Projects

Planon Software Suite

Version: L104

About this Document

Intended Audience

This document is intended for *Planon Software Suite* users.

Contacting us

If you have any comments or questions regarding this document, please send them to: support@planonsoftware.com.

Document Conventions

Bold
Names of menus, options, tabs, fields and buttons are displayed in bold type.

Italic text
Application names are displayed in italics.

CAPITALS
Names of keys are displayed in upper case.

Special symbols

	Text preceded by this symbol references additional information or a tip.
	Text preceded by this symbol is intended to alert users about consequences if they carry out a particular action in Planon.

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About Projects

Project Management is the discipline of planning, organizing and managing resources to bring about successful completion of specific project goals and objectives.

The following project types are supported:

- Capital projects (see Capital projects)
- Transaction plans (see Transactions)
- Spaces & moves scenario planning projects (see Spaces and Moves Scenario Planning)
- SSP projects (see Strategic Space Planning)
- Survey projects (see Condition Surveys)
- Regular projects

The term **Project** is frequently used within this documentation, instead of mentioning all the project types, to suggest that certain tasks are common to all the project types.

Projects – Concepts

This section describes the concepts available in Projects and how they interact with each other.

Answer lines

The **Answer lines** step at the **Project order details** selection level displays the answer lines of the questionnaire that is linked to a standard order.

> For more information, see Linking standard orders to a questionnaire.

Assessment values

Assessment values are used to assess the progress of an indicator in a project.

You can add assessments to a project for tracking its progress based on several indicators such as budget, planning or quality. An assessment value is associated with a color scheme to indicate the progress or status of various aspects of your project. You can define assessment values such as red for 'risk', green for 'good' and amber for 'needs attention'.

Assessment values can be defined in Supporting data . For more information, see Indicators and assessment values.

Contract - Projects

A contract is an agreement between two parties for the deliverance of goods or services. Contracts contain:

- General agreements that apply to the contract as a whole.

- Agreements on the items/services to be delivered: the property, rentable unit, space, asset to which it applies.

- Price agreements for each item/service that is delivered. These price agreements can vary in time.

  In Projects , you can link one contract to a WBS item at the Project items > WBS items selection step. These contracts are created in Contracts .

> For more information on contracts, see Contracts.

Constraint

A constraint controls the start or end date of a WBS item and the degree to which that WBS item can be rescheduled.

Every WBS item has a type of constraint applied to it. The constraint types are categorized as:

- Flexible constraints: Planon ProCenter can change the start or end date of a WBS item. This type of flexible constraint is the default constraint type that is set for all WBS items.

- Inflexible constraints: A WBS item must start or end on a certain date. These constraints are also called hard constraints.

- Semi-flexible constraints: A WBS item has a start or an end date boundary. However, Planon ProCenter has the flexibility to change the start or end date of a WBS item.

For a description of the various constraint types used in combination with the constraint start or end date in Projects , see Constraint fields

> ⚠️ A constraint can be set only on a start date or an end date for a WBS item and not on both simultaneously.

Critical path

'Critical path' can be defined as the longest estimated sequence of interdependent activities (WBS items) that must be completed on time to ensure that the project is completed on the due-date. The critical path activities are performed under the 'predecessor-successor' relationship, which means that any next activity cannot be started until its predecessor has been completed.

Each WBS item on the critical path is a critical WBS item. There can be more than one critical path in a project.

Communication logs

Communication logs are records of communication regarding an item that is added to Planon ProCenter . These records are added manually in the respective TSIs and they can include all types of communication such as emails, faxes, reports, transcriptions of phone calls and so on.

You can upload documents as reference or even include a link to a URL, which will always open in a separate browser window.

Communication logs can be added for many elements, for example orders (all order types), properties, visitors, budgets, invoices, and so on.

For communication logs that were automatically created for alerts or forms through the **Log to communication log** field, the **Action** field will be updated to reflect the source. For more information, see Communication log fields.

> ℹ️ You can create an action definition in Alerts to automatically delete communication logs based on a schedule.

Critical WBS item

A task that must be completed on schedule for the project to finish on time. If a critical task is delayed, the project completion date is also delayed. In a typical project, many tasks have some slack time and can therefore be delayed a bit without delaying other tasks or affecting the project end date.

If a WBS item cannot be delayed without affecting the project end date, it is called a critical WBS item. A WBS item is critical if it meets any one of the following conditions:

- It has no slack (or float) time.

- It has a **No later than** or **No earlier than** constraint.

A critical WBS item is identified by this symbol: 🔶

You can choose to turn on or turn off the critical path indicator by clicking the **Show critical path** / **Hide critical path** toggle button on the toolbar at **Project items**.

Dependency

WBS items are often dependent on each other. The start date of a WBS item can depend on either the start date or the end date of another WBS item. Similarly, the end date of a WBS item can depend on either the start date or the end date of another WBS item.

At the Details > Successors or Details > Predecessors selection steps, you can select one of four dependency types for each selected WBS item:

- Start-to-finish (SF)

- Finish-to-start (FS)

- Start-to-start (SS)

- Finish-to-finish (FF)

You can also specify a time interval for a dependency. This is the number of hours/days etc. between the start/finish of the current WBS item and start/finish of the preceding or succeeding WBS item (depending on the dependency type). If there is an overlap, this number can either be positive or negative.

Examples

Start-to-finish (SF): the end of activity B is connected with the start of activity A.

Finish-to-start (FS): the end of activity A is connected with the start of activity B.
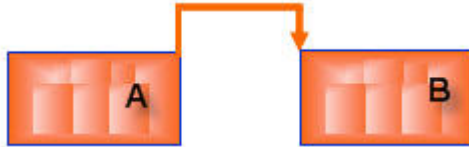
Start-to-start (SS): the start of activity A is connected to the start of activity B.
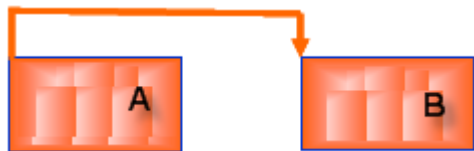
Finish-to-finish (FF): the end of activity A is connected to the end of activity B.
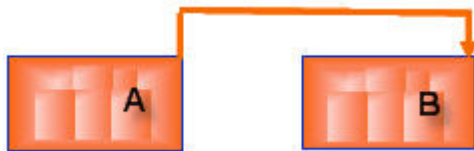
External party

An external party is a person or company that is not included in the Personnel or Addresses TSI, but that can be added to a project team. Usually, the external party is only involved for the duration of the project.

Graphical planner - Projects

The **Graphical planner** provides a graphical overview of all WBS items and their dependencies.
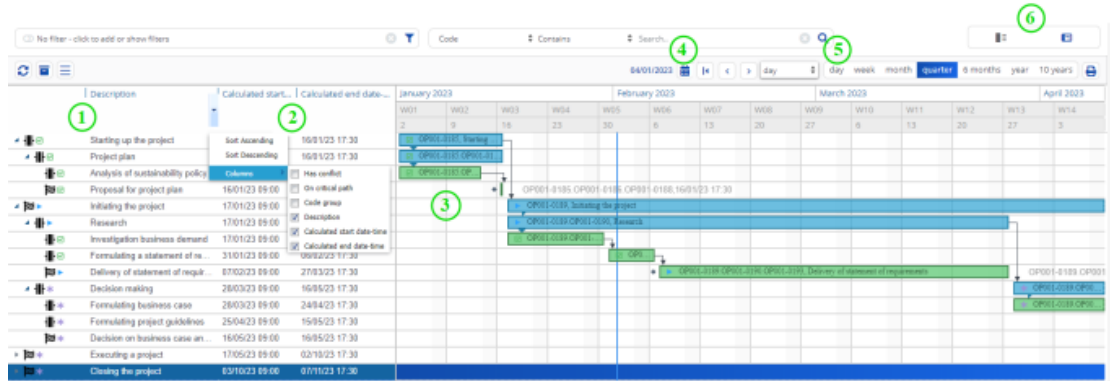
The individual components of the **Graphical planner** are explained in the table:

Component	Description
1	This section lists all WBS items and their subitems, along with their scheduled start date-times and end date-times.
2	Column headers represent relevant fields of the WBS item. With the shortcut menu, you can configure which columns are displayed on the elements panel and select sorting options.
3	This is the planboard interface. The time scale is at the top and the WBS items are on the left. The time scale that is displayed depends on the view you select (see 5).
	WBS items and their subitems are represented as horizontal bars, milestones with zero duration as diamonds and milestones with non-zero duration as diamonds on the bars. You can change the duration of a WBS item simply by moving the bar or by dragging its ends. If the WBS item has dependencies, this reschedules the entire project.
	The dependencies between WBS items are represented by arrows, which indicate the direction of the dependency. A 'Finish-to-Start' dependency is a connection from the end date of a WBS item to the start date of the next WBS item.
4	You can select a date from the date picker to view the items available on that date. By default, the WBS items are shown as of the current system date.
5	The period buttons enable you to specify the period shown in the graphical planner. You can select the following values: • **day** • **week** • **month** • **quarter** • **6 months**

Component	Description
	• **year**
	• **10 years**
	The navigation buttons **Previous** and **Next** allow you to move back and forth in accordance with the selected time unit.
6	These buttons enable you to switch between the **Reservations planboard** view and the **Data view**.

History

Planon ProCenter enables you to keep track of changes made to fields by enabling the **History** functionality. This includes the user who changed the value in a field, the old and new values of the field and the time and date at which the value was changed. Your application manager can enable an automatic **History** option for individual fields in Field definer. For more information, see Configuring the history feature.

> Any modification to the field's value will be saved automatically in a log file. The results of any field changes can be viewed on the **History** selection step of the relevant TSI.

With the appropriate authorization, you can also manually add a history of changes to the selected field, via the action panel. Any comments you want to make on changed data can be specified in the **Comment** field and subsequently saved. To enable history manually, see Adding history manually.

Following GDPR legislation, any personal data stored even in history records must be anonymized. To anonymize history in Planon ProCenter , see Anonymizing history.

Indicator

An indicator is used for tracking the progress of a project on various aspects, such as budget, time, quality, customer satisfaction, and so on.

You can add multiple indicators to a project and track their progress by using assessment values.

Indicators can be defined in Supporting data . For more information, see Indicators and assessment values.

Milestone

A milestone is a reference point to mark major events in a project and is used to monitor a project's progress.

It is possible to mark any WBS item with any duration as a milestone. You can set different milestones at different phases of a project to observe as the project enters or completes these phases.

At the **Project items** selection level, use the **Milestone?** field to indicate if a WBS item is a milestone. A **WBS item** is considered as a **Milestone** if its **Effort** is set to zero hours.

Predecessor

A WBS item that precedes another WBS item.

In Projects , add predecessors at the Details > Predecessors selection step.

Project

A collaborative activity that is carefully planned to achieve a particular goal.

The following project types are supported:

- Capital projects (see Capital projects)
- Transaction plans (see Transactions)
- Spaces & moves scenario planning projects (see Spaces and Moves Scenario Planning)
- SSP projects (see Strategic Space Planning)
- Survey projects (see Condition Surveys)
- Regular projects

The term 'Project' is used instead of mentioning all the project types, to suggest that certain tasks are common to all the project types.

Project calendar

A project calendar specifies the working and non-working days and times for activities. Project calendars play an important role in planning tasks for the coming month, quarter, and year.

You can specify which project calendar will be used for your project. All the WBS items of a project will be planned only during the working hours specified in this calendar. Dependency time intervals will also take the working hours into account.

The effort required for a WBS item is also specified within these working hours.

- An effort of 1 day: the time between the general start time and general end time.
- An effort of 1 week: the general working days defined in the calendar, including the general deviating hours.

Example

The general working hours for all employees in an organization is 8 hours per day (09:00 to 17:00) and 5 days per week (Monday to Friday). The specified deviating working hours are every Friday; the office is open for 4 hours in the morning (09:00 to 13:00).

- If the **Effort** for a WBS item is estimated as 1 week, the WBS item will end after 36 hours, based on the general working hours and deviating working hours specified in the project calendar.

- If the **Effort** for a WBS items is estimated as 5 days and starts at 09:00 on Monday, it will be considered as 5 times the general hours, so 40 hours. The end date and time for the item is 13:00 on the subsequent Monday (assumed that the calendar does not have a holiday in that specific week).

> ℹ️ For more information on configuring calendars and specifying deviating working hours, see Calendars.

Project classification

Classifications can be used to group projects. Project classifications are added and maintained in Supporting data . By setting up a classification structure you can classify and group your projects. Classifications can be linked to a project via the Project classification field.

You can filter projects by project classification or by Project manager.

For more information on adding and maintaining project classifications, see Project classifications.

Project manager

A project manager is responsible for the execution of a project from start to finish.

You can filter projects by project manager or by project classification. Use the **Filters > Project managers** selection step to filter out the projects of a specific project manager.

> ℹ️ The available project managers on this selection step are the persons registered in the Personnel TSI.

Project order

An order (request, work order, reservation etc.) linked to a WBS item.

In Projects , you can link orders to a WBS item at Details > Project orders. The orders functionality in the Projects TSI is exactly the same as that in Work Orders .

Project team

A group of people assigned the task of implementing a project.

For more information, see Adding a project team

Project team member

An individual, company or external party nominated to join the project team in order to fulfill a particular role in the team.

These team members may be external contacts from Addresses (company names and addresses), internal people from Personnel , or external parties that are not registered in either TSI, but who also have a role to fulfill in the project team.

Team members have a mandatory start date and a non-mandatory end date. Additionally, a reference date applies to team members, which means you can filter out team members whose start and end dates are covered by a particular reference date. In other words: team member information that is linked to a specific period in time can be retrieved by selecting a reference date from that period.

Project types

The following project types are supported:

- **Regular projects**

    A type of project created to manage common project activities. It is a non-specific project type that can be implemented by one or more project teams. A regular project can consist of more than one sub project of different project types.

    A regular project can be linked to a property, but this is not mandatory. Examples of regular project goals are the creation of a new store, renovation of a building etc.

- **Capital projects**

    A capital project is created to manage capital income or expenditure of a project. A capital project enables you to have absolute control over the costs/ budgets and also have strict status transitions. Capital projects can be added and managed in both the Budgets and Projects TSIs.

    For more information, see Capital projects

- **Survey projects**

    A project which is created to manage various condition surveys of properties (building), building elements and assets. Survey projects can be added and managed in **Condition Surveys** and the common tasks in Projects . You can also add history and communication logs to a survey project.

For more information, see Condition Surveys

- **Transaction plans**

  A project created to manage real estate transactions. The plan is initiated by either a buyer or a seller, and it includes amongst other things - listing properties, approving a loan and finally settling the transaction. You can add and manage transaction plans in Transactions and the common tasks in Projects . You can also add history and communication logs to a transaction plan. For more information, see Transactions.

- **Spaces & moves scenario planning projects**

  For more information, see Spaces and Moves Scenario Planning.

- **SSP projects**

  For more information, see Strategic Space Planning.

Role

The capacities and responsibilities of a team member. Project roles can include project manager, architect, legal adviser etc.

Role player

An 'actor' (person, contact, external party) with a specific role to play in a team, for example a project management team or a transaction management team. In Projects a role player is a project team member.

If you are working with PMFS apps such as PMFS Live app or AppSuite, or with Resource planner, you can also include role players as team members in maintenance teams. For more information on maintenance team configuration, see Configuring teams.

Successor

A WBS item that follows another WBS item.

You can add successors at the Details > Successors selection step.

Summary WBS item

A summary WBS item is a main WBS item that contains one or more subitems. The summary WBS item together with its WBS subitems can be regarded as a single entity. Unlike WBS items, a summary WBS item is not a task. Its main function is to specify the time span in which all of its subitems must be completed. The moment you add a WBS subitem to a main WBS item, the main WBS item becomes a summary WBS item.

Summary WBS items can have dependencies on other WBS items and have a limited set of constraints. 'Start no earlier than' and 'finish no later than' are the only two constraints that can be applied to a summary WBS item.

The time span of the summary WBS item is determined by the earliest start date and the latest end date of its subitems. If the earliest start date or the latest end date of one of the WBS subitems changes, the start or end date of the summary WBS item is modified accordingly.

Example:

In this example, there are two WBS items, with a two-day dependency between them. Main WBS item 2 is the summary of subitems 2.1, 2.2 and 2.3. The duration of WBS item 2 is determined by the total time span of its subitems.
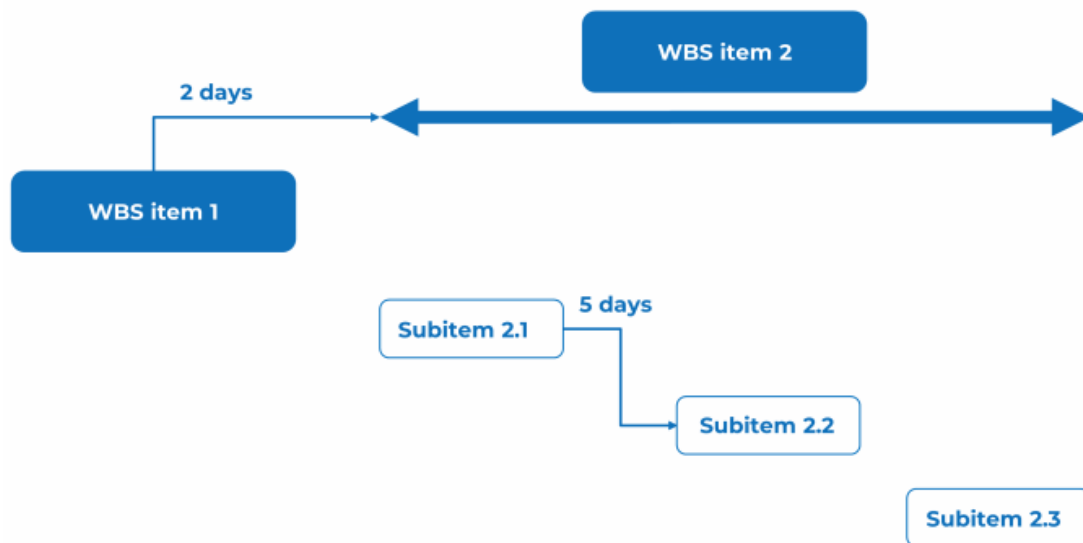
Swapping

Using this feature you can change the parent level of projects and WBS items. As the hierarchical level depth of a project is only two, it is not possible to convert a main project having a sub project under another main project. However, this does not apply to a WBS item. You can create any levels of sub WBS items.

If you swap a sub project with an empty main project (destination project), the sub project becomes a main project.

Work Breakdown Structure (WBS)

A structuring mechanism to configure project tasks in a logical sequence, which helps to execute a project in an efficient way. In Planon ProCenter the work breakdown structure is hierarchical and can have up to 10 levels.

You can add a work breakdown structure at the **Project items** selection level.

WBS item

An item of work (task, activity, phase) that is a unique part of a project's work breakdown structure (WBS). All WBS items together constitute 100% of a project's work.

All work associated with a project can be broken down both hierarchically and functionally at the **WBS items** selection step. It is possible to view, extend, shorten and move all the WBS items graphically in the graphical planner.

WBS items can be archived and dearchived. When (de)archiving a WBS item, Planon will also automatically (de)archive all related subitems.

> **i** Since WBS items are user-defined business objects, authorized users are able to define their own types of WBS items in Field definer .

WBS item status

The status of a WBS item indicates the extent to which a task has progressed in the project. WBS items can have the following statuses: **In preparation**, **In progress** and **Completed**.

When the status changes to **In progress** or **Completed**, Planon performs a dependency check. See the following table for more information.

Status change	Dependency check
In preparation > In progress or Completed	If a WBS item has predecessors with an FS dependency and a time interval not less than 0, the status should be **Completed**. Otherwise, Planon displays an error message.
	If a WBS item has predecessors with an FS dependency and a time interval less than 0, the status should be **Completed**. Otherwise, Planon displays a warning message.
In preparation > In progress or Completed	If a WBS item has predecessors with an SS dependency and a time interval less than 0, the status should be **In progress** or **Completed**. Otherwise, Planon displays a warning message.
	If a WBS item has predecessors with an SS dependency and a time interval not less than 0, the status should be **In progress** or **Completed**. Otherwise, Planon displays an error message.
In progress > Completed	If a WBS item has predecessors with an FF dependency and a time interval less than 0, the status should be **Completed**. Otherwise, Planon displays a warning message.
	If a WBS item has predecessors with an FF dependency and a time interval not less than 0, the status should be **Completed**. Otherwise, Planon displays an error message.

Status change	Dependency check
In progress > In progress or Completed	If a WBS item has predecessors with an SF dependency and a time interval less than 0, the status should be **In progress** or **Completed**. Otherwise, Planon displays a warning message. If a WBS item has predecessors with an SF dependency and a time interval not less than 0, the status should be **In progress** or **Completed**. Otherwise, Planon displays an error message.

Working with Projects

This section describes the various functions available.

> ℹ You can use Planon Enterprise Talk to import project-related data. For a successful import, make sure that project codes are unique and that WBS items are unique within a project. Dependencies and WBS activities cannot be imported via one single Enterprise Talk import script. In this case, you should use separate import scripts. For more information on importing data with Planon Enterprise Talk, see Enterprise Talk.

Adding projects

In Projects , you can add and manage various project types.

Procedure

1. Go to Projects.
2. On the action panel, click **Add** and select the relevant project type.
3. In the data panel, complete the relevant fields. For a description of these fields, see Project fields.
4. Click Save.

> ℹ The project calendar defines the working hours for a project. All the WBS items will be planned based on the working hours defined in this calendar including the time intervals in dependencies that also consider the project calendar working hours.

Swapping a project or a subproject

You can swap a project or a subproject with another project.

Procedure

1. Go to Projects.
2. In the elements list, select the main project or subproject you want to swap with another project.
3. On the Projects action panel, click Swap project.

   The **Enter values** dialog box appears.

4. In the Parent level field, select the main project you want to swap with the project or subproject selected in step 1 and click OK.

> **i** If you select a subproject in the elements list and you do not specify a value in the **Parent level** field, the subproject becomes a main project.

Adding a WBS item

You can break down the selected project into mutually dependent items of work (WBS items).

Procedure

1. Go to Project items > WBS items
2. On the action panel, click Add.
3. In the data panel, complete the relevant fields.

   For a description of these fields, see WBS item fields.

4. Click Save.
   - By default, the effort of a WBS item is one working day.
   - When a WBS item is registered for a project, the project calendar is taken into account to determine the start date-time of the WBS item. If no project calendar is defined, Planon will start the WBS item at the beginning of the day, which is 00:00 hours. When starting a (sub)project, if the project calendar differs from the property calendar, Planon will prompt you to decide whether the property calendar should be copied to this project.

Swapping a WBS item or a sub WBS item

You change the parent level of a WBS item or a sub WBS item by swapping it with another WBS item or a sub WBS item.

Procedure

1. Go to Project items > WBS items.
2. In the elements list, select a WBS item or sub WBS item for which you want to change the parent level.
3. On the action panel, click Swap WBS item. The Enter values dialog box appears.
4. In the Parent level field, select a WBS item and click OK.

Adding a project team

You can create a team responsible for the project's completion.

Procedure

1. Go to Project items > Teams.
2. On the Project teams action panel, click Add.
3. In the data panel, complete the relevant fields.

   For a description of these fields, refer to Project team fields
4. Click Save.

Adding project assessments

You can add assessments to a project for tracking its progress based on several indicators such as budget, planning or quality.

Procedure

1. Go to Project items > Project assessments.
2. On the action panel, click Add.
3. In the data panel, complete the relevant fields.

   For a description of these fields, see Project assessment fields.
4. Click Save.

ℹ️ If you hover the mouse over the color, the name of the color will appear.

Adding communication logs

You can add memos of relevant communication on the selected project or selected WBS item, such as emails, telephone calls, reports, etc.

Procedure

1. Go to:

1. Project items > Communications — projects to add communication logs to projects.
2. Details > Communications - WBS items to add communication logs to WBS items.

2. On the Communication logs action panel, click Add.

3. In the data panel, complete the relevant fields.

4. Click Save.

> ℹ For more information on communication logs, see Communication logs.

Adding work breakdown dependencies

You can specify the mutual dependencies between WBS items, by indicating which WBS item precedes or succeeds the selected WBS item.

> ℹ A WBS item cannot be dependent on any of its WBS subitems, nor can any of the WBS subitems be dependent on the summary WBS item. Within a series of dependencies between WBS (sub) items, a successor cannot simultaneously be a predecessor.

Procedure

1. Go to Project items > WBS items.
2. Select the WBS item to which you want to add a dependency.
3. Go to Details > Predecessors - Successors.
4. Add a preceding or succeeding WBS item.
5. On the WBS dependencies action panel, click Add.
6. In the data panel, complete the relevant fields.

   For a description of these fields, see Predecessor fields.

7. Click Save.

Adding project team members

You can add team members to a project team who are responsible for the project's completion.

Procedure

1. Go to Project items > Project teams.
2. Select the team you want to add members to.
3. Go to Details.
4. On the action panel, click Add Role players - contacts, Add Role players - personnel or Add Role players - external parties.

> ℹ️ If you selected several projects or WBS items, a dialog box will appear in which you can select the relevant project team.

5. In the data panel, complete the relevant fields.

   For a description of these fields, see Project team member fields.

6. Click Save.

> ℹ️ The selected reference date determines if a team member is displayed in the elements list. The list will only display team members that are valid on the reference date: members whose start date is earlier than or identical to the reference date and whose end date is later than or identical to the reference date.

Adding project orders

The Projects TSI allows you to manage project related orders. You can add one or more orders to a WBS item.

The order functionality in Projects is identical to that in Work Orders . If you have the required authorization, orders of all available order types can be added, updated and deleted at Details > Project orders. Orders added in Projects will also be displayed in Work Orders .

> ℹ️ To get a complete overview of all related orders, you can use the toggle button Show related orders. If this button is activated, not only the orders with a link to a WBS item are displayed, but also the related orders without a link to a WBS item.

For more information on working with orders, see Work orders.

Adding summary WBS items

You can create a summary WBS item by adding one or more subitems to a main WBS item.

Procedure

1. Go to Project items.
2. Select the WBS item to which you want to add a subitem.
3. On the action panel, click **Add sub**. You can add an activity or a milestone.
4. In the data panel, complete the relevant fields. For a description of these fields, see WBS item fields.
5. Specify the mutual dependencies between the WBS items. For more information, see Adding work breakdown dependencies.

> ℹ️ It is not possible to create a dependency between a main WBS item and one of its subitems at the lower levels. There can only be dependencies between WBS items that have no hierarchical relationship. It is not possible to create a dependency on a summary WBS item's end date.

Deep copying a project

You can make a comprehensive duplicate of an existing project using the **Deep copy** action. This way you can easily re-use the project along with all associated items to create a new project.

When deep copying, associated items can optionally be included or excluded, such as:

- Subprojects
- Project items
- Project assessments

Additionally for capital projects:

- Budget categories (only available when copying main level capital projects)
- Budgets

With the required authorization, you can deep copy a project, using the following procedure.

Procedure

1. Go to Projects > Projects and select the project you want to deep copy.
2. On the action panel, click Deep copy.

   The Copying dialog box opens.

3. Select the items that you want to include in the new project.
4. Click OK to confirm.

   A comprehensive copy is made of the project.

Using a project copy as project template

You can use a copy of an entire project including all subprojects, WBS items and dependencies as a project template. Copying a project saves adding a completely new project and thus prevents tedious repetitive data entry.

Procedure

1. At the Projects selection level, select the project you want to use as project template.
2. On the action panel, click Copy.

The project, including its subprojects, WBS items and dependencies is copied. The project template can be reused to quickly add complete projects.

> ℹ️ All dependencies between WBS items are included in the copied project. Any predecessors and successors will now refer to the copied WBS items.

> ⚠️ If the project to be copied is a subproject, its copy will be added to the corresponding main project.

Moving projects

You can move an entire project forward or backward in time, including all the WBS items and the constraint dates.

If the project's planned start date is changed, then all the planned start dates and planned end dates of the corresponding WBS items are moved forward or backward by taking the difference in working hours into account.

Also, all the constraint dates are moved taking the working hours into account.

Procedure

1. At the Projects selection level, select one of the available projects.
2. On the action panel, click Move project.

The Enter values dialog box appears.

3. In the New planned start date field, select the project's new start date.
4. In the Move sub projects field, select Yes or No.

The project including its sub projects, WBS items and dependencies (if applicable), is moved.

The intended start date of a project is 1st January 2023. However, this project is re-scheduled to start on 1st April 2023. When you enter the new start date and save it, the start and end dates of the corresponding WBS items will be moved forward by taking the difference in working hours into account.

Calculating slack time

Slack time is the total time a task can be delayed without causing additional delays and without affecting the planned end date of the project.

A project starts from 1 January with the following WBS items:

- WBS item 1 with a 10-day effort
- WBS item 2 with a 10-day effort
- WBS item 3 with a one-day effort

WBS item 2 has a dependency on WBS item 1. WBS item 1 must be completed before starting WBS item2.

The planned dates for these items are:

- WBS item 1: starts January 1, ends January 10
- WBS item 2: starts January 11, ends January 20
- WBS item 3: starts January 1, ends January 1

If WBS item 1 is delayed, the effort takes 11 days and the end date of WBS item 1 will be moved to January 11. As a result, WBS item 2 is also delayed. This also affects the end date of the project. The project is delayed and ends on January 21.

This means that WBS item 1 and WBS item 2 are both on the critical path: if one of them is delayed the project will also be delayed.

WBS item 3 has 20 days slack time, because it has no constraints or dependencies. It can be delayed for 20 days without influencing the end date of the project.

WBS items with a 'Must Start On' constraint are always part of the critical path too, even if they do not influence the end date. This is because items with a 'Must Start On' constraint have a very strict deadline (they MUST be executed at that time), so they must always have the attention of the person planning the project.

Rescheduling WBS items with dependencies

If you change the planned start date or end date of a WBS item with a dependency, the start and end dates of successor WBS items will also change or dependencies will be removed.

> ⚠️ If the **Planned start date-time** of a WBS item is changed, the successor in the dependency is rescheduled in all 'start-to-finish' and 'start-to-start' dependencies in which the changed WBS item is the predecessor. Similarly, if the **Planned end date-time** is changed, then the successor in the dependency is rescheduled in all 'finish-to-start' and 'finish-to-finish' dependencies in which the changed WBS item is the predecessor.

Example 1:

WBS item 1 lasts two days longer than anticipated. Consequently, both WBS item 2 and WBS item 3 start two days later.

Example 2:

WBS item 1 is finished two days earlier. There is a five-day 'finish-to-start' (FS) dependency with WBS item 2 and a three-day FS dependency between WBS items 2 and 3. Due to the early completion of WBS item 1, both WBS item 2 and WBS item 3 start two days earlier.

Example 3:

WBS item 3 was planned on 01/13 but now gets a constraint start date (01/11). The planned start date changes from 01/13 to 01/11 and the end date from 01/15 to 01/13. This creates a planning conflict of the 'finish-to-start' dependency with predecessor WBS

item 2. The FS dependency between WBS item 1 and WBS item 2 does not change. WBS item 4 is rescheduled, it starts two days earlier.

Note the following:

- If the planned start date time of a WBS item is changed, this change will be displayed in the **Start date-time** field of every linked order.

- If a main order is linked to a WBS item, the suborders that are not linked to a WBS item are rescheduled together with the main order. The suborders that are directly linked to a WBS item are rescheduled via the WBS item and not via the main order.

- The orders with the status **Planned**, **Completed** or **Closed** will not be rescheduled, but the WBS item to which they are linked will be rescheduled.

> Time zones are *not* taken into account in project planning when calculating planned date-times. Example: WBS item 1 is linked to a property in the United Kingdom (UK) and WBS item 2 is linked to a property in the Netherlands. WBS item 2 can start when WBS item 1 has been completed. The planned start date-time of WBS item 2 becomes the planned end date-time of WBS item 1. If time zones were taken into account, the planned start date-time of WBS item 2 would be one hour later because the time zone of the Netherlands is GMT + 1.

Rescheduling summary WBS items with dependencies

You can change the start date or end date of a summary WBS item and its subitems, while taking into account any dependencies that may exist between WBS subitems or between the summary WBS item and other (summary) WBS items.

Example

- There is a two day finish-to-start (FS) dependency between WBS item 1 and WBS item 2. WBS item 1 lasts two days longer than anticipated. Because WBS item 2 is a summary WBS item, WBS subitems with the same planned start date are also postponed. Due to the FS dependency between WBS item 2.1 and WBS item 2.2, WBS item 2.2 is also postponed. WBS item 2.3 has no dependencies and is therefore not changed. There was originally a margin of two days between 2.2 and 2.3, so the end date of the summary does not have to change.

- WBS item 2.1 needs to start two days earlier than planned, 01/03 instead of 01/06. To achieve this, a constraint start date of 01/03 is set on WBS item 2.1, the first WBS item of the summary. Because there is a dependency between summary WBS item 1 and WBS item 2, in which WBS item 2 is the successor, this dependency now has a conflict that is flagged.

Moving a project item in the graphical planner

Project items can be moved in the graphical planner. When you move a project item in the graphical planner, the **No earlier than** on the constraint start date-time is applied and the constraint start time is always on whole hours (for example 9:00 AM).

Procedure

1. Go to Project items > Project items.
2. Select the Graphical planner tab.
3. Select a project item.
4. On the graphical planner, hover on the project item for the move cursor ✛ .

Move the project item to the left to schedule it at an earlier time, or to the right, to postpone it. This results in a constraint start date-time No earlier than being set on the project item. If the project item has a dependency that prevents the project item to be planned to start on the new start date, a warning message is displayed to remove the dependencies or to cancel the move.

Refer to the following example to familiarize with moving a project item in the graphical planner.

Example:

A project start date is set as 01-01-2016. The project item (**Phase I**) for this project is scheduled to start on 01-01-2016. According to the project calendar, 01-01-2016 is a non-working day. The **Effort** of **Phase I** is defined as 3 days.

It is evident that **Phase I** has started on 01-04-2016 since 01-01-2016 is set as a non-working day in the project calendar and the weekend is defined as non-working days.

Now, **Phase I** is moved to 01-05-2016 by selecting it and moving it to the right.

ℹ Project items will always be moved in the graphical planner to the nearest full hour. The **drag&drop** units are ignored when moving a project item because a constraint can be set on time. You will also find a tooltip displaying information of a new start date-time and a new end date-time of the project item, based on the specified effort, as you move the cursor in the graphical planner.

# Working with a WBS item on the graphical planner

You can extend or shorten the effort of a WBS item on the graphical planner.

On the toolbar to the left of the graphical planner, set the drag & drop period by a measure of hours, days, weeks for extending or shortening a WBS item. This will override the units specified for **Effort**.

When a WBS item is extended or shortened on the graphical planner, the **Effort** is modified accordingly.

In Planon ProCenter , you can only extend or shorten a WBS item but not a summary WBS item.

Procedure

1. Go to Project items > WBS items.
2. Select the Graphical planner tab.
3. Select a WBS item.
4. On the graphical planner, hover on the WBS for the extend cursor ↔.

Drag the either ends of the WBS item to extend or shorten the effort. Based on the drag&drop unit specified on the toolbar, the appropriate changes are applied to the effort.

Maintaining history

To keep track of changes made to a project or a WBS item. This includes the user who changed the value in a field, the old and new values of the field and the time and date at which the value was changed. You can select which data fields of a project or WBS item you want to keep a history on.

In **FieldDefiner**, you can enable an automatic **History** option for individual fields belonging to projects or WBS items. Once this option is enabled for a field, changes to that field's value are saved automatically. These changes can then be viewed on the **History** selection step.

> **i** For details on changing field attributes, refer to *FieldDefiner*.

The Project items > History selection step displays a project's history; the Details > History selection step displays a WBS item's history. For a description of these fields, refer to Maintaining history fields.

Projects – Field Descriptions

Constraint fields

Constraint Category	Constraint type	Description
Flexible	None	This constraint type indicates that a WBS item can start as soon as possible. This is a default constraint type applied to all new WBS items when they are scheduled from the project start date.
Semi-flexible	No earlier than	When this constraint type is set, the WBS item can start or finish on or after the specified constraint date. This is a default constraint type if a constraint start or end date-time is entered.
	No later than	This constraint type indicates that a WBS item can start or finish on or before the specified constraint date.
Inflexible	On (No later than, No earlier than)	This constraint type indicates that a WBS item must start or finish on the specified constraint date.

Project fields

Field	Description
Actual end date	Use the date picker in this field to enter the project's actual end date.
Actual start date	Use the date picker in this field to enter the project's actual start date.
Assessment overview	Displays the indicator code, recent assessment value, and the recent comment for the selected project.
Budget type	Select an appropriate budget type from the list.

Field	Description
	• Select **Capital expenditure**, if the budget type of your project is CapEx.
	• Select **Operational expenditure**, if the budget type of your project is OpEx.
Calendar	A calendar that will be used to schedule all WBS items in the project. If this field is not filled, by default, a 24/7 calendar is used. Click on the reference icon to select a relevant calendar from the list. For more information on **Configuring a calendar structure**, refer to the **System Settings** part of the Planon ProCenter documentation.
Code	Enter a code for the project. This field is mandatory.
Costs excl. VAT	Select **No,** if you want to calculate budgets based on costs including VAT and **Yes** if you want to exclude VAT.

> The Costs excl. VAT setting is by default taken from the **General** settings in Planon ProCenter .

Field	Description
Description	Enter a name for the project.
Has conflict	Displays whether the project contains WBS items with a planning conflict. The default value of this field is **F** (false). If any of the WBS items of the project has a planning conflict, the value of this field automatically changes to **T** (true).
Planned end date	The end date of the project. If the project has WBS items and a project planned start date, this end date will be calculated by Planon ProCenter and is a read only field.
Planned start date	Use the date picker in this field to enter a start date for the project. If no start date has been filled, the project cannot be calculated.
Project classification	Select a project classification from the list. Classifications can be used to group projects. Project classifications are added and maintained in Supporting data . See Project classifications.
Property	If relevant, enter a property associated with the project.

Field	Description
Responsible manager	If applicable, select a person from the pick list who will be responsible for managing the project.
User-defined status	Displays the system status of the project.

WBS item fields

Field	Description
Code	Enter a code for the (sub-) WBS item. This field is mandatory.
Description	Enter a name for the WBS item.
Code group	Displays the generated code of a WBS item.
Has conflict	Displays whether the WBS item has a planning conflict. The default value of this field is **F** (false). If the WBS item has a planning conflict because the constraint of the WBS item conflicts with one or more dependencies, the value of this field automatically changes to **T** (true).
Project	Displays the name and code of the linked project.
Property	If relevant, select a property associated with the WBS item.
Contract	If relevant, select a contract associated with the WBS item.
System status	Displays the system status of the WBS item.
Priority	Specify the WBS item's priority by entering a number between 1-1000.
Milestone (Y/N)	Select either **Yes** or **No**. Using this option if you want you can view the WBS item as a milestone.
Percentage completed	Enter the percentage of the WBS item that has been completed so far.
Constraint start date-time	Use the date picker to enter the start date and time for the WBS item if you want to set a constraint on it. If a project calendar is defined in the system settings, and the time is outside working hours, the constraint start time is automatically adjusted to

Field	Description
	the nearest start time of the working hours that are defined in the project calendar for the selected date.
Constraint end date-time	Use the date picker to enter the end date and time for the WBS item if you want to set a constraint on it. If a project calendar is defined in the system settings, and the time is outside working hours, the constraint end time is automatically adjusted to the nearest end time of the working hours that are defined in the project calendar for the selected date.
Constraint type	Click on the drop-down list to select a constraint type for the constraint start date time or constraint end date time.
Effort	Use the period picker in this field to enter the WBS item's effort estimate. The effort is always expressed in either minutes, hours, days, weeks or months - based on the working and non-working days and times defined in the project calendar. Note that project planning always takes into account a fixed number of 20 working days for one month's effort, regardless of the number of days in a month.
	If the effort has been specified for a WBS item, the planned end date-time will be the sum of the **Planned start date-time** + **Effort**, considering the project calendar working hours.
	Note: the date-time is rounded up or rounded down to the nearest minute.
Calculated start date-time	The calculated start date-time of the WBS item is based on the effort, constraints, dependencies and the project calendar.
Calculated end date-time	The calculated end date of the WBS item is based on the effort, constraints, dependencies and the project calendar.
Actual start date-time	Use the date-time picker in this field to enter the WBS item's actual start date-time.
Actual end date-time	Use the date-time picker in this field to enter the WBS item's actual end date-time.
Team member responsible	Enter a project team member who is responsible for the completion of the WBS item.
External party involved	If relevant, select an external contact associated with the WBS item.

Field	Description
Forecasted costs	At the start of the project you can enter the WBS item costs that you expect to incur at the end of the project. Forecasted costs can be modified during the project.
Forecasted labor hours	At the start of the project you can enter the WBS item labor hours that you expect to have used at the end of the project. Forecasted labor hours can be adjusted during the project.
Estimated costs	Enter the WBS item costs that you've estimated at the start of the project.
Estimated labor hours	Enter the number of WBS item labor hours that you've estimated at the start of the project.
Actual costs	Enter the current WBS item costs. These are the costs that have so far been incurred at the current stage of the project.
Actual labor hours	Enter the current WBS item labor hours. These are labor hours that have so far been used at the current stage of the project.
Predecessors	A read-only tabular field that indicates any WBS items that are added as predecessors to the selected WBS item at the Details > Predecessors selection step. Click the arrow button next to the name of any column in the table to toggle between ascending and descending views of the column.
Successors	A read-only tabular field that indicates any WBS items that are added as successors to the selected WBS item at the Details > Successors selection step. Click the arrow button next to the name of any column in the table to toggle between ascending and descending views of the column.
Color	Specify a color to the WBS item.

Project team fields

Field	Description
Code	In this mandatory field, enter a code for the team.
Description	Enter a name for the team.

Field	Description
Project	Displays the name and code of the corresponding project.

Project assessment fields

Field	Description
Project	Select a project for which you want to add an assessment. If you want the field to be populated automatically with the project you selected at the **Projects** level, set the option **Fill in the drill-down context** to **Yes** in Layouts for the **Project assessments** layout.
Indicator	Select an indicator for the project. Indicators can be defined in Supporting data > **Indicators**. You can add only one indicator per aspect of a project. For example, you cannot add two indicators for planning to the same project. For more information, see Supporting data > *Indicators and assessment values.*
Assessment value	Select an assessment value for the indicator you selected. Assessment values can be defined in Supporting data > **Assessment values**. For more information, see Supporting data > *Indicators and assessment values.*
Changed on	Displays date and time of adding or updating the project assessment.
Comment	Enter a comment about the project assessment, if any.

Predecessor fields

Field	Description
Predecessor	Enter a WBS item to precede the WBS item currently selected. This field is mandatory.
Successor	Specifies the WBS item succeeding the currently selected WBS item.
Dependency type	Enter one of four dependency types for the currently selected WBS item: Start-to-finish, Finish-to-start, Start-to-start and Finish-to-finish.
Time interval	Enter a time interval using the dialog box that you can open in this field. By default, the interval is 0.

Field	Description
	Enter a negative value to create an overlap between start dates or end dates of the respective WBS items.
Has conflict	Displays if this dependency has a planning conflict with a WBS item. The default value of this field is **F** (false). If the dependency causes a conflict in planning a WBS item, the value of this field automatically changes to **T** (true).

Project team member fields

Field	Description
Contact	This mandatory field is displayed if you click **Add Role players — contacts**. Select a contact from Addresses using the pick list.
Personnel	This mandatory field is displayed if you click **Add Role players — personnel**. Select a person from Personnel using the pick list.
External party	This mandatory field is displayed if you click **Add Role players — external parties**. The dialog box that is opened via this field allows you to add new external parties or select an existing external party.
Role	In this mandatory field, select a role that the team member is to fulfill. Roles must be maintained in Supporting data .
Start date	Use the date picker in this field to enter the team member's start date.
End date	Use the date picker in this field to enter the team member's end date.
Comment	If required, use this field to enter an additional comment on the team member.
Code	In this mandatory field, enter a code for the team member.
Description	Enter a name for the team member.

History fields

Field	Description
Modification date-time	The date-time at which the change was entered in Planon ProCenter .
History added manually	Whether the history line was added manually via the Add button on the History action menu.
Planon user	The name of the Planon user who made the change.
User field name	The field name of the changed field as it is known to the user.
System field name	The field name of the changed field as it is defined in the system.
Old value	The contents of the field prior to the modification.
New value	The contents of the field after the modification.
Project / WBS item	The project / WBS items to which the change applies.
Start date	The date at which the change becomes effective.

> ℹ️ It is also possible to manually add history for the selected project or WBS item. At the project's or WBS item's History step, click Add in the action menu and type a comment in the Comment field.

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