open amounts.
INV_REQ_CURR	Amount Currency - Invoice Request	Shows the currency of the amounts in the invoice request.

Technical Name	Name	Description
INV_AMT_CUR R_C	Amount Currency - Invoiced	Shows the currency of the invoiced amounts.
PSTPND_AMT_ CURR	Amount Currency - Deferred	Shows the currency of the deferred amounts.
WRTNOFFAMT_ CUR	Amount Currency - Written-Off	Shows the currency of the written—off amounts.
TSK_PLN_WRK _UNT	Planned Work Unit	Shows the unit of the planned work.

> **i** You do not need to select any of the unit or currency characteristics. They will be automatically displayed together with the corresponding key figures.

Key Figures

Select the key figure group *Customer Projects*. This key figure group contains the most important key figures to get a view on the work progress and invoicing status of a project.

Technical Name	Name	Description
REQ_QTY	Quantity - Ordered	Shows the quantities of all sales orders that are assigned to a project or project task.
INV_QTY_CNT	Quantity - Invoiced	Shows the invoiced quantities for services and materials.
WRITTENOFF_ QTY	Quantity - Written-Off	Shows the quantities from services and materials which have been written-off.
PROCPIU02_C KF_01	Quantity - Not Yet Invoiced	Shows the quantities from services and materials that are confirmed but not yet invoiced and not written-off. > **i** This key figure is the total of **Quantities — Open**, **Quantities — Deferred**, and **Quantities — Invoice request**.
ALLOCATED_Q TY	Quantity – Used for Invoicing	Shows the quantities from services and materials which have been assigned to items in a project invoice request.
AMT_NET	Net Value - Ordered	Shows the net values of all sales orders that are assigned to a project or project task.
INV_NAMT_CN T	Net Value - Invoiced	Shows the invoiced net values.
INV_AMT_CNT	Amount - Invoiced	Shows the invoiced amounts for travel expenses.

Technical Name	Name	Description
WRITTENOFF_ AMT	Amount - Written-Off	Shows all travel expenses which have been written-off.
PROCPIU02_C KF_02	Amount - Not Yet Invoiced	Shows all travel expenses that are confirmed but not yet invoiced and not written-off. ⓘ This key figure is the total of **Amount — Open**, **Amount — Deferred**, and **Amount — Invoice request**.
ALLOCATED_A MT	Amount – Used for Invoicing	Shows the travel expenses which have been assigned to items in a project invoice request.
ACTUAL_WORK	Actual Work	Shows the work recorded for an individual project task and all its subordinate tasks (if available).
TSK_ACTUAL_ WORK	Actual Work (non-aggregated)	Shows the work recorded for an individual project task.
PLAN_WORK	Planned Work	Shows the work planned for an individual project task and all its subordinate tasks (if available).
TSK_PLAN_WO RK	Planned Work (non-aggregated)	Shows the work planned for an individual project task.
REM_WORK	Remaining Work	Shows the work still required to fulfill the individual project task and all its subordinate tasks (if available).
TSK_REMAIN_ WORK	Remaining Work (non-aggregated)	Shows the work still required to fulfill the individual project task.
WORK_POC	Work PoC (%)	Shows the percentage of completion of the project or a project task. This percentage is calculated as Actual Work divided by the sum of Actual Work and Remaining Work.

⚠ • The work-related key figures only show values if the project task is assigned to a sales order item.
• Be careful, when building totals of work-related key figures across sales order items.
There are several cases when this would lead to a double-count of work:
  ○ If several sales order items refer to the same project task, the work-related key figures show the same amount of work for every sales order item. Totals of work-related key figures across sales order items therefore multiply the amount of work on the project task.
  ○ If sales order items refer to project tasks that are subordinate to each other, you **should not use** aggregated work-related key figures. Aggregated work-related key figures already include the work of the subordinate tasks and totals of aggregated work-related key figures across sales order items therefore double count the work of the subordinate tasks.

For further analysis the following key figures are available in this data source.

Technical Name	Name	Description
OPEN_QTY	Quantity - Open	Shows the quantities of services and materials not yet invoiced and also not yet assigned to an invoice request.

Technical Name	Name	Description
INV_REQ_QTY	Quantity - Invoice Request	Shows the quantities of services and materials assigned to invoice requests that are not yet invoiced.
POSTPONED_Q TY	Quantity - Deferred	Shows the quantities of services and materials postponed to the next invoice request.
INV_REQ_NAM T	Net Value - Invoice Request	Shows the net values of quantities and amounts assigned to invoice requests that are not yet invoiced.
OPEN_AMT	Amount - Open	Shows the amounts of travel expenses not yet invoiced and also not yet assigned to an invoice request.
INV_REQ_AMT	Amount - Invoice Request	Shows the amounts of travel expenses assigned to invoice requests that are not yet invoiced.
POSTPONED_A MT	Amount - Deferred	Shows the amounts of travel expenses postponed to the next invoice request.

Access Contexts

- Project Management
- Company

Report Categories

Technical Name	Name
ANA_CAT_PRO _010	Projects - Cost and Revenue Analysis
ANA_CAT_SAL ES_040	Sales and Marketing - Customer Invoicing

3.8.17 Project Product Data

Overview

Shows basic data for multiple projects in different views: work in task and task services, quantities of task materials, and approved work times confirmed by employees.

Views

The following views are available with this report:
- Work by Service/Employee
- Products by Project
  Lists all products assigned to the project (services as well as materials).

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. For this report there are no mandatory fields.

Analyzing the Report

This report displays the actual, planned, and remaining work, as well as planned, actual, and remaining quantity, by employee, project, project task, and product type.

Additional information is available for the following:

- *Unstaffed Work (Service)*:
  Shows the amount of time planned to carry out a specific service that has not been assigned to an employee yet.

> **i** All available calendar characteristics, *calendar day* and *calendar month*, for example, refer to the confirmed work only.

To further analyze data in this report, you can drag characteristics to rows and columns.

From this report, you can navigate to:

- *View Project Overview*
- *View Project Task Overview*
- *View Product Overview*

3.8.18 Project Expense

Overview

This data source (`PROPEVU01`) provides project-related key figures with focus on the project's overall expenses.

You can use this data source to create reports that give you a complete picture of the times recorded by the employees in the *Time and Expenses* view of the *Project Management* work center, for example.

Characteristics

The following characteristics are defined for this data source. The characteristics are categorized by dimensions which allow you to find them more easily.

Business Partner

Technical Name	Name
PTY_SELLER_UUID	Supplier
PTY_RSEMP_UUID	Employee
CMPY_RESP_UUID	Buying Company

Project

Technical Name	Name
PROJECT_UUID	Project
PROJ_RSEMP_UUID	Project Responsible
PROJ_TASK_UUID	Project Task

Project Expense View

Technical Name	Name
EXP_DREF_FMT_ID	Source Document ID
EXP_DREF_OTC	PE Type (Project Expense Type)
PEV_STATUS_CNCL	PE Cancelation Status (Project Expense Cancelation Status)

Project Expense View Item

Technical Name	Name
BILLABLE_IND	Billable
BILL_QNTY_IND	Billable Quantity Indicator
CHECKED_IND	Checked
COMMENT	Comment **i** The maximum number of characters must not exceed 60.
DEDUCTION_IND	Deduction
ER_EXP_CAT_CODE	Expense Category Description
EXXP_DIR_FMT_ID	Source Document Item ID
EXP_DIR_OBJ_NTC	PE Item Type (Project Expense Item Type)
EXP_INC_END	Provision Date
EXP_INC_START	Calendar Day
EXP_INC_S_MONTH	Calendar Month
EXP_INC_S_YEAR	Calendar Year
EXP_RELEV-IND	Expense Relevant
NOTE	Remarks
PEV_ITEM_CNCN	Cancelation
PEV_ITEM_UUID	Project Expense Item
POI_REF_ID	Purchase Order
POI_REF_ITEM_ID	Purchase Order Item

Technical Name	Name
PRODUCT_UUID	Service Product
PRODUCT_CAT_UUID	Product Category
PROD_TYPE_CODE	Product Type
PTY_SRVPRF_UUID	Service Agent
SET_DATE	Checked On
SRVPRV_CMP_UUID	Selling Company
STATUS_CNCL	Canceled
WORK_DESC	Work Description ℹ The maximum number of characters must not exceed 60.

Units and Currencies

Technical Name	Name
BILL_QNTY_UNIT	Quantity Unit
TOTAL_AMT_CURR	Currency
TOTAL_QNTY_TC	Quantity Type Code
TOTAL_QNTY_UNIT	Quantity Unit

Key Figures

Technical Name	Name
0COUNT	Counter
BILL_QNTY	Billable Quantity
TOTAL_AMT	Amount
TOTAL_QNTY	Total Quantity

Access Context

- Project Management

Report Category

Technical Name	Name
ANA_CAT_PRO_030	Projects - Resource Analysis

3.8.19 Revenue Contribution

Overview

This data source (`PROCPIU03`) provides information on quantities, amounts, revenue contribution, and work progress, based on project time and expenses. You can use this data source to create reports that give you a detailed overview of revenue contribution by each project team member, based on the currently best available information.

The data source contains the following information:

- Sales order information, including quantities and net values
- Project information, including work progress
- Invoice information, answering the following questions:
  - What has already been invoiced?
  - What has not yet been invoiced?
  - What has been written-off?

Prerequisites

The report is available for customer projects and sales order items of type Time and Material. Time and expenses must have been recorded to the project.

Characteristics

The following characteristics are defined for this data source. The characteristics are categorized by dimensions which allow you to find them more easily.

Project

Technical Name	Name	Description
PROJECT_UUID	Project	Indicates the ID and the name of the project.
PRO_TASK_UUID	Project Task	Indicates an element within the project structure. A project task can represent the project header or a phase, task, or milestone.
PROJECT_STATUS	Project Status	Indicates the status of the project.
ON_HOLD	Project Task On Hold	Indicates if a project is set on hold to postpone it temporarily. This is possible for projects of any status.
RISK	Project Task Risk	Indicates the risk level of the project or the project task.
PERS_RESP_UUID	Project Task Responsible	Indicates the ID and the name of the person that is responsible for the project or an individual project task.
COMPANY_UUID	Project Company	Indicates the ID and the name of the company to which the project belongs.
RESPBL_UNIT	Responsible Unit	Indicates the cost center that is in charge of implementing the project.

Technical Name	Name	Description
PROGR_UUID	Project Program	Indicates the ID and the name of the program.

Sales Order

Technical Name	Name	Description
SALES_ORDER	Sales Order	Indicates the ID and the description of the assigned sales order.
CUSTOMER_UU ID	Customer	Indicates the ID and the name of the assigned customer.
SO_ORD_RES_ UUID	Sales Order Responsible	Indicates the ID and the name of the person that is responsible for the assigned sales order.
SO_ORD_STAT US	Sales Order Invoice Status	Indicates the invoicing status of the sales order.
SO_ORD_ITM	Sales Order Item	Indicates the ID and the description of the sales order item.
ORDRD_PROD_ UUID	Sales Order Product	Indicates the service, material or expense listed in the sales order.

Invoice

Technical Name	Name	Description
CPIR_ID	Project Invoice Request ID	Indicates the ID of the project invoice request.
INV_REQ_STA TUS	Project Invoice Request Status	Indicates the status of the project invoice request.
CPIR_ITEM_U UID	Project Invoice Request Item	Indicates the ID and the description of a project invoice request item.
INV_METHOD	Invoicing Method	Indicates if the item is invoiced based on confirmed time and expenses or based on a fixed price.
INV_PROD_UU ID	Invoicing Product	Indicates the service, expense, or material assigned to an invoice.
CI_FISCAL_Y EAR_ACC_PER IOD	Customer Invoice Accounting Period/Fiscal Year	Indicates the accounting period and fiscal year that corresponds to the Customer Invoice Posting Date.
CI_ID	Customer Invoice ID	Indicates the ID of the customer invoice.
CI_ITEM_ID	Customer Invoice Item	Indicates the item ID and the description of the customer invoice item.
CI_ITEM_UUI D	Customer Invoice Item	Indicates the item ID and the description of the customer invoice item.
CI_POSTING_ DATE	Customer Invoice Posting Date	Indicates the date used to post customer invoice in the default set of books.

Technical Name	Name	Description
`CI_UUID`	Customer Invoice ID	Indicates the ID of the customer invoice.
`INV_PROD_RE Q_SPEC`	Invoicing Product Requirement Specification	Indicates the product requirement specification for the service, expense, or material assigned to an invoice.

Time and Expenses

Technical Name	Name	Description
`TEAM_M EMBER`	Team Member	Indicates the name of the team member who has caused the expense. It is either the service agent or employee responsible.
`SERV_P ROVI_D ATE`	Source Document Provision Date	Indicates the date when the expense is incurred. This date is provided by the source document.
`PROD_C ONFIRM ED`	Source Document Product	Indicates the service, expense, or material recorded to the project.
`EDIR_O TC`	Source Document Type	Indicates the document type that was used to record time or expenses to the project, for example, time or service confirmation, goods receipt, or supplier invoice.
`EDIR_I TEM_ID`	Source Document Item	Indicates the original item ID of the project related expense document item (source document).
`CPEL_I TEM_ID`	Project Expense List Item ID	The unique identifier across all expense types (e.g. time confirmation, expense report) for a project related expense item.
`CPEL_I TEM_VE RSION_ ID`	Project Expense List Item Version	Indicates the version of the business transaction for accounting for a specific project expense list item.
`CPEL_I TEM_VE RSION_ POSTIN G_DATE`	Project Expense List Item Version Posting Date	Indicates the date used to post the project expense list item version in the default set of books.

Technical Name	Name	Description	
CPEL_ITEM_VERSION_UUID	Project Expense List Item Version UUID-Technical Attribute	Indicates the version of the business transaction for accounting for a specific project expense list item.	
CPEL_ITEM_VERS_FIS CYEAR_ACCPER	Project Expense List Item Version Accounting Period/Fiscal Year	Indicates the accounting period and fiscal year that corresponds to the Project Expense List Item Version Posting Date.	
EDI_CREATION_DATE_TIME	Project Expense List Item Created On	Indicates the time stamp when the project expense list item has been created.	
EDI_LAST_CHNAGE_DATE_TIME	Project Expense List Item Changes On	Indicates the time stamp when the project expense list item has been edited the last time.	
EFFECTIVE_FISCALYEAR_ACCPERIOD	Effective Accounting Period/Fiscal Year	Indicates the Customer Invoice Accounting Period/Fiscal Year or the Project Expense List Item Version Accounting Period/Fiscal Year or the Source Document Accounting Period/Fiscal Year.	
EMPLOYEE_RESPONSIBLE	Source Document Employee Responsible	Indicates the name of the employee who has caused the expense.	
EXP_INCUR_YEAR	Source Document Provision Year	Indicates the year that corresponds to the Source Document Provision Date.	

Technical Name	Name	Description
EXP_IN CUR_YE AR_MON TH	Source Docume nt Provisio n Month/ Year	Indicates the month and year that corresponds to the Source Document Provision Date.
EXP_IN CUR_YE AR_WEE K	Source Docume nt Provisio n Week/ Year	Indicates the week and year that corresponds to the Source Document Provision Date.
FISCAL _YEAR_ VARIAN T	Fiscal Year Variant	Indicates the fiscal year variant assigned to the default set of books.
PEV_IT EM_UUI D	Project Expense View Item UUID — Technica l Attribute	The unique technical ID of the copy of the project related expense item.
POSTIN G_DATE	Effective Posting Date	Indicates either the posting date of the customer invoice or the project expense list item version or the source document.
RLU_MA NAGER_ UUID	Team Member Reportin g Line Unit Manager	Indicates the ID and the name of the manager of the reporting line unit.
RLU_UU ID	Team Member Reportin g Line Unit	Indicates the ID and the name of the reporting line unit.
SERVIC E_PERF ORMER	Source Docume nt Service Agent	Indicates the name of the service agent who has caused the expense.

Technical Name	Name	Description	
SPLIT_UUID	Split UUID — Technical Attribute	The unique technical ID of a transaction for a project expense list item.	
SRC_DOC_CANCELLATION_STATUS	Source Document Cancellation Status	Indicates if the source document has been canceled.	
SRC_DOC_DEDUCTION_IND	Source Document Deduction Indicator	Expense report related information.	
SRC_DOC_EXPENSE_CATEGORY	Source Document Expense Category	Expense report related information.	
SRC_DOC_EXPENSE_DESCRIPTION	Source Document Expense Description	Expense report related information.	
SRC_DOC_FISCAL_YEAR_ACC_PERIOD	Source Document Accounting Period/Fiscal Year	Indicates the accounting period and fiscal year that corresponds to the Source Document Positing Date.	
SRC_DOC_GL_ACCOUNT	Source Document General Ledger Account	Indicates the general ledger account information of the source document.	
SRC_DOC_ID	Source Document ID	Indicates the original ID of the project related expense document (source document).	

Technical Name	Name	Description	
SRC_DOC_INT_NOTE	Source Document Internal Comment	Indicates the internal comment of the source document item.	
SRC_DOC_POSTING_DATE	Source Document Posting Date	Indicates the date used to post the source document in the default set of books.	
SRC_DOC_PROD_REQ_SPEC	Source Document Product Requirement Specification	Indicates the product requirement specification for the service, expense, or material of the source document.	
SRC_DOC_WORK_DESCR	Source Document Work Description	Indicates the work description of the source document item.	
SUPPLIER	Source Document Supplier	Indicates the supplier that provided the expense.	
SUP_ROLE_CAT	Supplier Role Category — Technical Attribute	Indicates the role category code assigned to the role of a supplier.	
TRANSACTION_DATE	Transaction Date	Indicates either the date of the project expense list item version or the creation date of the project expense list item version or the creation date of the project expense list item.	

Units and Currencies

Technical Name	Name	Description
REQ_QTY_UNIT	Sales Order Item Quantity Unit	Indicates the unit of the sales order item quantities.

Technical Name	Name	Description
INV_REQ_QTY_UNIT	Quantity Unit Invoice Requested (Source Document)	Indicates the unit of the quantities of the source document assigned to a project invoice request.
INVD_QTY_UNT_C	Quantity Unit Invoiced (Source Document)	Indicates the unit of the quantities of the source document that have already been invoiced.
PSTPND_QTY_UNIT	Quantity Unit Deferred (Source Document)	Indicates the unit of the quantities of the source document that have been postponed to the next project invoice request.
WRTNOFF_QTY_U	Quantity Unit Written-Off (Source Document)	Indicates the unit of the quantities of the source document that have been written-off.
OPEN_QTY_UNIT	Quantity Unit Open (Source Document)	Indicates the unit of the quantities of the source document that are open for invoicing.
INV_NAMT_CURR	Invoiced Project Invoice Request Item Net Value Currency	Indicates the currency of the invoiced net value of the project invoice request items.
OPEN_AMT_CURR_C	Amount Currency Open (Source Document)	Indicates the currency of the amounts of the source document that are open for invoicing.
INV_REQ_CURR	Amount Currency Invoice Requested (Source Document)	Indicates the currency of the amounts of the source document assigned to a project invoice request but not yet invoiced.
INV_AMT_CURR_C	Amount Currency Invoiced (Source Document)	Indicates the currency of the amounts of the source document that have already been invoiced.
PSTPND_AMT_CURR	Amount Currency Deferred (Source Document)	Indicates the currency of the source document that have been postponed to the next project invoice request.
WRTNOFF_AMT_CUR	Amount Currency Written-Off (Source Document)	Indicates the currency of the amounts of the source document that have been written-off.
ALLOCATED_AMT_CURR_C	Amount Currency Assigned to Project Invoice Request (Source Document)	Indicates the currency of the amounts of the source document that have been used for invoicing.
ALLOCATED_QTY_UNIT_C	Quantity Unit Assigned to Project Invoice Requests (Source Document)	Indicates the unit of quantities of the source document that have been used for invoicing.
EST_INV_NAMT_CURR	Net Value Currency Invoiced (Time and Expenses)	Indicates the currency of the net value of time and expenses that have already been invoiced.
EST_INV_REQ_NAMT_CURR	Net Value Currency Invoice Requested (time and Expenses)	Indicates the currency of the net value of time and expenses assigned to a project invoice request but not yet invoiced.

Technical Name	Name	Description
EST_OPEN_NAMT_CURR	Net Value Currency Open (Time and Expenses)	Indicates the currency of the net value of time and expenses that have not yet been assigned to a project invoice request.
EST_POSTPONED_NAMT_CURR	Net Value Currency Deferred (Time and Expenses)	Indicates the currency of the net value of time and expenses that have been postponed to the next project invoice request.
EST_WRITTENOFF_NAMT_CURR	Net Value Currency Written Off (Time and Expenses)	Indicates the currency of the net value of time and expenses that have been written-off.
TSK_PLN_WRK_UNT	Project Task Work Quantity Unit	Indicates the unit of the planned work of the project task.
INV_REQ_NAMT_CURR	Project Invoice Request Item Net Value Currency	Indicates the currency of the net value of the project invoice request items that have not been invoiced yet.
ORD_NAMT_CURR	Sales Order Item Net Value Currency	Indicates the currency of the sales order item net values.
SO_LIST_PRICE_CURR	Sales Order Item List Price Currency	Indicates the currency of the sales order item list price.
SRC_DOC_DIFF_BILL_QTY_UNIT	Source Document Billable Quantity Unit	Indicates the unit of the different billable quantities of the source document.
SRC_DOC_TOTAL_AMT_CURR	Source Document Total Amount Currency	Indicates the currency of the amounts of the source document.
SRC_DOC_TOTAL_QTY_UNIT	Source Document Total Quantity Unit	Indicates the unit of the quantities of the source document.

i You do not need to select any of the unit or currency characteristics. They will be automatically displayed together with the corresponding key figures.

Key Figures

Select the *Revenue Contribution* key figure group. This key figure group contains the most important key figures to get a view of the work progress, invoicing status of a project and estimated net values of revenue contribution of the project team members.

Technical Name	Name	Description
REQ_QTY	Sales Order Item Quantity	Indicates the quantities of all the sales orders items that are assigned to the project or a project task.
INV_QTY_CNT	Quantity Invoiced (Source Document)	Indicates the quantities of the source document that have already been invoiced.
WRITTEN OFF_QTY	Quantity Written-Off (Source Document)	Indicates the quantities of the source document that have been written-off.
PROCPIU 03_CKF_ 01	Quantity - Not Yet Invoiced	Indicates the quantities of the source document that have neither been invoiced nor written-off. **i** ▪ This key figure is the total of Quantities — Open, Quantities — Deferred, and Quantities — Invoice Request.
ALLOCAT ED_QTY	Quantity Assigned to Project Invoice Request (Source Document)	Indicates the quantities of the source document which have been assigned to a project invoice request not yet invoiced.
ORD_NAM T	Sales Order Item Net Value	Indicates the net values of all the sales orders items that are assigned to the project or a project task.
INV_NAM T	Customer Invoice Item Net Value	Indicates the net values of the customer invoice item.
INV_AMT _CNT	Amount Invoiced (Source Document)	Indicates the amounts of the source document that have already been invoiced.
WRITTEN OFF_AMT	Amount Written-Off (Source Document)	Indicates the amounts of the source document that have been written-off.
PROCPIU 03_CKF_ 02	Amount - Not Yet Invoiced	Indicates the amount of the source document that have neither been invoiced nor written-off. **i** ▪ This key figure is the total of Amount — Open, Amount — Deferred, and Amount — Invoice Request.
ALLOCAT ED_AMT	Amount Assigned to Project Invoice Requests (Source Document)	Indicates the amounts of the source document which have been assigned to a project invoice request not yet invoiced.
ACTUAL_ WORK	Actual Work (Project Task incl. Subtasks)	Indicates the work recorded to an individual project task and all its subordinate tasks (if available).
TSK_ACT UAL_WOR K	Actual Work (Project Task)	Indicates the work recorded to an individual project task.

Technical Name	Name	Description
PLAN_WO RK	Planned Work (Project Task incl. Subtasks)	Indicates the work planned for an individual project task and all its subordinate tasks (if available).
TSK_PLA N_WORK	Planned Work (Project Task)	Indicates the work planned for an individual project task.
REM_WOR K	Remaining Work (Project Task incl. Subtasks)	Indicates the work still required to fulfill the individual project task and all its subordinate tasks (if available).
TSK_REM AIN_WOR K	Remaining Work (Project Task)	Indicates the work still required to fulfill the individual project task.
EST_INV _REQ_NA MT	Net Value Invoice Requested (Time and Expenses)	Indicates the net value of time and expenses assigned to a project invoice request but not yet invoiced.
EST_OPE N_NAMT	Net Value Open (Time and Expenses	Indicates the net value of time and expenses that have not yet been assigned to a project invoice request.
EST_POS TPONED_ NAMT	Net Value Deferred (Time and Expenses)	Indicates the net value of time and expenses that have been postponed to the next project invoice request item.
EST_WRI TTENOFF _NAMT	Net Value Written Off (Time and Expenses)	Indicates the net value of time and expenses that have been written-off.
PROCPIU 03_CKF_ 03	Net Value Delivered (Time and Expenses)	Indicates the net value of time and expenses that have been delivered and not written-off. **i** This key figure is the total of **Estimated Net Value – Open Time and Expenses**, **Estimated Net Value – Deferred Time and Expenses**, **Estimated Net Value – Invoice Request Time and Expenses** and **Net Value – Invoiced Time and Expenses**.
PROCPIU 03_CKF_ 04	Net Value Not Yet Invoiced (Time and Expenses)	Indicates the net value of time and expenses that have been delivered but not yet invoiced. They may have already been assigned to a project invoice request item. **i** This key figure is the total of **Estimated Net Value – Open Time and Expenses**, **Estimated Net Value – Deferred Time and Expenses**, and **Estimated Net Value – Invoice Request Time and Expenses**.
EST_INV _NAMT	Net Value Invoiced (Time and Expenses)	Indicates the net value of time and expenses that have been invoiced.
WORK_PO C	Work PoC (%)	Indicates the percentage of completion of the project or a project task. This percentage is calculated as Actual Work divided by the sum of Actual Work and Remaining Work.
OPEN_QT Y	Quantity Open (Source Document)	Indicates the quantities of the source document not yet invoiced and also not yet assigned to a project invoice request.
INV_REQ _QTY	Quantity Invoice Requested (Source Document)	Indicates the quantities of the source document assigned to invoice requests that are not yet invoiced.

Technical Name	Name	Description
`POSTPON ED_QTY`	Quantity Deferred (Source Document)	Indicates the quantities of the source document postponed to the next project invoice request.
`INV_REQ _NAMT`	Project Invoice Request Item Net Value	Indicates the net values of the project invoice request item.
`OPEN_AM T`	Amount Open (Source Document)	Indicates the amounts of the source document not yet invoiced and also not yet assigned to a project invoice request.
`INV_REQ _AMT`	Amount Invoice Requested (Source Document)	Indicates the amounts of the source document assigned to project invoice requests that are not yet invoiced.
`POSTPON ED_AMT`	Amount Deferred (Source Document)	Indicates the amounts of the source document postponed to the next project invoice request.

⚠️
- The work-related key figures only show values if the project task is assigned to a sales order item.
- Be careful when building totals of work-related key figures across sales order items.
  There are several cases when this would lead to a double-count of work:
  - If several sales order items refer to the same project task, the work-related key figures show the same amount of work for every sales order item. Totals of work-related key figures across sales order items therefore multiply the amount of work on the project task.
  - If sales order items refer to project tasks that are subordinate to each other, you **should not use** aggregated work-related key figures. Aggregated work-related key figures already include the work of the subordinate tasks and totals of aggregated work-related key figures across sales order items therefore double count the work of the subordinate tasks.

Access Contexts

- Project Management
- Company

Report Category

Technical Name	Name
`ANA_CAT_PRO _030`	Projects - Resource Analysis

3.8.20 Earned Value Analysis by Project Structure

Overview

Shows the progress of a project in terms of scope, schedule, and costs. By tracking the planned values, actual cost, and earned values of a project a performance trend can be generated. The report is created using the baseline and snapshot data.

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 cost and planned cost 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 Cost (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 snapshot 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). This is valid as long as the project is not completed. In case of completion it is the completion date.
- Planned end date of the active baseline. This is valid as long as the end date has not been reached.

> **i** If more than one snapshot is created per day, only the most recent one is used as the basis for the calculation. Snapshots that are created on the day the report is triggered are not taken into account. Here, the data of the project itself is used.

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 . This implies that snapshot creation is scheduled with a snapshot creation run definition.
- During project execution, in case, overhead costs are in place for the project, the *Overhead Absorption Run* has to be executed on a regular basis. You can find the overhead absorption run in the *Cost and Revenue* work center under *Periodic Tasks* in *Overhead Cost Projects – Overhead Absorption* or *Direct Cost Projects – Overhead Absorption*.

Views

The following views are available with this report:

- By Date and Project Task – Hierarchical View
  Shows a tabular list of all available snapshot dates for all project tasks with cost values as a hierarchical view. This view also enables you to analyze aggregated values for summary tasks.
- By Project Task and Date – Flat View
  Shows a tabular list of all project tasks with cost values for all available snapshot dates as a flat view. This view enables you to monitor the trend of project tasks over the duration of the project.
- By Project Header – Chart
  Shows a graphical presentation of all aggregated cost values and their deviations at project header or task level.

Features

Running the Report

Before running the report, you can specify the data you want to see by making value selections for variables. You must make a value selection for all mandatory variables. In the system, an asterisk indicates mandatory variables (*)

> **i** If you do not select an entry for the *Set of Books* field, the system uses the default set of books of the company of the cost center responsible in the project.

Supported Methods

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

- **Work Proportional = Work PoC at project task level**
  Reflects the ratio of the cumulated actual work divided by the sum of the actual and the remaining work.

- **Zero to Hundred 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.

- **Twenty to Eighty 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.

- **Estimation at Project Level = Manual PoC at project header level**
  The project manager can enter his or her own estimation of the project progress on the project header.

- **Estimation at Task Level = Manual PoC at project task level**
  The project manager can enter his or her own estimation of the project progress on a project task.

> **i** You can use the baseline as selection criterion. For that, you have to add the baseline to the selection criteria area by using ⟨ Add Fields ⟩. If you select a baseline, this baseline applies to all your report lines. This means the data of the corresponding report lines that by default are based on their corresponding baseline is replaced by the data of the selected baseline.

Analyzing the Report

After you have selected the mandatory fields *Project* and *PoC Type*, and have chosen a set of books, the report initially displays the key figures PoC, Budget at Completion, Actual Cost, Planned Value, Earned Value, Cost Variance, Cost Performance Index, Schedule Variance, Schedule Performance Index, Estimate at Completion, and Estimate to Complete by default.

The report provides the following characteristics:

- Snapshot Date
- Project Version
- Project Task
- Baseline Version
- Baseline
- Baseline Task
- PoC Type
- Project
- Project Task Status

- Project Task Type
- Snapshot

Key Figures

The report runs with the following key figures:

- **Baseline Planned Work**
  Cumulated planned hours of work for the baseline/baseline task

- **Planned Work**
  Cumulated planned hours of work for the project/task

- **Actual Work**
  Cumulated confirmed hours of work for the project/task until the specified snapshot date

- **Remaining Work**
  Cumulated open hours of work for the project/task

- **Budget at Completion (BAC)**
  The total planned value when the project/task is completed. This value is determined by adding up the planned costs of the project baseline.

- **Actual Cost (AC)**
  Total cost incurred until the specified snapshot date

- **Time Based Percentage of Completion (Time based PoC)**
  Percentage of Completion based on the passed time in proportion to the total planned duration of the corresponding baseline task.

- **Planned Value (PV)**
  Cumulated value to date according to project schedule of the baseline. Since the baseline is an approved project plan the planned value can also be seen as the approved budget of a task. The value is being calculated by adding up total costs of planned work, materials and expenses.
  EV = BAC*Time based PoC

- **Percentage of Completion (PoC)**
  Determined by the project progress according to a method specified above.

  > **i**
  > - PoC is set to 100%, if the status of the project task is *Stopped* , *Completed* or *Closed* or there is planned or actual, but no remaining work and the PoC type is either *Work Proportional*, *Zero to Hundred* or *Twenty to Eighty*.
  > - PoC is also set to 100%, if there is neither planned nor actual or remaining work and the actual end date is set to a date prior to the snapshot date and the PoC type is either *Zero to Hundred* or *Twenty to Eighty*.
  > - If the PoC type is *Twenty to Eighty* the PoC will be set to 20% as soon as either expenses (for example, time recordings, purchases) have been posted to the project, or the actual start date is set to a date prior to the snapshot date.

  Earned Value (EV)
  Cumulated value of work completed to date for a specific task of the project based on the specified calculation rule for *Percentage of Completion*.
  EV = BAC*PoC

- **Cost Variance (CV)**
  The Cost Variance is a measure of the cost performance of a project. It indicates whether you are over spending or under budget as compared to the project baseline.
  CV = EV-AC

- **Cost Performance Index (CPI)**

Efficiency index measures cost performance of a task or project compared to the planned progress of the project baseline.
CPI = EV/AC
CPI is calculated on summary tasks and on the result lines.

- **Schedule Variance (SV)**
  The Schedule Variance is a measure of the schedule performance of a project. It gives you information about how far behind or ahead of schedule you are as compared to the project baseline.
  SV = EV-PV

- **Schedule Performance Index (SPI)**
  Efficiency index to measure schedule performance of a task or project compared to the planned progress of the project baseline.
  SPI = EV/PV
  SPI is calculated on summary tasks and on the result lines.

- **Estimate at Completion (EAC)**
  The forecast total cost of a project/task at completion. The EAC assumes that the cost performance until completion will be identical to the cost performance to date
  EAC = BAC/CPI

  > **i**
  > - EAC = AC, if the status of the project task is *Stopped* or *Closed*, because you do not expect more costs in case one of these statuses is set.
  > - EAC = max(BAC; AC), if CPI is zero. This is true at the beginning of a project task, when at least one of the key figures earned value or actual cost is zero.

- **Estimate to Complete (ETC)**
  The forecast remaining cost from a specific point in time until the project or task is completed
  ETC = EAC-AC

You can use the following characteristics for navigating to the respective fact sheet:

- Project
- Snapshot
- Baseline

See Also

Reports View
Overview of Reports in Project Management   [page 164]
Overview of Data Sources in Project Management   [page 166]

4 Project Team

4.1 Project Work View

4.1.1 Project Work Quick Guide

In the ▶ *Project Team* ▶ *Project Work* ◼ view, you can access all relevant information for projects on which you are working as a team member. This view contains two subviews: *Work Packages* and *Responsibilities*.

Business Background

Project Work

In the *Project Work* work center, you can record times, create and track your expense reports and shopping carts related to your projects.

For more information, see Project Work   [page 220].

Project 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 Numbering   [page 8].

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 and expense confirmations 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 projects.

For more information, see Project Management.

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, see Order-to-Cash (Project-Based Products and Services).

Tasks

Edit Time Sheet

1. In the taskbar, click *Common Tasks* and choose *Edit Time Sheet*.
2. Select the week for which you wish to record your working time.
3. Enter the project task.
4. Specify the type of service.
5. Enter the amount of time you spent on this project task during the week.
6. Release the times you recorded.

Your working time is now saved to the system.

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 .

Create New Expense Report

For information about this task, see here .

Add a Work Package to a Project Task

1. In the *Responsibilities* subview, select a task in the list and click Edit .
2. The project task editor opens.
3. Add work packages to the project task and specify the service, team member, and planned work for each package.
4. Click Save .

The work package has been added to your project task.

Edit a Checklist

1. In the *Responsibilities* subview, select a project task in the list and click Edit .
2. The project task editor opens. Choose Checklists .
3. Select the checklist and change the status of the first checklist items.
4. Add a note for this first checklist item.
5. Click Save .

The checklist has been edited. Note that the status of the checklist is read-only and derived of the checklist item status.

Plan Work

1. In the *Responsibilities* subview, select a project task in the list and click Edit .
2. The Project Task editor opens. Choose Work .
3. Click Add Row and select a service and a team member.

4. Enter the planned work.

5. Optional: Enter the remaining work.

> ℹ The actual work is read-only and is filled out via the time recordings.

> ℹ If you change the planned work of a work package for which time recordings already exist, the system does not recalculate the remaining work.

6. Select whether the service is billable.

7. Click Save .

As soon as the project status is started or released and the team members do their time recordings, the actual work and remaining work are updated by the system.

Edit Task Scheduling Information

1. In the *Responsibilities* subview, select a project task in the list and click Edit .

2. The Project Task editor opens. Choose Scheduling .

3. Enter the duration of the task.

4. Enter the start constraint date and select the start constraint type.

5. Enter the finish constraint date and select the finish constraint type.

6. Click Save .

You can now see the time frame allowances for the start and finish date.

Attach a Document to a Work Package

1. In the *Work Packages* subview, select a work package in the list and click Edit .

2. The work package editor opens.

3. Attach a document to the work package.

> ℹ The document is attached to the project task to which the work package belongs.

4. Click Save and Close .

Set Dependencies

1. In the *Responsibilities* subview, select a project task in the list and click Edit .

2. The Project Task editor opens. Choose Dependencies .

3. Click Add Row .

4. Choose the dependency type and the project task.

5. Optional: Enter a lag.

6. Click Save

Assign a Work Package to yourself

1. In the *Work Packages* subview select a work package.

2. Click Assign to me to assign the package to yourself.

In case the work package has already been assigned to a team member or if you are not a team member of the project to which the work package belongs, the *Assign to me* button is grayed out.

See Also

4.1.2 Business Background

4.1.2.1 Project Work

Overview

In the *Project Work* view of the *Project Team* work center, you can see all project tasks you are responsible for and work packages that are assigned to you.

In the *Work Packages* subview, you can view and access all work packages assigned to you. In addition, you can display the unassigned work packages and assign them to yourself directly. You can also find information relevant to each work package, including the service used and the amount of remaining work, as well as the project task to which the work package belongs. Moreover, you can find information on these project tasks, including the latest end date and its status. In the details area, further information is displayed for each work packaging, including planned and actual work as well as the percentage of completion. When you open a work package, you can update the remaining work in each work package, and add attachments.

In the *Responsibilities* subview you can view and access phases, tasks, and milestones for which the project manager has made you responsible. The list shows information such as the name, latest end date, status and risk of each project task. The Gantt chart provides you with an overview of all project related tasks and subtasks and allows you to select every task individually to edit task information, such as work and dependencies. In the details area, you can access information such as the duration, whether checklists or attachments are assigned to the project task, and work information. In addition, you can plan the estimated work effort for the project header or for phases and tasks, calculate time frame allowances for start and finish dates, and set dependencies between project tasks.

A project task can have several work packages, therefore, the planned, actual, remaining work and percentage of completion are a summary value.

> **i** When a task is marked as *completed*, the percentage of completion is overridden and shown as 100%, regardless of the remaining work. The *Task Completed* indicator can be deselected, if required.

You can also see the employees staffed to each project task. It is your responsibility to ensure that these project tasks are executed. For example, you can add work packages to phases and tasks, and staff team members to these work packages. It is also your responsibility to manage any checklists associated with these phases, tasks, and milestones, as created by the project manager. In order to enable processes, such as time recordings to project tasks, you must ensure that the project tasks for which you are responsible have the status *Released*. If the project status is still *In planning* you cannot release the task. The project manager must set the project status to *Started* before you can set the status of your project task(s) to *Released*.

> ⚠ If the project manager sets the status of the whole project to *Released*, **all** project tasks assigned to this project are automatically released as well. This is also the case for subtasks that are added to a released task. If you wish to release separate tasks without releasing the entire project, set the status of the project to *Started*. When adding a new task to a started project, its status is set to *In Planning*.

For more information about statuses, see Project Status and Integration   [page 8].

5 Project Management Task Types

5.1 Task - Approve Project Baseline

Overview

This task is created when a project manager submits a project baseline for approval. The project baseline must be approved by the cost center manager responsible for the cost center to which the project is assigned. The requesting unit of the project is used to identify the correct cost center. If the requesting unit is not available, the responsible unit of the project is used.

This type of task has medium priority.

Relevance

The system assigns this task to the cost center manager responsible for the cost center to which the project is assigned.

This user receives the task in the *Managing My Area* work center, *Approvals* view.

Response

To respond to this task, do the following:

1. In the *Managing My Area* work center, *Approvals* view, select the task title to view more details.
2. Review the project baseline.
3. Do one of the following:
   - To approve the project baseline, click *Approve*.
   - To reject the project baseline, click *Send Back for Revision*.

Configuration

It is possible to configure certain elements of this task type using the *Business Task Management for Project Management* fine-tuning activity. You can change, for example, the default priority of the task, and the deadline for completion of the task.

See Also

Business Task Management

5.2 Task - Approve Project Baseline (Multi-Step Approval)

Overview

If the multi-step approval process for a project baseline is scoped, then this task is created based on the settings done by the administrator.

This type of task has medium priority and the due date is one week after creation. The priority changes to very high once the due date has been exceeded.

Relevance

Depending on the settings made by the administrator the task is relevant to the following:

- **The cost center manager responsible for the project**
  When an employee creates the project baseline, the task is sent to the cost center manager for approval. If a cost center already exists for the project, then the task is sent to the requesting cost center manager, else it is sent to the responsible cost center manager.

- **The super ordinate cost center manager responsible for the project**
  When the project manager and cost center manager are the same, the task is sent to the super ordinate cost center manager. Depending on whether a requesting cost center exists for a project, the task is sent to the requesting or responsible cost center manager.

- **The reporting line manager**
  The task is sent to the reporting line unit manager of the employee who is responsible of the project.

- **Direct approvers**
  The task is sent to the employees who are set as direct approvers

If the system is unable to find a suitable manager to send the approval task to, the task is sent to all suitable managers depending on the level of approval.

The relevant people receive this task in the *Approvals* view of the *Managing My Area* work center.

For more information, see Approvals Quick Guide (in Managing My Area) and Quick Guide for Approvals (in Project Management) [page 108].

Response

To respond to this task, open the task and choose one of the following courses of action:

- To approve the project baseline and release it, click Approve .
  The system sends the Project Baseline Approved notification to the user who created the project baseline.

- If you want the user who created the project baseline to make a change to the project baseline and then resubmit it, enter a comment and click Send Back for Revision .
  The employee responsible receives the Revise Project Baseline task [page 224]and can change the project baseline and restart the approval process.

Once the project baseline is approved, or sent back for revision, the system completes the task and removes it from the worklist.

For more information, see Process An Approval Request

Configuration

The configuration for this task is predefined.

See Also

Setting Up Approvals

Business Task Management

Employee Work Distribution Quick Guide

5.3 Task - Revise Project Baseline (Multi-Step Approval)

Overview

The task is raised because an approver returns a project baseline for revision to the employee responsible.

This type of task has medium priority and the due date is a week after creation. The priority changes to very high, once the due date has been exceeded.

Relevance

The task is relevant to the employee who has the authorization for this project baseline.

The creator of the project baseline receives this task in the *Inbox* subview of the *Work* view of the *Home* work center.

For more information, see Quick Guide for Work Inbox.

Response

To respond to this task, open the task and choose one of the following actions:

- Check the comments of the approver or contact the approver directly
- Change the project baseline, if necessary and resend it
- Withdraw the project baseline request from approval

The task is completed and removed from the worklist when the project baseline is resent or canceled

Configuration

The attributes of this task type are fully predefined and cannot be configured.

5.4 Task - Revise Project Baseline (Multi-Step Approval)

Overview

The task is raised because an approver returns a project baseline for revision to the employee responsible.

This type of task has medium priority and the due date is a week after creation. The priority changes to very high, once the due date has been exceeded.

Relevance

The task is relevant to the employee who has the authorization for this project baseline.

The creator of the project baseline receives this task in the *Inbox* subview of the *Work* view of the *Home* work center.

For more information, see Quick Guide for Work Inbox.

Response

To respond to this task, open the task and choose one of the following actions:

- Check the comments of the approver or contact the approver directly
- Change the project baseline, if necessary and resend it
- Withdraw the project baseline request from approval

The task is completed and removed from the worklist when the project baseline is resent or canceled

Configuration

The attributes of this task type are fully predefined and cannot be configured.

5.5 Task - Revise Project Baseline

Overview

This task is created by the system when a cost center manager rejects a project baseline that was submitted by the project manager for approval. The project manager must revise the project baseline based on the feedback from the cost center manager and submit the new baseline version for approval.

This type of task has medium priority.

Relevance

The system automatically assigns this task to the project manager who submitted the project baseline. This user can view the task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Project Management* work center, create a new version of the project baseline and change it according to the feedback from the cost center manager.
2. Submit the revised baseline to the cost center manager for approval.
3. In the *Home* work center, *Work* view, *Inbox* subview, select the task and choose *Complete* from the *Actions* menu.

Configuration

It is possible to configure certain elements using the *Business Task Management for Project Management* fine-tuning activity. You can change, for example, the default priority of the task, and the deadline for completion of the task.

See Also

Business Task Management

5.6 Task – Approve Shopping Cart

Overview

If the total net value of the shopping cart exceeds the approval limit defined in configuration, the shopping cart contains items without a price, or any other condition defined for the approval process is met, the system creates a task.

This type of task always has medium priority. The due date is always one day after creation.

Relevance

The task is relevant for the following:

- Account assignment on cost center

- Account assignment on project

> **i** If no manager is assigned to the cost center or project, the system sends an approval task to the line manager of the requesting employee.

> **i** This default setting can be changed during fine-tuning. Instead of sending the approval task to the cost center or project manager first, the task is then directly sent to the line manager of the requesting employee.

- Account assignment on sales order or service order
  Line manager of requesting employee.

The relevant cost center manager and the line manager receive this task in the *Approvals* view of the *Managing My Area* work center. The relevant project manager and the alternative approvers receive this task in the *Approvals* view of the *Project Management* work center.

For more information, see Quick Guide for Approvals (in Managing My Area) and Quick Guide for Approvals (in Project Management) [page 108].

Response

To respond to this task, open the task and choose one of the following courses of action:

- To approve the shopping cart and release it to continue the purchasing process, click Approve .
  The system sends the Shopping Cart Approved notification to the user who created the shopping cart.

- If you are not satisfied with the shopping cart, click Reject .
  The shopping cart is rejected and the system sends the Shopping Cart Rejected notification to the user who created the shopping cart. The approver can add a note to explain the reason for rejection. If the shopping cart is rejected, the approval process cannot be restarted.

- If you want the user who created the shopping cart to make a change to the approval request and then resubmit it, enter a comment and click Send Back for Revision .
  The user receives the Revise Shopping Cart task and can change the shopping cart and restart the approval process.

For more information, see Process An Approval Request.

Once the shopping cart has been approved, rejected, or sent back for revision, the system completes the task and removes it from the worklist.

Configuration

It is possible to configure certain elements of this task using the **Business Task Management for Self-Service Procurement** fine-tuning activity.

It is possible to configure the approval limit of the total net value of the shopping cart and additional approval conditions in the **Shopping Cart Approvals** fine-tuning activity. You can also define that approval is required if the shopping cart contains at least one item without a price. For more information, see the documentation on creating and editing approval processes.

See Also

Business Task Management

Shopping Cart Processing

5.7 Task – Approve Purchase Order

Overview

If the total net value of a purchase order exceeds the approval limit defined in configuration, the system will create this task.

This type of task always has medium priority. The due date is always one day after creation.

Relevance

The task is relevant to the following:

- The manager of the operational purchasing org unit
- If the **Purchase Order Approval by Most Expensive Line Item** business option has been selected in scoping, the system will compare all line items in the purchase order and determine the cost object of the most expensive line item based on the total value of each line item. The system determines the employee responsible for the cost object of the most expensive line item and sends the purchase order for approval to this person. The cost object can be, for example, a project or cost center. If no responsible manager can be determined for this cost object, the purchasing unit manager is taken as approver.
- Any defined alternative approver for the operational purchasing org unit or cost center, or "all" org units in the context of purchasing (or "all" org units) also receive the task.
- If no approver can be defined with the procedure described above, the line manager of the employee responsible is taken as approver.

> **i** If no manager is assigned to an org unit, a manager can be assigned manually. Contact an administrator to request creation of the missing information. The assignment of managers to the operational purchasing org unit is maintained in the *Organizational Management* work center.

The relevant manager and the alternative approvers receive this task in the *Approvals* view of the *Managing My Area* work center.

For more information, see Quick Guide for Approvals (in Managing My Area) and Alternative Approver for Purchase Orders Work Category.

Response

To respond to this task, open the task and choose one of the following courses of action:

- To approve the purchase order and release it, click Approve .
- If you are not satisfied with the purchase order, click Reject .
  The purchase order is rejected and the system sends the Purchase Order Rejected notification to the employee responsible. The approver can add a note to explain the reason for rejection. If the purchase order is rejected, the approval process cannot be restarted.
- If you want the user who created the purchase order to make a change to the approval request and then resubmit it, enter a comment and click Send Back for Revision .
  The employee responsible receives the Revise Purchase Order task and can change the purchase order and restart the approval process.

Once the purchase order is approved, rejected, or sent back for revision, the system completes the task and removes it from the worklist.

For more information, see Process An Approval Request.

Configuration

It is possible to configure certain elements of this task using the **Business Task Management for Purchase Request and Order Management** fine-tuning activity.

It is possible to determine the approval limit of the total net value of this task in the **Purchase Order Approvals** fine-tuning activity. For more information, see Configuration: Purchase Order Approvals.

It is also possible to activate or deactivate the **Purchase Order Approval by Most Expensive Line Item** business option in scoping.

See Also

Business Task Management

Purchase Orders Quick Guide

Notification - Approved Purchase Order Changed

5.8 Task – Approve Goods and Services Receipt

Overview

If the over-delivery tolerance of the purchase order is exceeded by the goods and services receipt, the system creates a task to approve the goods and services receipt only for non-stock items.

This type of task always has medium priority. The due date is always one day after creation.

> **i** The system does not create a task for goods and services receipts that were created automatically based on time sheets since these recorded times have already been approved.

Relevance

The task is relevant to the employee responsible of the cost center or project of each item in the goods and services receipt, not just those that deviate from the related purchase order.

> **i** Since the system determines the employee responsible **of each item** of the goods and services receipt, it is possible that it sends this task to more than one employee responsible.

The employee responsible is one of the following:
- Cost center manager or project manager of the accounting object
- Line manager of the person who created the goods and services receipt for all other accounting types

The relevant cost center manager receives this task in the *Approvals* view of the *Managing My Area* work center.

The relevant project manager receive this task in the *Approvals* view of the *Project Management* work center.

Employees responsible also receive this task in the *Inbox* subview of the *Work* view of the *Home* work center.

For more information, see Quick Guide for Approvals (in Managing My Area), Quick Guide for Approvals (in Project Management) [page 108], and Quick Guide for Work Inbox.

Response

To respond to this task, open the task and choose one of the following courses of action:

- To approve the goods and services receipt and release it for further processing, click Approve .

> **i** A goods and services receipt can only be approved once. Since it is possible that the system sends this task to more than one employee responsible, it completes the task and removes it from the worklist as soon as one of the employees responsible has approved it.

  The system sends a Goods and Services Receipt Approved notification to the employee responsible.

- If you are not satisfied with the goods and services receipt, click Reject .
  The goods and services receipt is rejected and the system sends a Goods and Services Receipt Rejected notification to the employee responsible. You can add a note to explain the reason for rejection. If the goods and services receipt is rejected, the employee responsible cannot restart the approval process.

- If you want the employee responsible to make a change to the approval request and then resubmit it, enter a comment and click Send Back for Revision .
  The employee responsible receives the Revise Goods and Services Receipt task and can change the goods and services receipt to restart the approval process.

Once the goods and services receipt is approved, rejected, or sent back for revision, the system completes the task and removes it from the worklist.

For more information, see Process An Approval Request.

Configuration

The attributes of this task type are fully predefined and cannot be configured.

See Also

Business Task Management
Receipts and Returns Quick Guide

5.9 Notification - Project Baseline Approved

Overview

This notification is created to inform a project manager that the cost center manager has approved the project baseline that was submitted for approval.

This type of notification has medium priority and instances of this notification do not expire automatically.

Relevance

The system automatically assigns this task to the project manager who submitted the project baseline. This user can view the task in the *Home* work center, *Work* view, *Inbox* subview.

Response

This task is intended to inform you that your project baseline has been approved.

After you have viewed the notification, do the following:

1. In the *Inbox* subview, select the notification.
2. Choose *Acknowledge* from the *Actions* menu.
    The notification is removed from your inbox.

Configuration

It is possible to configure certain elements of this notification using the *Business Task Management for Project Management* fine-tuning activity.

See Also

Business Task Management

5.10 Notification - Purchase Order with Reference to Project was Created or Updated

Overview

This notification is created when a purchase order that references a project is created or updated. It is used to inform the project manager of any new or changed project-related purchases.

This type of task has medium priority and instances do not expire automatically.

Relevance

The system automatically assigns this notification to the project manager of the project that is referenced by the purchase order. The notification is shown in the header area of the project editor when the project manager views or edits the project.

The user can also view this notification in the *Home* work center, *Work* view, *Inbox* subview.

Response

This notification is intended to inform you of new or updated purchase orders that reference a project.

After you have viewed the notification, do the following:

1. In the *Inbox* subview, select the notification.
2. From the *Actions* menu, choose *Acknowledge*.
    The notification is removed from your inbox.

> **i** You can acknowledge multiple notifications simultaneously by selecting the lines in the table and choosing *Acknowledge* from the *Actions* menu.

Configuration

It is possible to configure certain elements of this notification type using the *Business Task Management for Project Management* fine-tuning activity. For example, you can deactivate this notification to stop the system from sending the notification when a purchase order that references a project is created or updated.

See Also

Business Task Management

5.11 Task - Solve Business Document Inconsistency in Invoice Request to Process Invoicing Confirmation

Overview

This task is created when the system cannot edit a customer project invoice request due to a business document inconsistency. The system has received an invoicing confirmation message requesting that a customer project invoice request used in project invoicing is updated. This is not possible because a business document involved in the process contains an error.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the user who is entered as the employee responsible for the customer project invoice request.

The user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.
2. Under *Error Messages*, you can view the error message that has triggered the task.
3. Check the business document referred to in the error message and resolve the inconsistency.
4. Do one of the following:
   - Click *Restart* to process the original message again.
   - Click *Request Reconciliation* to request that the message is resent.

> **i** If you do not respond to this task, the customer project invoice request will not be updated correctly in project management.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.12 Task - Approve Project Purchase Request

Overview

If the approval process for project purchase request is scoped, then this task is created based on the settings done by the administrator.

This type of task has high priority and the due date is two days after creation. The priority changes to very high once the due date has been exceeded.

Relevance

Depending on the settings made by the administrator the task is relevant to the following:

- **The project manager responsible for the project**
  If the employee creates the project purchase request, the task is sent to the project manager responsible for the project. If the project manager or the substitute creates the project purchase request, then no responsibility is determined.

- **The project manager responsible for the project and the cost center manager based on the value limit.**
  If the project manager or a substitute creates the project purchase request, then the approval task is sent to the cost center manager within whose approval limit, the net value of the project purchase request lies.
  If an employee raises the project purchase request, an approval task is sent to the project manager, and if its value exceeds the value limit set for the project manager, an approval task is sent to the suitable cost center manager.
  If there any substitutes for the project manager, then when an employee raises the project purchase request, the approval task is sent to the substitutes.

- **The reporting line unit manager**
  The task is sent to the reporting line unit manager of the employee who submitted the project purchase request.

- **The reporting line unit manager based on the value limit**
  The task is sent to the reporting line unit manager of the employee who submitted the project purchase request if its net value lies within the value limit set for the line unit manager. Otherwise the approval task is sent to a higher level manager within whose approval limit the value of the project purchase request lies.

- **Direct approvers**
  The task is sent to the employees set as direct approvers.

If the system is unable to find a suitable manager to send the approval task to, an unassigned approval task is created. The administrator can then manually assign the task to a suitable person.

The relevant people receive this task in the *Approvals* view of the *Managing My Area* work center

For more information, see Approvals Quick Guide (in Managing My Area) and Quick Guide for Approvals (in Project Management) [page 108].

Response

To respond to this task, open the task and choose one of the following courses of action:

- To approve the project purchase request and release it, click Approve .
  The system sends the Project Purchase Request Approved notification [page 234] to the user who created the project purchasing request.

- If you are not satisfied with the project purchase request, click Reject .
  The project purchase request is rejected and the system sends the Project Purchase Request Rejected notification [page 235] to the employee responsible. The approver can add a note to explain the reason for rejection. If the project purchase request is rejected, the approval process cannot be restarted.

- If you want the user who created the project purchase request to make a change to the project purchase request and then resubmit it, enter a comment and click Send Back for Revision .
  The employee responsible receives the Revise Project Purchase Request task [page 236] and can change the project purchase request and restart the approval process.

Once the project purchase request is approved, rejected, or sent back for revision, the system completes the task and removes it from the worklist.

For more information, see Process An Approval Request

Configuration

The configuration for this task is predefined

See Also

Setting Up Approvals

Business Task Management

Employee Work Distribution Quick Guide

5.13 Notification - Project Purchase Request Approved

Overview

This notification informs the creator of the project purchase request that it has been approved. The priority of this type of notification is medium.

The system automatically cancels the notification after 14 days.

Relevance

The notification is relevant to the creator of the project purchase request.

The creator of the project purchase request receives this notification in the *Inbox* subview of the *Work* view of the *Home* work center. For more information, see Quick Guide for Work Inbox

Response

To complete the notification and remove it from the worklist, you can acknowledge it as follows:

1. Go to the *Home* work center > *Work* view>*Inbox* subview.
2. Select the notification.
3. Click [Actions] and acknowledge the notification.

Configuration

The attributes of this task type are fully predefined and cannot be configured.

See Also

Business Task Management

Maintaining Projects — Product Procurement   [page 81]

5.14 Notification - Project Purchase Request Rejected

Overview

The notification informs the employee responsible that the approver has rejected the project purchase request.

The priority of this type of notification is medium. This notification is canceled automatically by the system after 14 days.

Relevance

The notification is relevant for the employee responsible for raising the project purchase request.

The employee responsible receives the notification in the *Inbox* subview of the *Work* view of the *Home* work center. For more information, see Quick Guide for Work Inbox.

Response

You can open the notification in the *Inbox* subview and check the comments made by the approver, or you can contact the approver directly.

To complete the notification and remove it from the worklist, you can acknowledge it as follows:

1. Go to the *Home* work center> *Work* view> *Inbox* subview
2. Select the notification.
3. Click [Actions] and acknowledge the notification

Configuration

The attributes of this notification type are fully predefined and cannot be configured.

See Also

Business Task Management

Maintaining Projects — Product Procurement [page 81]

5.15 Task - Revise Project Purchase Request

Overview

The task is raised because an approver returns a project purchase request for revision to the employee responsible.

This type of task has high priority and the due date is two days after creation. The priority changes to very high, once the due date has been exceeded.

Relevance

The task is relevant to the employee who has the authorization for this project purchase request.

The creator of the project purchase request receives this task in the *Inbox* subview of the *Work* view of the *Home* work center.

For more information, see Quick Guide for Work Inbox

Response

To respond to this task, open the task and choose one of the following actions:
*   Check the comments of the approver or contact the approver directly
*   Change the project purchase request, if necessary and resend it
*   Cancel the project purchase request to stop the purchasing process

The task is completed and removed from the worklist when the project purchase request is resent or canceled

Configuration

The attributes of this task type are fully predefined and cannot be configured.

See Also

Business Task Management

5.16 Task — Review and Release Project Invoice Request

Overview

The system creates this task after it created a project invoice request based on an invoice schedule for project-based sales order items.

This type of task always has high priority and does not expire automatically.

Relevance

Relevant users receive this task because they have access rights for the following work center views:

- The *Work* view in the *Customer Invoicing* work center.
- The relevant users receive this task in the *Inbox* subview of the *Work* view in the *Home* work center.

Response

To respond to this task, do the following:

1. **Open the task**
   In the worklist, click the task title.
   The *Project Invoice Request Overview* window opens.

2. **Review the project invoice request**
   - Click `Edit`.
     The *Project Invoice Request* window opens.
   - Click `Check` to check if the project invoice request is consistent.
     Correct any inconsistencies.
   - Review the percentage, the net value, and the assignment of time and expense items and change them, if required.

3. **Release the project invoice request**
   Choose `Release` to release the project invoice request to customer invoicing.

4. **Result**
   If you successfully released the project invoice request, the system performs the following actions:
   - The system send the project invoice request to customer invoicing.
   - The system sets the status of the task to *Completed*.

Configuration

The attributes of this task type are fully predefined and cannot be configured.

See Also

Business Task Management

Quick Guide for Work in Customer Invoicing

5.17 Task — Solve Issue When Creating Project Invoice Request

Overview

The system creates this task if it tried to create a project invoice request based on an invoice schedule for a project-based sales order item but failed.

This type of task always has high priority and does not expire automatically.

Relevance

Relevant users receive this task because they have access rights for the following work center views:

- The *Work* view in the *Customer Invoicing* work center.

- The relevant users receive this task in the *Inbox* subview of the *Work* view in the *Home* work center.

> **i** For this task type *Solve Issue When Creating Project Invoice Request* access context is enabled to restrict users to view run results of other companies. This will restrict the users to see the information pertaining to net value; invoice data etc., for customer project invoice request.
>
> - For restricted users, only those instances of this task type would be displayed which matches his access restrictions.
>
> - For unrestricted users, all instances of this task type would be displayed.

Response

To respond to this task, do the following:

1. **Open the task**
   In the worklist, click the task title.
   The *Task: Solve Issue When Creating Project Invoice Request* window opens.

2. **Check the application log**
   - Click the ID of the application log.
     The *Application Log* window opens.

   - Choose Results .
     A table displaying errors, warnings, and information messages is displayed.

   - Choose Expand All .
     The system expands the hierarchy so that you can view the messages.

3. **Resolve all errors**
   Use the information from the error messages to resolve all errors.

4. **Retry**

- Choose Close to leave the application log and get back to the task.
- In the *Task: Solve Issue When Creating Project Invoice Request* window, choose Actions ▌ and then *Retry* to restart the creation of the project invoice request.

5. **Result**
   - If you solved all errors successfully, the system performs the following actions:
     ◦ The system creates the project invoice request.
     ◦ The system sets the status of the task to *Completed*.
     ◦ The system creates a new task *Review and Release Project Invoice Request*.
   - If you could not resolve all errors, the system retries to create the project invoice request and adds the new messages to the application log under the header *Manual retry to create project invoice request failed*.
     Check the application log again and resolve the remaining errors.

Configuration

The attributes of this task type are fully predefined and cannot be configured.

See Also

Business Task Management

Quick Guide for Work in Customer Invoicing

Project Invoicing   [page 18]

5.18 Task - Solve Business Document Inconsistency in Project to Process Employee Time Confirmation

Overview

This task is created when the system cannot process an employee time confirmation related to a project task because of an inconsistency in a business document. The system has received an employee time confirmation requesting that a project is updated. This is not possible because a business document involved in the process contains an error.

This type of task always has high priority and instances do not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the employee time confirmation. This user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.

The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Check the business document referred to in the error message and resolve the inconsistency.

4. Do one of the following:
   - Click *Restart* to process the purchasing notification again and then click *Refresh* to check that the message has been processed successfully.
   - Click *Request Reconciliation* to request that the message is resent.

   The task is automatically set to completed.

---

1 If the employee time confirmation cannot be processed, the time recordings will not be visible in the project.

If you do not respond to this task, the system will also not be able to process any further employee time confirmations related to this project.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.19 Task - Solve Business Document Inconsistency in Project to Process Expense Notification

Overview

This task is created when the system cannot edit a project expense due to a business document inconsistency. The system has received an expense notification message requesting that a project expense is created or updated. This is not possible because a business document involved in the process contains an error.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the project expense notification. The user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Check the business document referred to in the error message and resolve the inconsistency.

4. Do one of the following:
   - Click *Restart* to process the original message again.
   - Click *Request Reconciliation* to request that the message is resent.

> ℹ If you do not respond to this task, the project expense contained in the project expense notification will either not be visible in project management or will not be updated correctly.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.20 Task - Solve Business Document Inconsistency in Project to Process Purchase Order Notification

Overview

This task is created when the system cannot process a purchase order notification related to a project task because of an inconsistency in a business document. The system has received a purchase order notification requesting that a project is updated. This is not possible because a business document involved in the process contains an error.

This type of task always has high priority and instances do not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the purchase order notification. This user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Check the business document referred to in the error message and resolve the inconsistency.

4. Do one of the following:

- Click *Restart* to process the original message again and then click *Refresh* to check that the message has been processed successfully.
- Click *Request Reconciliation* to request that the message is resent.

The task is automatically set to completed.

> **i** If the purchase order notification cannot be processed, the system will not be able to update the *Purchase Orders* view of the *Purchase Tracking* tab in the *Maintain Project* editor.
>
> If you do not respond to this task, the system will not be able to process any further purchase order notifications from this purchase order for this project.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.21 Task- Solve Business Document Inconsistency in Project to Process Purchasing Confirmation

Overview

This task is created when the system cannot process a purchasing confirmation related to a project task because of an inconsistency in a business document. The system has received a purchasing confirmation from a purchase request requesting that a project is updated. This is not possible because a business document involved in the process contains an error.

This type of task always has high priority and instances do not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the purchasing confirmation. The user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.
2. Under *Error Messages*, you can view the error message that has triggered the task.
3. Check the business document referred to in the error message and resolve the inconsistency.

4. Do one of the following:
   - Click *Restart* to process the purchasing confirmation again and then click *Refresh* to check that the message has been processed successfully.
   - Click *Request Reconciliation* to request that the message is resent.

   The task is automatically set to completed.

> **i** If the purchasing confirmation cannot be processed, the system will not be able to update the *Purchase Request* view of the *Purchase Tracking* tab in the *Maintain Project* editor with the purchase request ID.
>
> If you do not respond to this task, the system will also not be able to process any further purchasing confirmations related to the purchase request.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.22 Task - Solve Business Document Inconsistency in Project to Process Purchasing Notification

Overview

This task is created when the system cannot process a purchasing notification related to a project task because of an inconsistency in a business document. The system has received a purchasing notification requesting that a project is updated. This is not possible because a business document involved in the process contains an error.

This type of task always has high priority and instances do not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the purchasing notification. This user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.
2. Under *Error Messages*, you can view the error message that has triggered the task.
3. Check the business document referred to in the error message and resolve the inconsistency.

4. Do one of the following:
    - Click *Restart* to process the purchasing notification again and then click *Refresh* to check that the message has been processed successfully.
    - Click *Request Reconciliation* to request that the message is resent.

    The task is automatically set to completed.

> **1** If the purchasing notification cannot be processed, the system will not be able to update the *Purchase Requests* view of the *Purchase Tracking* tab in the *Maintain Project* editor.
>
> If you do not respond to this task, the system will also not be able to process any further purchasing notifications related to the purchase request.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.23 Task - Solve Business Document Inconsistency in Project to Process Task Assignment Notification

Overview

This task is created when the system cannot process a task assignment notification related to a project task because of an inconsistency in a business document. The system has received a task assignment notification from a request for quotation or purchasing contract requesting that a project is updated. This is not possible because a business document involved in the process contains an error.

This type of task always has high priority and instances do not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the task assignment notification. This user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Check the business document referred to in the error message and resolve the inconsistency.
4. Do one of the following:
   - Click *Restart* to process the original message again and then click *Refresh* to check if the message has been processed successfully.
   - Click *Request Reconciliation* to request that the message is resent.

   The task is automatically set to completed.

> **i** If the task assignment notification cannot be processed, the system will not be able to update the *References* view of the *Project Overview* tab in the *Maintain Project* editor.
>
> If you do not respond to this task, the system will not be able to process any further task assignment notifications related to this project.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.24 Task - Solve Business Document Inconsistency in Project-Related Sales Order

Overview

This task is created when the system cannot edit a project sales order due to an inconsistency in a business document. The system has received a message requesting that a project sales order used in project invoicing is created or updated. This is not possible because a business document involved in the process contains an error.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project referenced in the project sales order. This user can view the task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:
1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.
2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Check the business document referred to in the error message and resolve the inconsistency.
4. Do one of the following:
   * Click *Restart* to process the original message again.
   * Click *Request Reconciliation* to request that the message is resent.

> **i** If you do not respond to this task, the project sales order will either not be visible in project invoicing or will not be updated correctly.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.25 Task - Solve Configuration Inconsistency in Business Topic "Project Invoicing" to Process Invoicing Confirmation

Overview

This task is created when the system cannot edit a customer project invoice request due to an inconsistency in business configuration. The system has received an invoicing confirmation message requesting that a customer project invoice request used in project invoicing is updated. This is not possible due to a business configuration error related to the *Project Invoicing* business topic.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the user who is entered as the employee responsible for the customer project invoice request.

The user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.
2. Under *Error Messages*, you can view the error message that has triggered the task.
3. Resolve the error in business configuration.
4. Click *Restart* to process the invoicing confirmation message again.

> ⓘ If you do not respond to this task, the customer project invoice request will not be updated correctly in project management.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.26 Task - Solve Configuration Inconsistency in Business Topic "Sell Project-Based Services" to Process Project-Related Sales Order

Overview

This task is created when the system cannot edit a project sales order due to an inconsistency in business configuration. The system has received a message requesting that a project sales order used in project invoicing is created or updated. This is not possible due to a business configuration error related to the *Sell Project-Based Services* business topic.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project referenced in the project sales order. This user can view the task in the *Inbox* subview of the *Work* view in the *Home* work center.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.
2. Under *Error Messages*, you can view the error message that has triggered the task.
3. Resolve the error in business configuration.
4. Click *Restart* to process the message again.

> ⓘ If you do not respond to this task, the project sales order will either not be visible in project invoicing or will not be updated correctly.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.27 Task - Solve Configuration Inconsistency in Project to Process Employee Time Confirmation

Overview

This task is created when the system cannot process an employee time confirmation related to a project task due to an error in business configuration. The system has received an employee time confirmation requesting that a project is updated. This is not possible because of a business configuration error.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the employee time confirmation. This user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
    The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Resolve the error in business configuration.

4. Click Restart to process the task assignment notification again.
    The task is automatically set to completed.

5. Click Refresh to check that the notification has been processed successfully.

> If the employee time confirmation cannot be processed, the time recordings will not be visible in the project.
>
> If you do not respond to this task, the system will also not be able to process any further employee time confirmations related to this project.

Configuration

This task type cannot be configured.

5.28 Task - Solve Configuration Inconsistency in Project to Process Expense Notification

Overview

This task is created when the system cannot edit a project expense due to an error in business configuration. The system has received an expense notification message requesting that a project expense is created or updated. This is not possible because of a business configuration error.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the project expense notification. The user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.
2. Under *Error Messages*, you can view the error message that has triggered the task.
3. Resolve the error in business configuration.
4. Click *Restart* to process the project expense notification again.

> **i** If you do not respond to this task, the project expense contained in the project expense notification will either not be visible in project management or will not be updated correctly.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.29 Task - Solve Configuration Inconsistency in Project to Process Purchase Order Notification

Overview

This task is created when the system cannot process a purchase order notification related to a project task due to an inconsistency in business configuration. The system has received a purchase order notification related to a project task requesting that a project is updated. This is not possible because of a business configuration error.

This type of task always has high priority and instances do not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the purchase order notification. This user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Resolve the error in business configuration.

4. Click *Restart* to process the purchase order notification again.
   The task is automatically set to completed.

5. Click *Refresh* to check that the message has been processed successfully.

> **1** If the purchase order notification cannot be processed, the system will not be able to update the *Purchase Orders* view of the *Purchase Tracking* tab in the *Maintain Project* editor.
>
> If you do not respond to this task, the system will not be able to process any further purchase order notifications from this purchase order for this project.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.30 Task - Solve Configuration Inconsistency in Project to Process Purchasing Confirmation

Overview

This task is created when the system cannot process a purchasing confirmation related to a project task due to an inconsistency in business configuration. The system has received a purchasing confirmation requesting that a project is updated. This is not possible because of a business configuration error.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the purchasing confirmation. The user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Resolve the error in business configuration.

4. Click *Restart* to process the purchasing confirmation again.
   The task is automatically set to completed.

5. Click *Refresh* to check that the confirmation has been processed successfully.

> **i** If the purchasing confirmation cannot be processed, the system will not be able to update the *Purchase Request* view of the *Purchase Tracking* tab in the *Maintain Project* editor with the purchase request ID.
>
> If you do not respond to this task, the system will also not be able to process any further purchasing confirmations related to the purchase request.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.31 Task - Solve Configuration Inconsistency in Project to Process Purchasing Notification

Overview

This task is created when the system cannot process a purchasing notification related to a project task due to an error in business configuration. The system has received a purchasing notification requesting that a project is updated. This is not possible because of a business configuration error.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the purchasing notification. The user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Resolve the error in business configuration.

4. Click *Restart* to process the task assignment notification again.
   The task is automatically set to completed.

5. Click *Refresh* to check that the notification has been processed successfully.

> **i** If the purchasing notification cannot be processed, the system will not be able to update the *Purchase Requests* view of the *Purchase Tracking* tab in the *Maintain Project* editor.
>
> If you do not respond to this task, the system will also not be able to process any further purchasing notifications related to the purchase order.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.32 Task - Solve Configuration Inconsistency in Project to Process Task Assignment Notification

Overview

This task is created when the system cannot process a task assignment notification related to a project task due to an error in business configuration. The system has received a task assignment notification from a request for quotation or a purchasing contract requesting that the project is updated. This is not possible because of a business configuration error.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the task assignment notification. The user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
    The *Process Communication Error* window opens.
2. Under *Error Messages*, you can view the error message that has triggered the task.
3. Resolve the error in business configuration.
4. Click *Restart* to process the task assignment notification again.
    The task is automatically set to completed.
5. Click *Refresh* to check that the notification has been processed successfully.

> **i** If the task assignment notification cannot be processed, the system will not be able to update the
> *References* view of the *Project Overview* tab in the *Maintain Project* editor.
>
> If you do not respond to this task, the system will also not be able to process any further task assignment
> notifications related to the project.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.33 Task - Solve Lock Issue in Invoice Request to Process Invoicing Confirmation

Overview

This task is created when the system cannot edit a customer project invoice request due to a permanent locking issue. The system has received an invoicing confirmation message requesting that a customer project invoice request used in project invoicing is updated. This is not possible because the customer project invoice request is currently locked by another user or process.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the user who is entered as the employee responsible for the customer project invoice request. The user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.
2. Under *Error Messages*, you can view the error message that has triggered the task.
3. Unlock the customer project invoice request.
4. Click *Restart* to process the invoicing confirmation again.

> **i** If you do not respond to this task, the customer project invoice request will not be updated correctly in project management.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.34 Task - Solve Lock Issue in Project to Process Employee Time Confirmation

Overview

This task is created when the system cannot process an employee time confirmation related to a project task because of a permanent locking issue. This means that the project is currently being used by another user or process.

This type of task always has high priority and instances do not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the employee time confirmation. This user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task

3. Unlock the project.

4. Click *Restart* to process the employee time confirmation again.
   The task is automatically set to completed.

5. Click *Refresh* to check that the message has been processed successfully.

> ▪ If the employee time confirmation cannot be processed, the time recordings will not be visible in the project.
>
> ℹ If you do not respond to this task, the system will also not be able to process any further employee time confirmations related to this project.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.35 Task - Solve Lock Issue in Project to Process Expense Notification

Overview

This task is created when the system cannot edit a project expense due to a permanent locking issue. The system has received an expense notification message requesting that a project expense is created or updated. This is not possible because the project expense is currently locked by another user or task.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the project expense notification. This user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Unlock the project expense.

4. Click *Restart* to process the project expense notification again.

> **i** If you do not respond to this task, the project expense contained in the project expense notification will either not be visible in project management or will not be updated correctly.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.36 Task - Solve Lock Issue in Project to Process Purchase Order Notification

Overview

This task is created when the system cannot process a purchase order notification related to a project task because of a permanent locking issue. This means that the project is currently being used by another user or process.

This type of task always has high priority and instances do not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the purchase order notification. This user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
    The *Process Communication Error* window opens.
2. Under *Error Messages*, you can view the error message that has triggered the task.
3. Unlock the project.
4. Click *Restart* to process the purchase order notification again.
    The task is automatically set to completed.
5. Click *Refresh* to check that the notification has been processed successfully.

> **i** If the purchase order notification cannot be processed, the system will not be able to update the *Purchase Orders* view of the *Purchase Tracking* tab in the *Maintain Project* editor.
>
> If you do not respond to this task, the system will not be able to process any further purchase order notifications from this purchase order for this project.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.37 Task - Solve Lock Issue in Project to Process Purchasing Confirmation

Overview

This task is created when the system cannot process a purchasing confirmation related to a project task because of a permanent locking issue. The system has received a purchasing confirmation requesting that a project is updated. This is not possible because the project is currently locked by another user or process.

This type of task always has high priority and instances do not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the purchasing confirmation. The user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Unlock the project.

4. Click *Restart* to process the purchasing confirmation again.
   The task is automatically set to completed.

5. Click *Refresh* to check that the confirmation has been processed successfully.

> **i** If the purchasing confirmation cannot be processed, the system will not be able to update the *Purchase Request* view of the *Purchase Tracking* tab in the *Maintain Project* editor with the purchase request ID.
>
> If you do not respond to this task, the system will also not be able to process any further purchasing confirmations related to the purchase request.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.38 Task - Solve Lock Issue in Project to Process Purchasing Notification

Overview

This task is created when the system cannot process a purchasing notification related to a project task because of a permanent locking issue. This means that the project is currently being used by another user or process.

This type of task always has high priority and instances do not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the purchasing notification. This user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Unlock the project.

4. Click *Restart* to process the purchasing notification again.
   The task is automatically set to completed.

5. Click *Refresh* to check that the notification has been processed successfully.

> **i** If the purchasing notification cannot be processed, the system will not be able to update the *Purchase Requests* view of the *Purchase Tracking* tab in the *Maintain Project* editor.
>
> If you do not respond to this task, the system will also not be able to process any further purchasing notifications related to the purchase request.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.39 Task - Solve Lock Issue in Project to Process Task Assignment Notification

Overview

This task is created when the system cannot process a task assignment notification related to a project task because of a permanent locking issue. The system has received a task assignment notification from a request for quotation or purchasing contract requesting that a project is updated. This is not possible because the project is currently locked by another user or process.

This type of task always has high priority and instances do not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project that is referenced in the task assignment notification. This user can view this task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.

2. Under *Error Messages*, you can view the error message that has triggered the task.

3. Unlock the project.

4. Click *Restart* to process the task assignment notification again.
   The task is automatically set to completed.

5. Click *Refresh* to check that the notification has been processed successfully.

> **i** If the task assignment notification cannot be processed, the system will not be able to update the *References* view of the *Project Overview* tab in the *Maintain Project* editor.
>
> If you do not respond to this task, the system will also not be able to process any further task assignment notifications related to this project.

Configuration

This task type cannot be configured.

See Also

Business Task Management

5.40 Task - Solve Lock Issue in Project-Related Sales Order

Overview

This task is created when the system cannot edit a project sales order due to a permanent locking issue. The system has received a message requesting that a project sales order used in project invoicing is created or updated. This is not possible because the project sales order is currently locked by another user or task.

This type of task always has high priority and does not expire automatically.

Relevance

The system automatically assigns this task to the project manager of the project referenced in the project sales order. This user can view the task in the *Home* work center, *Work* view, *Inbox* subview.

Response

To respond to this task, do the following:

1. In the *Inbox* subview, click the task title.
   The *Process Communication Error* window opens.
2. Under *Error Messages*, you can view the error message that has triggered the task.
3. Unlock the project sales order.
4. Click *Restart* to process the message again.

> **i** If you do not respond to this task, the project sales order will either not be visible in project invoicing or will not be updated correctly.

Configuration

This task type cannot be configured.

See Also

Business Task Management

6 Working with SAP Project Transparency Apps for Mobile Devices

6.1 System Set up Guide for Project Transparency Apps

Overview

SAP Project Transparency applications are the next-generation mobile apps that facilitate the process of project management. These apps are not just extensions of the existing functionality in the SAP Business ByDesign system on a mobile device, but are new applications that provide quick access to all data on the projects handled in SAP Business ByDesign, and help you interact with the project team effectively.

Currently these apps are available:

- **SAP Project Cockpit app**
  This is a **project management app** for the project leader that runs on iPad® devices and within the browser. The app provides a quick way to interact with the project team and gives you access to all data on the projects handled in SAP Business ByDesign.
  The app helps the user to remain abreast on the overall status of the project, and address any potential problems and inaccuracies. This includes checking the progress and financial overview as well as setting the project status and entering comments about it.
  The app provides a mobile system-based support for decisions and facilitates the interaction with the project team at any time and everywhere.

  > **i** The mobile app is optimized for IE 11, and Chrome 46.0 and above.

- **SAP Project to Go app**
  This is a **project participation app** for the project team members that runs on iOS and android devices. The app provides a quick way to interact with the project team and gives you access to all relevant data on the projects handled in SAP Business ByDesign.
  The app helps the user to be up to date on their tasks, and provides information about the overall status of the project, and any problems and inaccuracies that arise.
  The app provides a mobile system-based support for decisions and facilitates the interaction with the project team at any time and everywhere.

Prerequisites

- You have installed SAP Business ByDesign version May 2015 or higher, and have project management in the scope in the SAP Business ByDesign solution
- The users are assigned to these views in *Project management* work center:
  - *Project Cockpit* for SAP Project Cockpit app
  - *Project to Go* for SAP Project to Go app
- SAP Project Cockpit is available for iOS and can be launched via SAP Business ByDesign work center view *Project Management* within the browser. SAP Project to Go is available for iOS and Android

Configuration and Installation Instructions

When launching the SAP Project Transparency applications from your device, you must know the system's URL and have a valid user name and password for it.

> ℹ If your password expires, you must connect to the system from a desktop computer in order to change the password.

No further configuration is required for starting the apps.

In order for the application to function correctly on your device, follow these instructions:

1. Install the SAP Project Transparency apps from the app store or play store depending upon, if your device uses an iOS or android operating system.
2. Enter the URL to your SAP Business ByDesign tenant.
3. Enter your user name and password for the SAP Business ByDesign system, and choose *Log On*.

> ℹ If this is the first time you are logging on to the system from the app, you will now be prompted to create an app password. This password should be at least 8 characters long.

You can uninstall the SAP Project Transparency applications at any time from your device, just as you would uninstall any other app.

Troubleshooting

- Logging On
  Contact your administrator.
- Slow server response
  Check if you are connected to a network.
- Getting support
  Create an incident in the component *SRD-PRO-PTA* if there are any other issues with using the apps.

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