



Service Providers - data setup

Planon Software Suite

Version: L105

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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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Introduction to the Service Providers solution

The **Service Providers** solution supports the processes of [service providers](#), including contract management, customer on-boarding, work planning, mobile execution, subcontractor management and business intelligence. The software accelerates business by making service offering, planning, execution, monitoring and billing efficient, scalable and transparent.

The solution focuses on the following business areas:

- *Customer management*
Monitors and manages all customer related communications and delivers transparency on performance. This area includes proposal management, customer self-service, help desk and request management, real-time status tracking and easy customer access to KPIs.
- *Operations command centre*
Reduces the customer on-boarding effort and increases efficiency. This includes work planning and work assignment, service level and contract management, managing subcontractors and quality control.
- *Mobile Field Services*
Uses mobile devices and tablets to improve the productivity of field engineers, increase the speed of processing and ensure compliance. This includes fast job handling, health and safety procedures, registration of time and materials, job documentation and customer sign off.
- *Financial management*
Increases speed and completeness of invoicing to reduce revenue leaks and supports cost and sales price calculations to improve profitability. This includes commercial contract management, invoicing preparation for export to your financial system and compliant financial reporting.
- *Subcontractor management*
As a Service Provider, you are likely to outsource work to one or more specialized subcontractors. You may even have multiple agreements with individual subcontractors, covering the scope of work that they carry out. If your organization works with subcontractors, you can configure the necessary data in the **Subcontractors** TSI.

Service Providers solution mode

Service Providers is one of the solution modes available in Planon ProCenter. The other solution mode is the default **Workplace** solution mode. The Service Provider TSIs come

with their own licenses. You must have at least one TSI licensed with one of the Service Provider licenses before switching to the Service Provider mode.



The **Service Provider** solution mode can be set in **System Settings** after the installation of Planon, even in a running system. Be aware that selecting this mode is *irreversible*!

Key to the Service Providers user documentation

Service Providers - data setup is intended for application managers and explains how to configure the data that is specific to the **Service Providers** solution. It explains how to set up:

- your **Internal organization** data, such as a service catalog with available [service agreement services](#) and data related to materials, teams, personnel, skills, hourly rates and operational workflows.
- your **Customer management** data, such as customer contracts and related items such as customer assets, [service locations](#), [service agreements](#) and [service terms](#).



The configuration of Planon data that is non-specific to Service Providers is not covered in this documentation. Examples of this generic back-office data: Personnel, Accounts, Skills, Company calendars, Hourly rates, Teams, Assets, Planned Maintenance.



For more information on setting up generic back-office data or making system settings and user settings, see:

- Supporting data
- Assets
- Personnel
- System Settings
- Authorization
- Planned Maintenance

The configuration of additional solutions used within the Service Providers remit, such as **Resource planning** and the **AppSuite - Field services** app is explained in their respective configuration documents.



For more information on the Planon AppSuite and Resource Planner, see:

- *Planon AppSuite Field Services - Configuration Guide*
- *Resource Planner Configurations*

End users of the Service Providers solution, such as back-office operatives and fields workers can find useful information in:



- *Service Providers - Back-office operations*
- *Resource Planner*
- *Planon AppSuite - Field Services*

The Service Providers' world

As a service providing organization, you are operating in a complex environment. You have to deal with many different (contracting) parties, such as [customers](#) and [subcontractors](#). The detailed contractual agreements between your organization and theirs require meticulous registration and monitoring.

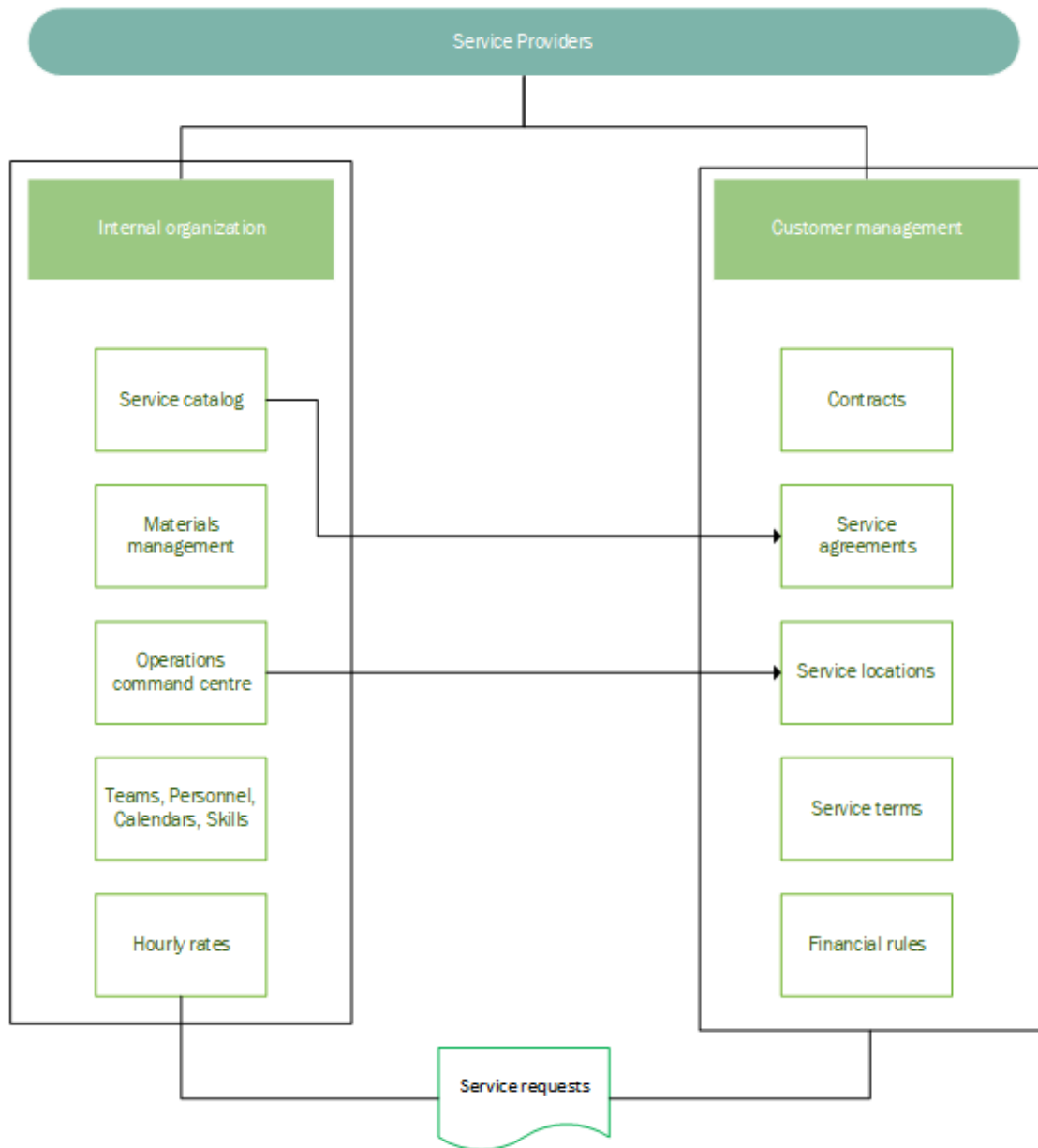
The same applies to the data reflecting your identity as a Service Provider, such as your services offering and your internal organization setup. The services should be accurately registered in a [service catalog](#). Data supporting your internal organization, such as skills, trades and materials also require detailed registration.

Planon's **Service Providers** solution offers all the necessary features and standards to reduce operational complexities, and monitor your performance. Your profitability is made transparent, because both revenues and costs are calculated. The solution also provides the possibility to track a history of data entry, which will make your integrated services management system auditable.

An optimal configuration in Planon mirrors the 3 'worlds' depicted in this image:

- internal organization
- customer management
- service request and invoice handling by the back-office

The Service Providers world can be visualized as follows:



Defining a service catalog

The [service catalog](#) containing your service offering reflects your identity as a service provider. Therefore, an important first step in Planon is entering your service catalog data. It is recommended to structure your service catalog along the lines of hierarchical service agreement categories. This serves two goals:

- at the top levels of the service category structure, you create the basic service structure that provides transparency on your operations
- at the lowest level, you differentiate within service categories, to meet specific customer requirements

Go to the following topics to find out more about adding and linking catalog data:

- [Adding service agreement categories](#)
- [Adding service agreement services](#)

Adding service agreement categories

Categorizing the services you provide within a service agreement allows you to create a realistic digital version of your service catalog and also to monitor business transparency (for example, reporting on how profitable a service is).

- You can create up to 10 levels of subcategories for a main service category.
- Services can be added only to the lowest level in the service category hierarchy.
- You can copy or delete an existing service category. A service with subs cannot be deleted.

Procedure

1. Go to Service catalogs > Service agreement categories.
2. On the action panel, click Add.
3. In the data panel, enter a unique Code and a Name for the service agreement category.

You can assign a parent to the service agreement category, if required.

4. Click Save.

You have now added a service agreement category.

Adding service agreement subcategories

Procedure

1. Go to Service catalogs > Service agreement categories.
2. Select a service agreement category to which you want to add a sub.
3. On the action panel, click Add sub.
4. Enter a unique code and a name for the sub.
5. In the Parent level field, the selected main service category is displayed. If you want to change the parent, select another parent category from the list.
6. Click Save.

You have now added a service agreement subcategory.

Adding service agreement services

Procedure

1. Go to Service catalogs > Service agreement categories.
2. Find the service agreement category to which you want to add a service and select the lowest level in the hierarchy.
3. Go to Services.
4. On the action panel, click Add.
5. Enter a unique code and name for the service that you want to add.
6. Select a relevant service type: Availability or Performance.
 - If the availability of the associated asset(s) is essential to the bonus-malus terms of the contract, as it is in preventive maintenance, select **Availability**.
 - If performance is essential to the bonus-malus terms of the contract, as it is with catering services, select **Performance**.
7. Select the relevant trade for a service in the Trade field. The specified trade is subsequently used in the associated work order, so that the correct trade is entered for every order. This will help you determine hourly rates and labor hours for an order.
8. Select a Service category, to assign the service to a category.
9. Click Save.

You have now added a service agreement service.

10. Link the service to a relevant contract line and service agreement via the Links on the action panel.

The service is now linked to a customer, via the contract line and service agreement.



Since some jobs can only be carried out by persons who have certain certificates and/or skills, you can link skills and certificates to people and service agreement services in Planon. Skills and certificates can be added and linked to specific persons in the Personnel TSI. For more information on this subject, see the Personnel documentation. To link skills and certificates to a service agreement service, see the two steps below.

11. If you have defined Skills for your workforce, you can also select the relevant skills for a service via the Link skills option on the Links action panel.
12. If you have defined Certificates for your workforce, you can also select the relevant certificates for a service via the Link certificates option on the Links action panel.

Defining material types

You can define the types of materials that are used/required to work on a service for the customer. You can link material types to **Terms for materials**. Per material type, you can register different terms with your customers.

Procedure

1. Go to the Material types TSI.
2. On the action panel, click Add.
3. In the data panel, enter a unique Code and a Name for the material type.
4. Click Save.

You have now added a new material type.

Defining order statuses for revenue calculation

You can calculate your order revenues by first deducting the relevant costs and saving the result as revenues on the order. There are various types of revenues that are calculated via the terms that belong to the service agreement(s) linked to an order (see [Order revenues](#)). In Field definer , you can define for which order statuses you want order revenues to be calculated. Subsequently, order revenues are generated in Work Orders if an order is set to one of these statuses.

1. Go to **Field definer** .
2. Go to Business objects > Orders.
3. On the action panel, click Under construction and then click Business objects settings. The Order settings dialog box appears.
4. On the General tab, from the Links action panel, click the Revenue calculation statuses option.
5. Select the status(es) that you want to link as revenue calculation status(es), and move them to the In use section.



The **(Administratively) completed** and **Canceled** statuses cannot be selected for order revenue calculation.

6. Click OK and close the Order settings dialog box.
7. Set the Orders business object status to Completed.

You have now defined status(es) for order revenue calculation.

Configuring a procurement procedure

As a service provider you can agree with your customer to provide *procurement* costs before starting the actual work on orders.


You have to make the following settings to enable a procurement procedure:


- Configure user-defined statuses for procurement types in Field definer . For more information, see [Defining order statuses for revenue estimation](#).
- Set the **Include in revenue estimations** field on **Orders** to **Yes**. For more information, see .
- Select a procurement type in the **Procurement type** field on **General terms**. For more information, see [General terms - fields](#).

The procurement process depends on the configuration of the above fields and statuses and how they will impact the main order and suborders (if any). There are two procurement procedures available:

- **Estimation** - You can agree with the customer to first estimate how much the work for a particular order will cost. This enables the customer to anticipate the costs involved and decide whether or not to proceed with the order.



Consequently, when an order is created and a contract line is found with a general term, with **Revenue estimations** selected in the **Procurement type** field on this general term, the order (with subs) is automatically moved to the **Estimation required** status. In this status, estimation lines can be added. For more information on adding revenue estimation lines, see **Service Providers - Back-office operations > Adding revenue estimation lines**. After all estimation lines have been added, the order must be moved to the **Estimation completed** status. When all sub orders are in the **Estimation completed** status, the main order is automatically moved to the **Estimation completed** status. When the main order is in the **Estimation completed** status, the total estimations are checked against the **Threshold amount**. If the value is less than the threshold amount, the order will automatically move to the **Ready to pickup** status. If it is more, it remains in the **Estimation completed** status.

 If suborders exist under a main order, you can only add estimation lines to the suborders. If there are estimation lines on the main order and you add a suborder, the estimation lines on the main order will be deleted and new estimation lines must be added to the suborder.

 If the main order is a PPM order, the suborders are handled independently, so no status change will occur for suborders if the main order status is changed.

- **Quotation** - Quotation is the formal approach to the procurement process. The price defined by the sales person for the order is considered final and the customer has to approve the quotation to start work on the order.

Consequently, when an order is created and a contract line is found with a general term, with **Quotation** selected in the **Procurement type** field on this general term, the main order is automatically moved to the **Quotation required** status. Quotation lines are added by the sales person and the order is set to **Approval from the customer**. For more information on adding quotation lines, see **Service Providers - Back-office operations > Adding quotation lines**.


-  There will be no automatic creation of quotations or estimations if the order is in the designated status. This requires manual action from the user.
-  With non-PPM orders, each suborder will reflect the status of the associated main order. However, you can exclude a suborder from the estimation process by selecting **Exclude from revenue estimation** option.

Defining order statuses for revenue estimation

You can configure user-defined statuses and status transitions on **Orders** to enable revenue estimations and quotations.

Procedure

1. Go to Field Definer.
 2. Go to Business objects > Orders.
 3. On the action panel, click Under construction and then click Business objects settings. The Order settings dialog box appears.
 4. Go to the Procurement tab.
 5. On the Links action panel, select the relevant action to link specific user-defined statuses to the estimation or quotation statuses:
 - **Estimate required** - The order is set to this status if an estimate is required.
 - **Estimate completed** - The order is set to this status if estimate is completed.
 - **Ready to pick up** - The order is set to this status if the estimate is below the threshold defined by the customer.
 - **Direct quotation** - The order is set to this status if direct quotation is requested by the customer.
- The respective dialog box is displayed.**
6. Select the status(es) that you want to link as revenue estimation status(es), and move them to the In use section.

 The selected status must be unique for all four settings.

7. Click OK and close the Order settings dialog box.
8. Set the Orders business object status to Completed.

You have now defined status(es) for a procurement procedure on order revenues.

Configuring the invoice approval process


As a service provider you can set up an automatic invoice approval / refusal process for your customers, via a status transition on the main order and suborder(s).

The following configuration / field settings are part of the invoice approval process:

- **Field definer:** create user-defined order statuses for invoice approval. For more information, see [Defining order statuses for invoice approval](#).
- **Orders:** the **Exclude from invoice approval** field. For more information, see .
- **General terms:** the **Invoice approval required** field. For more information, see [General terms - fields](#).

The invoice approval process and how it impacts the main order and any suborders, depends on the configuration of the above settings. The scenarios on settings and status transitions are shown below:

- If the main order has the **Invoice check required** status, the value of the **Invoice approval required** field on the general term linked to the contract line of the (main) order is retrieved. If the value is **Yes**, the order is set to the **Approval required** status. If the setting is **No**, the order is set to the **No approval required** status.

 For non-PPM order the following applies: only if all suborders are moved to **Invoice check required** status, will the main order also be automatically moved to that status, unless a suborder is explicitly set to **Exclude from invoice approval**.

- If the main order is set to one of the statuses **No approval needed**, **Approval needed**, **Approved** or **Refused**, the suborders (that are NOT excluded from the invoice approval process) are also automatically set to these statuses. Therefore, it is not allowed to manually change the suborder's status to any of these statuses.

 The **Approved** and **Refused** statuses can only be applied to the main order.

Defining order statuses for invoice approval

You can configure user-defined statuses and thus enable status transitions on **Orders** for invoice approval or disapproval.

Procedure

1. Go to [Field definer](#) .
2. Go to [Business objects](#) and select the [Orders](#) business object.

3. On the action panel, click Under construction, followed by clicking Business objects settings.

The Order settings dialog box is displayed.

4. Go to the Invoices tab.
5. On the Links action panel, select the relevant action to link specific user-defined order statuses to invoice statuses:
 - **Invoice check required** - in this status, the general terms are checked to verify if invoice approval is required.
 - **Approval needed** - the order is set to this status if approval is required.
 - **No approval needed** - the order is set to this status if no approval is required.
 - **Invoice approved** - the order is set to this status if the invoices are approved.
 - **Invoice refused** - the order is set to this status if the invoices are refused.

A dialog box is displayed.

6. Select the relevant user-defined status(es) in the Available section and move them to the In use section.
7. Click OK.
8. Close the Order settings dialog box.
9. Set the Orders business object to Completed.

You have now defined status(es) for automatic invoice approval.



If the main order is a PPM order, status changes on the main order / suborders are handled independently.

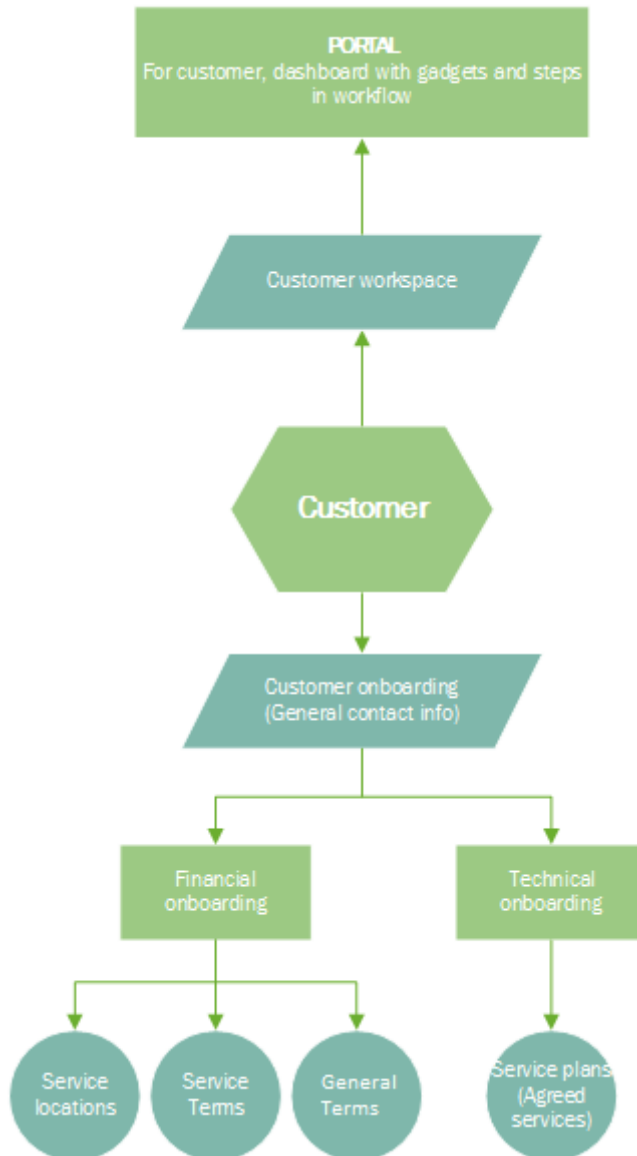
The Customers' world

The Planon configuration of the customers' world must reflect all interactions with your customers.

On the front-office side, you can configure a Self-Service portal and workspace for your customer.

On the back-office side, customer 'onboarding' data must be configured. This includes:

- Financial onboarding: data on the financial relationship between service provider and customer, such as Contracts, Service agreements and Terms.
- Technical onboarding: data on the physical subjects of the contracts, the so-called *service components*, such as the customers' Properties (Service locations), Spaces, Assets.



The customers can enjoy the following benefits from this setup:

- Transparency in performance (metrics)
- Creation and follow-up of service requests
- Option to submit a one-off request for quotation
- Invoice overview per order
- Access to agreements

Defining customer-related data

After you have set up a service catalog, services and the rest of the data concerning your internal organization in Planon ProCenter, you can start adding customers. This includes:

- registering [customer](#) data
- adding [service locations](#), assets, maintenance plans etc.
- setting up [customer contracts](#) and [service agreements](#)
- optimize filtering by [Filtering customers by linked properties](#)

Adding customers

Before you can start registering a contract you must add the [customer](#) with whom this contract is closed.

Procedure

1. Go to Customers.
2. On the action panel, click Add.
3. In the data panel, enter data in the relevant fields.

For more information about these fields, see [Customer fields](#).

4. Click Save.

You have now added a customer.

Adding service location types

A [service location type](#) represents the type of property where services must be carried out. For example, office building, terrain, warehouse, residential area, production facility etc. Grouping service locations according to type can be useful for reporting and business monitoring purposes.

Procedure

1. Go to Customers > Service location types.
2. On the action panel, click Add.
3. In the data panel, enter a unique Code and a Name for the service location type.
4. Click Save.

You have now added a service location type. Add as many service location types as required and proceed by [Adding service locations](#) to these types.

Adding service locations

After you have defined service location types, you can start adding the actual [service locations](#): the buildings / properties where the customer is located.

Procedure

1. Go to Customers > Service location types > Service locations.
2. On the action panel, click Add.
3. In the data panel, enter data in the relevant fields.



For more information about these fields, see *Property Management*.

4. Click Save.

You have now added a new service location.

A service location should be linked to a customer to establish the association between them. You can have multiple customers in the same service location. This is achieved by clicking **Link customers** on the action panel.

Adding service levels

Your customers can have multiple contracts with you, as their service provider. When registering the actual contract in Planon, you can also define all relevant [service levels](#). By linking service levels to specific contract line, you can make sure that customers can only choose contractually agreed service levels when submitting a request. The service level is used to determine applicable KPIs and financial terms.

Procedure

1. Go to the Customers TSI.
2. Go to Service location types > Service levels.
3. On the action panel, click Add.
4. On the data panel, enter data in the relevant fields.

For more information about these fields, refer to [Service level fields](#).

5. Click Save.

You have now added a service level.


6. On the action panel, click Link contract lines.
7. Link one or more relevant contract lines to this service level.

Filtering customers by linked properties

To optimize the search for all properties that are *linked* to a selected customer in a reference pop-up or any other filter, you can configure specific field attributes for filtering in Field definer . The **Linked properties** field on **Customers** displays all properties linked to the customer via the **Link** action on the action panel.

There are two filter settings available for the **Linked properties** field on **Customers**:
Simple selection (field is added as search option to quick search filters, including


those in pop-ups) and **In selection** (field becomes available as search option in other relevant filters). Also see the Field definer > Field attributes user documentation for more information.

 This task specifically describes how to optimize the search for linked customer properties in filters. However, the same functionality is available for other business objects with **Linked [...]** fields (M:N relationships). For example: you can create similar filter settings in Field definer between **Service agreements** and **Linked services**, between **Service agreement services** and **Linked contract lines**, and so on.

Procedure

1. Go to **Field definer** .
2. Select the Customers business object and set it Under construction.
3. Go to Details > Fields.
4. Select the Linked properties field.
5. Set the In selection and/or Simple selection fields to Yes.
6. Click Save.
7. Return to the Business objects level and set Customers to Completed.

The **Linked properties** field is now available as filter option in **Customer filters**.

 Vice versa, you can make it easier to find linked customers in a **Property** filter, by configuring the **Linked customers** field for the **Properties** business object, similar to what is described above.

Defining service contracts

Although the type of services you deliver to your customers may be very similar, for example *Planned maintenance of heating installations* or *Fault maintenance of air-conditioning installations*, the terms under which these services are delivered can vary greatly per customer.

In fact, even for a single customer, the terms under which a particular service is delivered can differ per service location, per space or per asset.

Example:

Fault maintenance on an air-conditioning installation in a server room requires different delivery times than airco maintenance in an office space. It is vital that these terms are registered in a structured way per customer. The data structure must be carefully prepared and executed. This way you make sure that you are ready when a customer orders a service, or when planned maintenance is due, or when an invoice must be drawn up. In Planon, you can register the following agreements and terms:

- Time terms (delivery times / SLAs)
- Financial terms (labor hours, materials, travel, bonus/malus, subcontractors)


Terms are always linked to a contract.

On the contract, you can group the terms via **contract lines**. You can for example add:

- a contract line for preventive maintenance
- a contract line for fault maintenance
- a contract line for additional work
- a contract line for activities covered by a guarantee fund

For more information, see [Adding contract lines](#).

As soon as a customer orders a service, a work order is created in Planon. The customer just selects a service and specifies the service location where this service must be delivered. The combination of *customer + service + service location* will detect the exact contract line that must be linked to the order. Any terms that apply to the order are also immediately available. This mechanism also applies to automatically generated orders that are generated from a contract-based maintenance plan.


 For more information on contract-based maintenance, see the user documentation for Maintenance management.

Adding customer contracts

You can define contracts for [customers](#) and specify - per service location - the contract details and related service agreements and terms.


Procedure

1. At Customers, select the customer for whom you want to add a contract.

 For more information on defining customers, see [Adding customers](#).

2. Go to the Contracts selection level.
3. On the action panel, click Add service contract or Add lease contract.
4. In the data panel, complete the relevant fields.


 For a description of the contract fields, refer to *Contract Management*.

 When filling in the contract fields, take note of the following:

- Use the **Customer** field instead of the **Accepting contracting party** field
- If it is not desirable that the address of the **Offering contracting party** is automatically copied from the contract to the external tradesperson on a linked work order or PPM order, you can prevent this with a setting in Field definer . See: [General order setting fields](#).

5. Click Save.

You have now created a customer contract. You can continue by adding the corresponding contract lines.

 If the reference date is active, any expired contracts (i.e. contracts whose end date has already passed or contracts that are terminated) will not be visible in the elements list.

Adding contract lines

After creating a **customer contract** in Planon, you can add the corresponding contract line(s). Contract lines on a customer contract specify the financial details.


 The system type of a user-defined contract line must be **SLA contract line**.

 If the reference date is active, any expired contracts (i.e. contracts whose end date has already passed or contracts that are terminated) will not be visible in the elements list.

Procedure


1. At the Contracts selection level, select the customer contract to which you want to add the contract lines.
2. Go to Contract lines.
3. On the action panel, click Add to create a new contract line.
4. Complete the fields in the data panel.

For information on the available fields, refer to *Contract Management*.

 • If a standard cost calculation applies, for example for corrective maintenance activities or other regular contractual activities, select **Standard** in the **Contract line type** field, to make it possible to find correct the contract line on the order.
• If a special cost calculation should apply, because *proactive maintenance* or *preventive maintenance* is part of the contract, respectively select **Proactive** or **Preventive**. See [Contract lines for customer contracts](#) for more information on contract line types.


5. Click Save.

You added a contract line. You can proceed to link services, properties, service levels and/or SLAs to this contract line. See [Linking contract lines to services, properties, service levels](#).

 If there are properties linked to the customer for whom you add a contract line, the dialog on the **Property** field or **Link properties** action will only display the linked properties of the selected customer.

Linking contract lines to services, properties, service levels

You can directly link a customer contract line to *one or more* services, properties and/or service levels. The action panel includes separate link actions for these items.

 In Service Providers mode, links between contract lines and their respective services, properties and service levels are *reference date aware*. This means the links are only

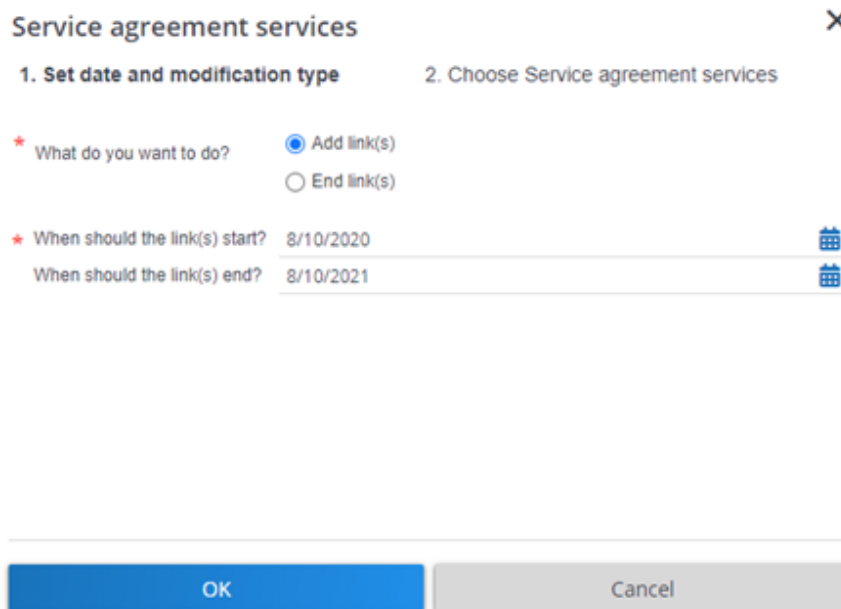
available in periods when they are **active**, i.e. the period between their start and end date. See [Time aware links](#) for more information.

Procedure

1. Go to Contract lines.
2. Select the contract line to which you want to link one or more services, properties or service levels.
3. On the Links action panel, click the appropriate link action: Link services / Link properties / Link service levels .

The Link [...] dialog box appears. The next steps are about linking *services*, but are identical for linking *properties* and *service levels*.

4. In the dialog, under Set date and modification type > What do you want to do?, select Add link(s).



5. In the When should the links start? field, enter a start date for the link. Optional: enter an end date in the When should the links end? field.

i The start date and end date of a link cannot exceed the start and end date of the related business object, in this case: the contract line. Also, it is not possible to have links with overlapping periods. In this case, it means that the combination created between the contract line and the service(s) should be unique within the selected period.

6. Click OK.
7. In Not linked, select the relevant service(s) you want to link to the selected contract line.
8. Click the right arrow button to transfer the selected items to the Linked section.
9. Click OK.

The selected item(s) is (are) now linked to the selected contract line in the selected period. Repeat this procedure for each type of link you want to create.

The linked services / properties / service levels can be viewed on the layout of the contract line in the respective **Linked ...** fields.



The link actions and link records are hidden from the layout and dialog if the selected reference date is outside the defined period.

Defining invoicing methods

Since the financial handling of a customer contract is done via a contract line, any invoicing method you want to apply to the contract must also be directly related to a contract line. **General terms** include the generic invoicing settings that have a direct link with contract lines. At **Service terms > General terms** you can find the settings you need to define generic invoicing methods.

There are basically four main invoicing methods:

1. **Time and materials:** with this invoicing method you can invoice each customer request separately, based on registered labor hours, used materials, subcontractor costs and potential travel fees. Within this method, you can invoice based either on actual usage or on fixed price. You can also include your customer's approval in the workflow, before starting the actual work.

Next to this, it is also possible to define deviations such as having a **Warranty check**. If the operations concern an asset that is still under warranty, the customer request is not invoiced separately.

2. **Lump sum / Fixed fee:** with this invoicing method you can invoice customer requests based on a periodic fixed fee and a defined scope. Customer requests that fall within this scope are not invoiced separately.

You can also define deviations such as a **Usage check**, where the customer request is only invoiced if it has been proven that the asset was damaged due to vandalism/incorrect usage.

3. **Partial fixed fee:** with this invoicing method you can invoice customer requests based on a periodic fixed fee, up to a predefined amount. Once this defined amount is used up, any subsequent customer requests are invoiced separately. The **Warranty check** and **Usage check** deviations are allowed in this structure.
4. **Bank of money:** this invoicing method is based on a budget setup. The contract line determines which costs can be deducted from the budget and which costs can be invoiced separately. Based on this structure, you can report on budget usage. Subsequently, customers receive timely signals about the budget's status.



If any of the invoicing settings should deviate significantly for part of the contract's scope, you must create a separate contract line.

Defining service agreements

Any terms that apply to a service are linked to the contract lines via [Service agreements](#). The service agreement defines the relation between the , contract lines, services and terms. There are 7 types of service agreements you can add:

- Service agreement for contract lines
- Service agreement for location types
- Service agreement for service locations
- Service agreement for space categories
- Service agreement for spaces
- Service agreement for asset groups
- Service agreement for assets

The difference between these agreements is the scope to which the linked terms apply. Service agreements are part of the hierarchy that is indicated above, giving priority to terms linked at the lowest level (service agreements for assets) over terms that are linked at the higher levels.

That is, terms that are added to a *service agreement for contract lines* apply to all orders linked to the contract line. On the other hand, terms added to a *service agreement for assets* only apply to the services on the linked asset.

For example, if you have linked a term for fault maintenance on air-conditioning units at the highest level (**Service agreement for contract lines**), this term will be overruled by a similar term for fault maintenance on an air-conditioning unit in a space linked to a **Service agreement for spaces**. This mechanism ensures that you can efficiently register

that in case of an air-conditioning unit failure, the repair time is 2 days, but if the fault occurs on the air-conditioning unit in the server room, the repair time is only 2 hours.

The hierarchy also applies to finding terms of service agreements related to assets, properties or asset groups.

For example, if no service agreement can be found for a (sub) property filled in on the order when searching for terms linked to a property-related service agreement, the service agreement related to a property on a higher level is considered. This search process continues until one service agreement or none is found.

For more information, see [Adding service agreements](#).

Adding service agreements

You can define various types of [service agreements](#) for your customers, depending on the service area to which they apply. For example, does your agreement apply to all your [service locations](#), service locations of a specific type or specific service locations? Similarly, you can decide whether the agreement applies to a whole asset group or to one specific asset. The same can be decided for space categories and spaces.

- Decide for which specific service area(s) you want to define a service agreement.
- Decide at what level the service agreement must be available.



It is recommended to add one or more service agreements that you can reuse as a 'template', with linked terms and other data. This template can subsequently be deep copied and edited to create new service agreements.

Procedure

1. Go to Customer contracts > Customers.
2. Select the customer for whom you want to define a service agreement.
3. Go to Contracts and select the contract for which you want to define a service agreement.
4. At Service contract line, select the relevant contract line.
5. Go to Service agreements and click Add [...] on the action panel.

Select the Add action for the relevant service component. There is an action for each potential service component in a service agreement: Asset group, Asset, Space category, Space, Service location type, Service location and Contract line.


6. Enter the data on the agreement and click Save.

For more information these fields, see [Service agreement fields](#).




Some fields on the service agreement are life cycle aware (dependent on the selected reference date), any changes in these fields are added to the **Life cycle** selection level / step.

7. If required, repeat the procedure to add more service components to the agreement.
8. On the action panel, click Link service agreement services, to link relevant services to the service agreement. You can only define a service agreement for a contract line if the service agreement is linked to a service that is also linked to the contract line.

-  • For service location agreements, asset agreements and space agreements, you must also link the service agreement to the applicable property (-ies), asset(s) or space(s), using the relevant action on the action panel: **Link properties**, **Link assets** or **Link spaces**.
- In Service Providers mode, links between service agreements and their respective service agreement services, properties, spaces and assets are *life cycle aware*. This means that their display depends on the selected reference date and that the links are only available in periods when they are *active*, i.e. the period between their start and end date. See [Time aware links](#) for a description and [Linking contract lines to services, properties, service levels](#) for information on working with a reference date aware **Link ...** action.

Copying service agreements

Adding a service agreement can be sped up considerably by *copying* a similar, existing service agreement and doing some minor edits afterwards.

-  Tip: Add one or more service agreements that you can reuse as a 'template', with linked terms and other data.


Procedure

1. Go to Customer contracts.
2. At the consecutive selection levels, select the customer, contract and contract line whose service agreement you want to copy.
3. Go to Service agreements and click the relevant service agreement.
4. On the action panel, click Copy.
The Copying [...] dialog is displayed.
5. Enter the relevant copying settings in the Copy as of, Copy modifications, Hour type and Contract line fields.
6. Select the check boxes of the linked items you want to copy along with the service agreement:
 - Linked services
 - Linked assets
 - Linked spaces
 - Linked properties
 - Terms for time (including bonus-malus settings)

- Terms for subcontractors
- Terms for materials
- Terms for travel
- Terms for labor hours
- Linked trades

7. Click OK.


The service agreement and associated items are copied to the new service agreement. You can proceed editing the data.

 Note that the fields and link options displayed in the copy pop-up may vary depending on the service agreement you have selected to copy.

Adding general terms

The general terms of a contract determine how to calculate the generic costs and revenues of the service contract and also determine whether or not certain services must be invoiced.


If you want to apply any deviations to the general terms, you must register these in service agreements and specific terms (for time, materials, labor hours, travel etc.).

 If a work order is linked to a contract line, the general terms are applied to calculate the costs and revenues for this order. General terms are always applied to the contract line of the main work order, even if suborders are present. For PPM orders, each main order and suborder finds and uses its own general terms.

Procedure

1. Go to Customer contracts > Service contract lines.
2. Select the contract line to which the general terms must apply.
3. Go to Service terms > General terms.
4. On the action panel, click Add.
5. In the data panel, enter data in the relevant fields.

For more information about these fields, refer to [General terms - fields](#).

 All fields on the general terms are life cycle aware. Any changes to these fields are added to the **General terms - life cycle** selection step.

6. Click Save.


Defining specific service terms

The contracts between your organization and its customers will eventually lead to service requests and work orders. The costs and [revenues](#) resulting from this work are

determined by the terms you have agreed in a contract and linked service agreement(s). Therefore it is essential to configure your terms very precisely.


You have already linked **General terms** to the contract line, which apply to the whole contract. For more information, see [Adding general terms](#).

You can use additional service terms to register any *exceptions* you have agreed with your customer. For more information, see [Adding specific service terms](#).


 To reduce the data entry effort to a minimum, it is recommended to work from generic to specific. Start by registering the largest scope first and then work downwards, by reducing the amount of data as you reach the lower level(s).

The following subtypes are available:

- **Terms for time** - are used to calculate the various key performance indicators (KPIs) that apply to the delivered services, such as the Time to Respond (TTR), Time to Attend (TTA), Time to Fix (TTF) and Time to Complete (TTC). They are also used to calculate the scores of these KPIs (using the weighting as defined in the term). If applicable, terms for time also include your *bonus-malus* arrangements: a 'bonus' can be calculated in cases of over-performance (if the terms are met with superior results) or a 'malus' in cases of under-performance (if the terms are not met). A malus will result in a discount for the customer.


 Similar to SLAs in the IWMS system, different time terms can be defined that apply from the moment an order is added. For more information on the working of SLAs and KPI calculations, refer to [Service Level Agreements](#) and [KPI \(Key performance indicator\)](#).

- **Terms for labor hours** - financial terms, reflecting the hourly rates that apply to the available services. These rates are also associated with the **Trades** that are linked to various services in the service catalog, or to **Tradesperson categories** which can be linked to engineers carrying out the work. This ensures that the correct rates are automatically applied to orders when calculating the revenues ensuing from labor hours of the types **Work** or **Waiting**.
 - For work performed outside office hours, you can define surcharge rates in the separate **Surcharge terms** TSI and link them to the terms for labor hours. See [Terms for labor hours - fields](#) for more information.
 - It is also possible to link calendars to the labor hour rates that determine when specific rates are applicable, such as rates for overtime, bank holidays etc.
 - The **Terms for labor hours** also allow for *dynamically applied hourly rates*. See [Defining dynamic thresholds \(threshold groups for terms\)](#), for information on how to configure this.

 In addition to *terms for labor hours* to calculate the cost price of a service, you can also register the *labor hour costs* you have to make to deploy your employee. Comparing the two will provide clarity on the difference between the costs and revenues at labor hour level.

- **Terms for subcontractors** - financial terms that are used to calculate the revenues in case subcontractor lines are present on an order.

- **Terms for materials** - financial terms that are used to calculate the revenues based upon the materials specified in the order lines of an order.
- **Terms for travel** - financial terms that are defined to calculate the revenues in case labor hours of the type **Travel** exist. For more information on configuring terms for travel, see [Terms for travel - fields](#). In addition to the settings on the **Terms for travel**, you can select several criteria on a **Property** as a basis for the fixed travel revenue calculation: **Travel time (minutes)**, **Travel distance**, **Fixed travel allowance**. Planon administrators can configure these fields on the relevant **Property** layout(s).

 As of release L98, you can create multiple **Terms for travel** (with different calculation bases) per **Service agreement / Service level** combination. Before, this was limited to only one term. When you generate travel revenues, this is done for all applicable terms found on the service agreement.

Adding specific service terms


Just as the general terms, these additional terms are also used to calculate the revenues and costs of an order. The difference is that they apply to the *service location (type)*, *space (category)* or *asset (group)* of an order.

Procedure

1. Go to Customer contracts > Customers.
2. Select the customer for whom you want to define a specific service term.
3. Go to Contracts > Contract lines and select the appropriate contract line.
4. Go to Service agreements and select the service agreement to which you want to add terms.
5. Go to Service terms.
6. Go to the selection step of the term type you want to define and click Add on the action panel.
7. Enter the data on the service term.

For more information these fields, see:

- [Terms for labor hours - fields](#)
- [Terms for materials - fields](#)
- [Terms for travel - fields](#)
- [Terms for time - fields](#)
- [Terms for subcontractors - fields](#)


 Some fields on the terms are life cycle aware. Any changes to these fields are added to the **Life cycles** selection level / step.

8. Repeat the procedure to add more service terms to the agreement, as required.

Adding a calculation method for fixed travel terms

As service coordinator you are able to configure whether *fixed* travel revenues on an order should be calculated *per day* and / or *per internal tradesperson*. You can also specify if the calculation method should apply to the main order (request) only, or to both main and suborders individually.

You can define a calculation method for fixed travel allowances in **Customer contracts**, at the **Methods for travel terms** selection step. See [Methods for travel terms](#) for a definition of this calculation method.

 You can only create 1 'active' method for travel terms per service agreement and service level at a time, and methods cannot overlap.


Procedure

1. Go to Customer contracts.
2. At Customers and Contracts respectively, select the relevant customer and the service contract for which you want to add a method for travel terms.
3. Go to Service contract lines and select the contract line to which the terms for travel (will) apply.
4. Go to Service agreements and select the relevant service agreement.
5. Go to Terms for travel and add travel terms with a calculation basis that includes a fixed travel allowance, or check for any existing travel terms with a calculation basis for a fixed travel allowance.
6. Select the Methods for travel terms selection step.
7. On the action panel, click Add.
8. On the data panel, enter data in the relevant fields.

For more information on these fields refer to [Methods for travel terms - fields](#).


9. Click Save.

The selected calculation method will be applied for this service agreement when generating the travel revenues for the defined period.

 Any resulting revenue records are dependent on whether the service agreement applicable to the order has the correct set-up for the terms for travel. If no 'fixed revenue' travel terms exist, or if they are not applicable to the order, then fixed travel revenues will not be created.

The table below illustrates the results, depending on the settings you selected:

Method for fixed allowance	Fixed allowance per day?	Fixed allowance per internal tradesperson?	Resulting revenue record
Main order only	No	No	1 travel revenue record per request / main order
Main order only	No	Yes	1 travel revenue record per request / main order, per tradesperson
Main order only	Yes	No	1 travel revenue record per request / main order, per day
Main order only	Yes	Yes	1 travel revenue record per request / main order, per day, per tradesperson
Per order	No	No	1 travel revenue record per order
Per order	No	Yes	1 travel revenue record per order, per tradesperson
Per order	Yes	No	1 travel revenue record per order, per day
Per order	Yes	Yes	1 travel revenue record per order, per day, per tradesperson

 If you have set the **Non-fixed revenues allowed?** setting on the **Methods for travel terms** to **No**, no variable travel revenues will be created. If you set it to **Yes** (and there are variable travel terms applicable to the service agreement and order) then variable travel revenues will also be created.

Labor hour settings for revenue calculations

There are several settings available to *round* labor hours for the purpose of revenue calculation. These settings apply to labor hours of the types Work and Travel.



Once enabled, these settings only apply when revenues are generated for an associated order. The labor hour records themselves remain unchanged.

Rounding

Basically, there are two methods to round labor hours on revenue calculation:

- **Time-based:** rounds off time to a selected time unit. For example the nearest 10-minute time unit or the previous 5-minute time unit.
- **Duration-based:** rounds off time to a multiple of the selected time unit, after totaling the minutes the tradesperson worked on an order on a single day.

Tariff thresholds

Apart from / in addition to either one of these rounding methods, you can choose to apply a *tariff threshold* to the tradesperson's labor hours. Typically, this is done if you want to allow for a slightly earlier start or later end of the working day without charging special tariffs to your customer.

Procedure

1. Go to Service terms > General terms.
2. In the Labor hour based rounding field, select your preferred rounding method: None, Time-based or Duration-based.
3. If you select the Time-based method, select the preferred type of time-based rounding in the Time-based rounding field and the preferred time-unit in the Time unit for time-based rounding field.
4. If you select the Duration-based method, decide whether you want to apply this method to either work or travel, or both, in the respective fields: Duration-based rounding for work? and Duration-based rounding for travel?. Also, specify a rounding time unit for either of these choices.

See [General terms - fields](#) for more information on the various rounding method fields.

5. If you want to apply tariff thresholds to the start and end times of a tradesperson's labor hours, set the Apply threshold to start / end of [work time; travel time; waiting time]? fields to Yes as required and specify a time unit for the threshold in the Time unit for [start] [end] time threshold fields.

The rounding settings you make under the general terms apply to any labor hour terms or travel terms that are linked to an order's contract line when order revenues are generated.

Labor hour reversal

It may happen that labor hour records need correction after finalization. Incorrect labor hour records are likely to come from Planon AppSuite users who have prematurely finalized their labor hours on the app. The incorrect records could be corrected by changing the data in the back-office. However, if your organization exports labor hour records from Planon ProCenter to an external, third-party system, it often is impossible or prohibited to update incorrect labor hour records. In that case, incorrect labor hours can be 'neutralized' by adding a reverse record in Planon ProCenter .

The reverse record will undo the initial, incorrect labor hour record, after which the correct labor hour record can be exported. If revenues are subsequently generated by the back-office, the original, incorrect record and its counterpart will be ignored. Only the correct, newly added record is taken into account for the calculation. Any corresponding VAT / tax charges are also corrected.



The **Reverse labor hours** action can only be used in **Service Providers** solution mode. Also, the **Field services through the Planon AppSuite** feature switch must be enabled in System settings > Improved features.

You can enable labor hour reversal with the following procedure:

Procedure

1. Go to **Layouts** on the navigation panel.
2. On All business objects, select the Labor hours business object.
3. Go to the Layouts level and put the relevant layout(s) Under construction.
4. Add the Reversed labor hours field and the Reverse labor hours action to the respective layouts on the layouts panel.
5. Set the Labor hours business object to Completed.

Back-office employees can now use the configured field and action to reverse incorrect labor hour entries in a third-party system. See Work Orders > Labor hour fields for more information.

Linking labor hour terms to trades

In the Service Providers solution mode, the links that you create between **Terms for labor hours** and **Trades** are life cycle aware, which means that they are 'active' during a specified period with a clear start date and an optional end date. Their display depends on the selected reference date.

When configuring the labor hour terms, you can only configure 1 labor hour term per service agreement, per service level, per trade and per hour type. In case of a **Term for labor hours - Trade** combination, the software checks for links of the same trade to other terms. The Start dates / End dates of the links are not allowed to overlap in time.

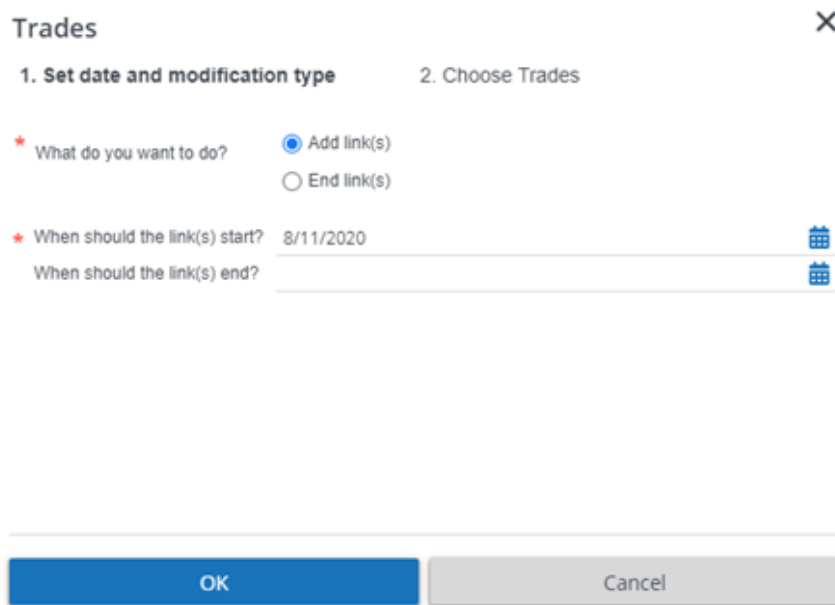
Good to know: As of release L100, the **Link trades** action can only be enabled on the action panel if you set the **Type of labor hour term** field to **Trade based**. See [Terms for labor hours - fields](#) for more information.

Procedure

1. Go to Customer contracts.
2. At Customers, select the relevant customer.
3. At Contracts select the relevant contract.
4. At Service contract lines, select the relevant contract line.
5. At Service agreements, select the relevant service agreement.
6. Go to Service terms > Terms for labor hours.
7. Select the terms for labor hours to which you want to link trades.
8. On the action panel, click Link trades.

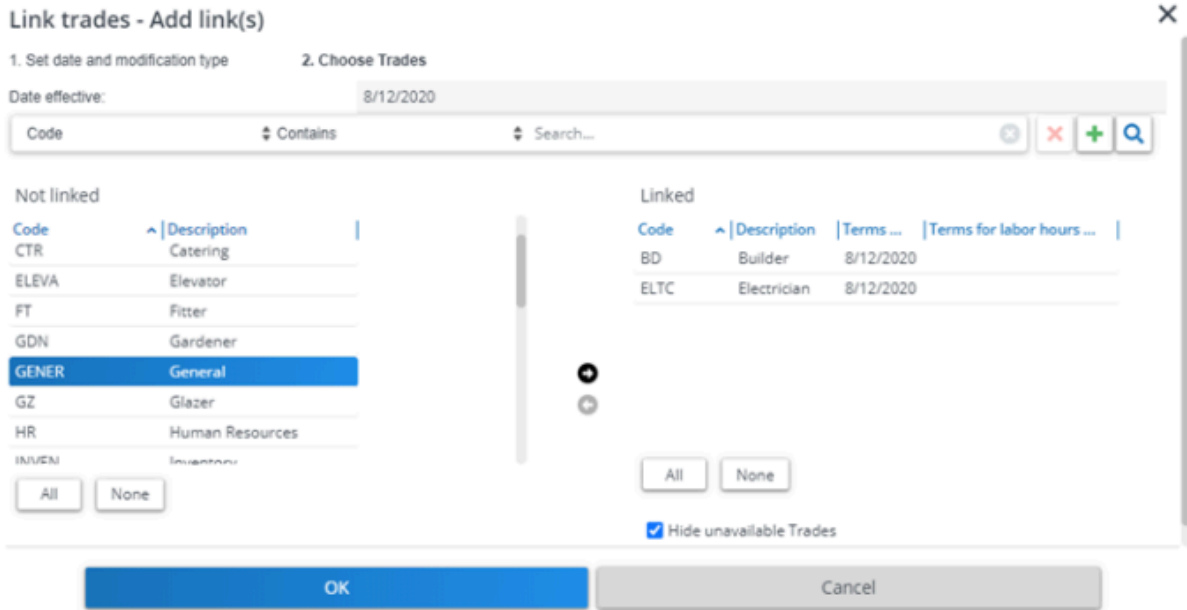
The Trades dialog opens.

9. In the dialog at Set date and modification type > What do you want to do?, select Add links.



10. In the When should the link(s) start? select a start date for the link.
Optional: at When should the link(s) end?, select an end date for the link.
11. Click OK.

- In the Link trades screen, at Not linked, select the trades you want to link for the specified period.



- Click the right arrow button to transfer the trades to the Linked section.
- Click OK.

You created links to trades that are exclusive to this period. As a result, these trades become unavailable for linking other terms for labor hours during this period. You can view 'unavailable' trades in the dialog by deselecting the checkbox at the bottom of the Linked section.

Linking labor hour terms to tradesperson categories

In the Service Providers solution mode, the links that you create between **Terms for labor hours** and **Tradesperson categories** are life cycle aware, which means that they are 'active' during a specified period with a clear start date and an optional end date. Their display depends on the selected reference date.

When configuring the labor hour terms, you can only configure 1 labor hour term per service agreement, per service level, per trade and per hour type. In case of a **Term for labor hours - Tradesperson category** combination, the software checks for links of the same tradesperson category to other terms. The Start dates / End dates of the links are not allowed to overlap in time.

Good to know: The **Link tradesperson categories** action can only be enabled on the action panel if you set the **Type of labor hour term** field to **Tradesperson category based**. See [Terms for labor hours - fields](#) for more information.

Procedure

- Go to Customer contracts.

2. At Customers, select the relevant customer.
3. At Contracts select the relevant contract.
4. At Service contract lines, select the relevant contract line.
5. At Service agreements, select the relevant service agreement.
6. Go to Service terms > Terms for labor hours.
7. Select the terms for labor hours to which you want to link tradesperson categories.
8. On the action panel, click Link tradesperson categories.

The Tradesperson categories dialog opens.

9. In the dialog at Set date and modification type > What do you want to do?, select Add links.
10. In the When should the link(s) start? select a start date for the link.
Optional: at When should the link(s) end?, select an end date for the link.
11. Click OK.
12. In the Link tradesperson categories screen, at Not linked, select the tradesperson categories you want to link for the specified period.
13. Click the right arrow button to transfer the trades to the Linked section.
14. Click OK.

You created links to tradesperson categories that are exclusive to this period. As a result, these tradesperson categories become unavailable for linking other terms for labor hours during this period. You can view 'unavailable' tradesperson categories in the dialog by deselecting the checkbox at the bottom of the Linked section.

Defining dynamic thresholds (threshold groups for terms)

The **Thresholds for terms** TSI can be used to configure groups of dynamically applicable thresholds (the **Advanced thresholds** method), which will determine which *surcharge percentage* applies to any linked **Terms for materials** or **Terms for subcontractors**, or which hourly rates must apply to **Terms for labor hours**.

Make sure the **Thresholds for terms** TSI is available on you navigation panel.

Procedure

1. Go to the Thresholds for terms TSI.
2. On the Threshold groups step, click Add.
3. Enter a **Code**, **Description** and **Threshold type** for the new threshold group.

See [Threshold groups - material terms and subcontractor terms](#) and [Threshold groups - labor hour terms](#) for more information on threshold groups.

You can select the following threshold types:

- **Percentage based** threshold (applicable to **Terms for materials** or **Terms for subcontractors**)
 - **Hourly rate based** threshold (applicable to **Terms for labor hours**).
4. Click **Save**.
 5. Go to the Thresholds for terms level and step.
 6. On the action panel, either select Add percentage-based threshold if you want to link Terms for materials or Terms for subcontractors (threshold type = **Percentage based**).
 7. Or, select **Add hourly rate-based threshold**, if you want to link **Terms for labor hours** (threshold type = **Hourly rate based**).
 8. Add as many thresholds as you require:

For **Terms for materials** or **Terms for subcontractors**, after entering a **Code** and **Description**, fill in the following fields:

- **Threshold amount**: determines as of which amount (spent on materials or subcontractors) a surcharge should be applied to the order, in accordance with the applicable **Terms for materials** or **Terms for subcontractors**.
- **Threshold percentage**: The actual surcharge percentage that applies if the corresponding threshold amount is reached.

For **Terms for labor hours**, after entering a **Code** and **Description**, complete the following fields:

- **Hourly rate**: enter the rate that applies to the number of hours in the defined threshold (difference between minimum and maximum). If the total number of hours for an order's completion fall within this threshold, this rate will be applied for revenue calculations.
- **Minimum no. of hours** - fill in a starting value for the threshold. This the number of hours as of which the hourly rate should apply.
- **Maximum no. of hours** - this field is automatically filled with a value that is based on the minimum number of hours of the next threshold. This value is set to one hundredth below the next minimum value.

9. Click **Save**.

You can now link the defined threshold group to corresponding:

- **Terms for materials** and **Terms for subcontractors**. You can only link a threshold group to these terms if their selected **Threshold method** is **Advanced thresholds**.
- **Terms for labor hours**.

See also [Terms for materials - fields](#), [Terms for subcontractors - fields](#) and [Terms for labor hours - fields](#).

Examples of service agreements with specific terms

In this section you will find some examples of service agreements with specific terms:

- Service agreements for a specific space / space type (example 1 and 2)
- Service agreement for a specific service location (example 3)

Example 1: specific space / space type

General, everyday climate control issues need to be solved within 1 working week. However, climate control issues that occur in specific server spaces must be solved within 1 hour, because of the immediate impact on cooling the servers.

This example illustrates deviating KPIs, based on specific spaces / space types. In this case, you can define two service agreements:

1. Generic contract line service agreement: TTC (time to complete) for Service 'Climate control' = 7 days
2. Deviating space (space type) service agreement: TTC for Service 'Climate control' = 1 hour

Example 2: specific space / space type

General, everyday climate control issues need to be solved within 1 working week against an hourly rate of 75 EUR. However, the same climate control issues occurring in specific server spaces must be solved within 1 hour, against an hourly rate of 110 EUR, because of the high impact on cooling the servers.

This example illustrates deviating KPIs based on specific spaces/space types. In this case, you can define two service agreements:

1. Generic contract line service agreement: TTC for Service 'Climate control' = 7 days. Labor hour tariff = 75 EUR
2. Deviating space (space type) service agreement: TTC for Service 'Climate control' = 1 hour. Labor hour tariff = 110 EUR

Example 3: specific service location

In general, tradespeople's working hours are invoiced against an hourly rate of 55 EUR. However, for service locations A, B and C the hourly rate is 45 EUR. In this case, you can define two service agreements:

1. Generic contract line service agreement: tradesperson's hourly rate = 55 EUR
2. Deviating service location(s) service agreement: tradesperson's hourly rate = 45 EUR

Maintenance plan viewer


With the **Maintenance plan viewer** you can enable your customers to view a graphical display of all maintenance activities that you, as their service provider, are responsible for. They will be able to see when their maintenance activities are due or search for a particular attribute of a maintenance activity definition. The filter options allow them to only view those activities that comply with their particular query. They can also select a specific maintenance activity definition in the viewer to see more detailed information.

Maintenance plan viewer - screen layout


The **Maintenance plan viewer** interface in **Self-Service / Web configuration** looks similar to that of the ProCenter Web client's **Maintenance planner TSI**. The difference is that the **Maintenance plan viewer** only allows for *viewing* maintenance plans and their activities. There are limited customization options. The following image explains the five main sections of the screen layout:

The screenshot shows the 'Maintenance plan viewer' interface. It includes a search block with filters for Property, Code, Activity type, Asset/building element, Description, and Maintenance regime. Below this is a table of activities with columns for Code, Description, Asset/building element, Property, and Next activity. To the right is a planboard calendar for 2021, showing activities plotted on a grid. Below the calendar is a pagination control showing 'Page 3' and '15 - 21'. At the bottom, there are two detailed views: one for an activity definition (Code: 51-21-1236, Description: Atmosp. Gas Boiler HR 50 - 65 kW, replace) and one for an activity schedule (Date-time: 9/27/2021 13:18, Day of week: Mon, Order, Activated: Yes, Recurring: Yes, Overruled: No).

1. **Search block** - Displays the fields that your customers can filter on. With these fields they can find relevant maintenance activity definitions and planned activities. The search fields that are displayed here, can be configured in Web Configuration .

 The search fields are displayed in columns (separated and aligned) when bars are added in configuration.

2. **Activities block** - Displays maintenance activity definitions in rows (after filtering in the **Search block**).
3. **Planboard block** - Displays maintenance activities that were plotted, based on the scheduled frequency and maintenance regime type. The shapes and colors of the activities indicate their type and status. For more information on the options in time scale block, refer to [Maintenance plan viewer - features](#).

 The maximum number of activities displayed per row is limited to 150, irrespective of the view (week/month/quarter/6 months/year) selected.

- 4. Pagination block** - Displays the page you are on and the total number of pages, and allows for navigation to other pages.

i Pagination is applied to the viewer, to ensure that large numbers of activities can be loaded quickly and switching between views (day, week, month etc.) proceeds adequately. The number of records shown per page depends on your configuration, with a maximum of 100 records per page.

- 5. Activity details block** - Displays the details of the selected activity definition. The fields that are displayed here, can be configured in Web Configuration .
- 6. Planned activities block** - Displays the details for each individual maintenance activity in the row. For example: **Date-time**, **Order** or **Activated** (Yes/No).

i You can configure the fields displayed in each of these blocks in Web Configuration TSI. For more information, refer to [Maintenance plan viewer](#).

Maintenance plan viewer - features

The **Maintenance plan viewer** interface includes various controls, filters and other features that allow your customers to view maintenance activity definitions and their respective activity details.

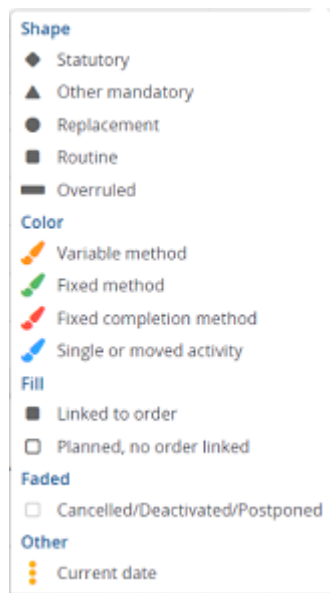
The screenshot shows the 'Maintenance plan viewer' interface. At the top, there are filters for Property (14, Columbus Square), Asset/building element (Airco Unit), Activity type, and Maintenance regime. Below these are navigation buttons (1, 2) and a calendar view (3) for the year 2021, showing months from October to March. A table (4) lists activity definitions with columns for Code, Description, Asset/building element, Property, and Next activity... (Date-time). A detailed view (5) of a selected activity (SP16.02) shows its description, asset, and property. A table (6) shows the activity details for the selected activity, including Date-time, Day of week, Order, Activated, Recurring, and Overruled.

Code	Description	Asset / building element	Property	Next activity ...
SP16.01	Check Air Conditi...	Airco Unit	14, Columbus Sq	10/1/2021 00:00
SP16.01	Check Air Conditi...	Airco Unit	14, Columbus Sq	10/1/2021 00:00
SP16.02	Check Air Conditi...	Airco Unit	14, Columbus Sq	9/27/2021 15:07
SP16.03	Condition based...	Airco Unit	14, Columbus Sq	9/27/2021 15:07

Date-time	Day of week	Order	Activated	Recurring	Overruled
11/1/2021 00:00	Mon		Yes	Yes	No
2/1/2022 00:00	Tue		Yes	Yes	No
5/1/2022 00:00	Sun		Yes	Yes	No

- 1. Refresh button** to update the list.
- 2. Hide empty rows** button to conceal empty rows, i.e. activity definitions without plotted maintenance activities. When this option is activated, the total page count is hidden, nor can you navigate to a specific page number or to the last page.

3. **Next activity date-time** displays the next date-time of an activity; option to sort / group the maintenance activity definitions in the order of the next activity date.
4. **Calendar** to select the date as of which the maintenance activity definitions are displayed.
5. **View** options to display the activities in a week / month / quarter / 6 months and year view.
6. **Export** button to copy the planboard content to PDF or to a spreadsheet, for printing purposes.
7. **Legend** option explaining the meaning of the activities' shape, color and fill.



8. **Hint text** or tooltip - is displayed when you hover over an activity.

i The date-time displayed on the hint text is based on the user setting **Use 24-hour notation** of the logged-in user.



For more information on how to configure a **Hint text**, refer to [Maintenance plan viewer fields](#).

9. **Sorting** (1) and **Grouping** (2) options for columns - right-click in the column header and select the relevant sorting and / or grouping option from the context menu.

Maintenance plan viewer

Property 1, Airport Boulevard > Cod

Asset / building Storage boiler electri > Des

  2 1


Code	Description	Asset / bu...	Property	Next activity ...
● AHU discharge/heat recovery 2.8-5.6m3/s (3)				
5771.454.00B	AHU discharge/h	AHU discharge/		2022 12:00
5771.454.00K	AHU discharge/h	AHU discharge/		
5771.454.00L	AHU discharge/h	AHU discharge/		
● AHU extract + WTW < 0,6 m3/s (1)				
57.71.221B	AHU extract + W	AHU extract + W		
● AHU extract 1.4 - 2.8 m3/s (10)				
SP01.02	Check air handlir	AHU extract 1.4 - 14, Columbus Sq		

Context menu for 'Property' column:

- Columns >
- Hide column
- Sort ascending
- Sort descending
- Multisort >
- Group ascending
- Group descending
- Stop grouping

Exporting the planboard to PDF or spreadsheet

You can export the visible content of the current planboard to PDF or a spreadsheet.

Click the  button at the top of the planboard to start the export.

A drop-down menu includes the following options: **Export to PDF** or **Export to spreadsheet**.

Export to PDF

If you select this option, a dialog is displayed with the following settings:

- **Columns** - select the fields you want to include as columns in the export. By default all fields are selected.
- **Title** - You can freely add text here.
- **Schedule range**- you can either:
 - export the **Complete schedule**,

- export the **Visible schedule**,
- specify **Date range** for the export, by choosing an start and end date.
- **Start date / End date** - only visible if the date range is selected at **Schedule range**.
- **Rows** - choose whether you want to export all rows or only the visible rows.
- **Pagination** - the default export option is **Multiple pages**. If you select **Single page**, the maintenance plan is scaled to fit a single page.
- **Paper format** - the supported formats are **A3** and **A4** (default).
- **Orientation** - either select **Portrait** or **Landscape** (default).

General behavior of this feature:

- Exports a graphic representation of the planboard to PDF: all *visible* content is included
- Export to PDF includes a logo in the header (top left). Which logo is used, depends on the following logic:
 - If you (the logged-in user) are a **Customer** with a customer logo, your logo is displayed.
If this does not apply, then ->
 - The **Logo for printing** in the **Themes** TSI is displayed.
If this does not apply, then ->
 - The default Planon logo is used.

Export to spreadsheet

If you select this option, a dialog is displayed with the following settings:

- **Columns** - select the fields you want to include as columns in the export. By default all fields are selected.
- **Schedule range** - you can either:
 - export the **Complete schedule**,
 - export the **Visible schedule**,
 - specify **Date range** for the export, by choosing an start and end date.
- **Start date / End date** - only visible if the date range is selected at **Schedule range**.
- **Rows** - choose whether you want to export all rows or only the visible rows.
- **Format** - you can select to export to **CSV** format (default) or to **XLSX** format.
- **Delimiter** - option to either use a comma or a semicolon as delimiter for separating the data items. This option is only available if you select CSV format.

General behavior of this feature:

- Exports a list of all activities (events) that are displayed on the planboard: all pages are included when exporting to spreadsheet, with a maximum of 250,000 activities. If this number is exceeded you will be notified.
- For each event that is exported, the **Start date-time**, **Order**, **Activated**, **Recurring** and **Overruled** fields are also exported.

Customer management - setting up Customer portals

If you want to make specific Planon functionalities available to your customers, you can set up a customer portal per customer. This means configuring and styling multiple Planon Web Clients and Homepages.

The portals will give your customers easy access to a 'one-stop-shop' to order services, enter special requests and to interact with your organization. The customers have real-time web access to status updates, reports and KPI dashboards.



For more information about the CSS styling, refer to the Web Configuration documentation.

Removing Web Client buttons from the ribbon

Precondition: this feature is only available in Service Provider mode.



For more information on the Service Providers solution mode, see the user documentation: System Settings > General settings fields.

If required for your customer portal, you can remove the **Reference date**, **Alarms** and /or **Help** button(s) from the ribbon.

Procedure

1. On the navigation panel, go to Web client > Web client.
2. Select the web client definition from which you want to remove buttons.
3. In the **Remove reference date button**, **Remove alarms button** and / or **Remove help button** fields, select Yes to remove the button(s) from the ribbon.
4. Click **Save**.

The button(s) are removed from the ribbon.

Replacing the Planon logo with a custom logo

You can replace the Planon logo with a custom logo, for example your own logo. If you create dedicated web clients for your customers, you can also display their logo. You can select an existing logo from the available files or upload one.

Procedure

1. Go to the Web Client TSI.
2. On the navigation panel, go to Web client > Web client.
3. Select the web client in which you want to replace the logo.
4. On the **General** tab, go to the **Logo** field and select an icon from the list with existing image files.
5. If you want to upload a new logo, click the **Upload** icon.
6. Click **Save**.

The Planon logo is replaced by the selected logo. An additional logo, 'Powered by Planon', will appear at the bottom of the navigation panel.



To remove an existing logo or to quit your replacement action, click the **Clear** icon. The Web Client will now display the default Planon logo.

Configuring the Homepage title

It is possible to configure the homepage's title. The page title is also used as the homepage's tab title.

1. Go to the **Web Client** TSI.
2. Select the Homepage on which you want to configure the Page title.
3. In the **Page title** field, select a relevant language and enter a title for the homepage.



The page title of a homepage is set to '**Home**' by default.

4. Click **Save**.

The homepage displays the configured page title.

Assigning gadgets a fixed position on the homepage

You can fix the order and position of gadgets on the homepage. This will prevent end users from accidentally adding or removing any gadgets on that homepage.

Procedure

1. Go to ProCenter modules > Web configuration > Homepage.
2. Select the Homepage for which you want to restrict the end user's access to gadgets.
3. Set the field Configurable by end user to No to impose the restriction.

4. Click Save.

The homepage will display the gadgets in a fixed position. End users cannot add or remove any gadgets.

Displaying customer logo of the logged on user

You can display the customer logo in the box shown when you click the logged on user's name on the Planon ribbon. The logo is displayed to all users logged on to your customer's environment.

Procedure

1. Go to the Web Client TSI.
2. Select the web client environment to which you want to add a logo.
3. On the General tab, set the field Show customer logo of logged in user to Yes to display the logo.
4. Click Save.

If an image is selected in the Logo field of the Customers business object and if the logged in user belongs to the customer's domain when this setting is enabled, the logo is displayed in the About box.



For more information on the **Logo** field, see [Customer fields](#).

Maintenance plan viewer

With the Web Configuration **Maintenance plan viewer** module you can create a web definition to display relevant maintenance activity definitions and their activities to your customers.

Your customers will be able to filter and change the view to see relevant maintenance information.

Defining Maintenance plan viewer web definitions

Use the following procedure to configure **Maintenance plan viewer** web definitions for your customers.

Procedure

1. Go to ProCenter modules > Web configuration.
2. Select the Maintenance plan viewer selection step.
3. On the action panel, click Add to add a new web definition.
4. On the data panel, complete the relevant fields.

For a description of these fields, refer to [Maintenance plan viewer fields](#).

5. Click Save.

The new maintenance plan viewer web definition is created and can now be customized further.

6. On the action panel, select Link navigation groups.
7. Link the relevant customer navigation group(s) to the web definition.
8. On the action panel, select Link user groups.
9. Link the relevant customer user group(s) to the web definition.

KPI charts for customer contracts

KPI charts enable contract managers to visually assess a contract's performance via a gauge dashboard.

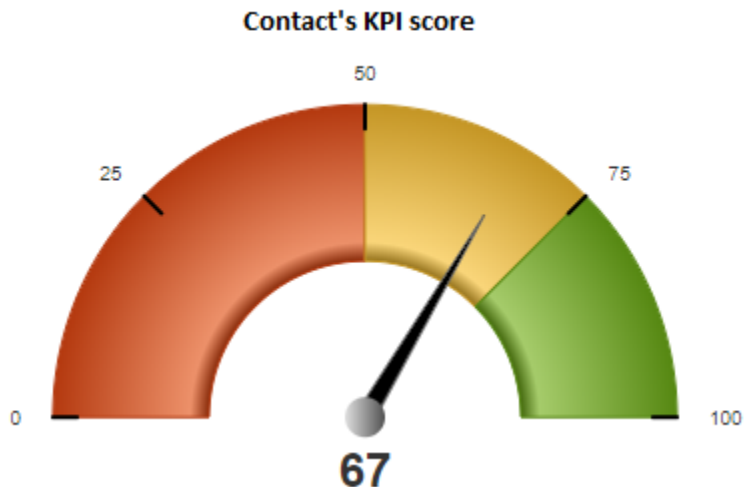
Concepts

The following topics describe the concepts that are key to understanding the functionality.

KPI charts

KPI is an acronym for *key performance indicator*. KPIs on orders (work orders or PPM orders) are used to measure the effectiveness of a service in achieving its objective.

A KPI chart is an angular gauge type in Self-Service Publisher that displays the KPI results based on contract threshold. It enables you to view and analyze the contract 'performance'. An example of KPI chart is given below:



In the above image, 0, 25, 50, 75 and 100 are threshold values. The KPI value is 67, in the yellow area. This represents a reasonable, but still insufficient performance of the contract.

Threshold

A **threshold** is a maximum or minimum value which is used as a benchmark to assess and review the current situation.

Working with KPI charts

This section explains the processes and tasks that can be configured in the **KPI charts** TSI.

- At **KPI chart groups** you define the chart groups that link to contracts.
- At **Contract KPI thresholds** you define threshold values for each contract in a KPI group.

Adding KPI chart groups

In Supporting data > KPI charts, you can create a KPI group and link it to multiple contracts. You can specify different threshold values per contract (for the same criteria).

Procedure

1. Go to KPI chart groups.
2. On the action panel, click Add.
3. On the data panel, enter a relevant Code and Name for the KPI chart.
4. Select the No. of thresholds that you want to define for the KPI chart group. You can define a maximum number of 4 thresholds.
5. Click Save.

You have now created a KPI chart group.

You can link contract(s) to this group by clicking the **Link contract** option on the action panel. In the **Link contact** pop-up, move the contract(s) from **Available** to **In use** and click **OK**. The linked contract(s) will be displayed in the **Linked contracts** field in the data panel.

Proceed with [Adding contract KPI thresholds](#).

Adding contract KPI thresholds

You can specify different threshold values for the various contracts within the same KPI group.



If you have linked contracts on the **KPI chart groups** level, a contract KPI threshold is created automatically for each contract. However, you must still provide the required threshold values on the data panel.

Procedure

1. Go to KPI chart groups > Contract KPI thresholds.
2. On the action panel, click Add.
3. In the data panel, fill in the relevant fields. For description of these fields, see Contract KPI threshold fields.
4. Click Save.

You have now added threshold values for a contract in the KPI chart group.

Field descriptions

The following section(s) describe(s) the fields, their purpose and meaning.

Contract KPI threshold fields

Field	Description
Contract	Select a contract for which you want to define the threshold values.
Start of range	Enter a start range for the contract threshold. This will be the starting value of the KPI chart.
End of range	Enter a end range for the contract threshold. This will be the end value of the KPI chart.
KPI chart group	Select the KPI chart group from the list.
Threshold limit 1-4	Enter number(s) to indicate the threshold values of the KPI chart. These values will be plotted between the start and end range of the KPI chart. Depending on the number selected in No. of thresholds field in KPI chart groups, these fields will become available.

Glossary

This glossary is a key to the main concepts used in the Service Providers solution.

Bonus - malus

On the **Terms for time**, you can make settings with regard to the bonus-malus calculations that should apply in cases of over-performance or under-performance. The key performance indicators (KPIs) that you have agreed with your customer in the service terms, determine whether the *performance* or *availability* of a service was satisfactory or not. Based on the bonus-malus settings, additional calculations are made that will affect the generated order revenues. In other words, if there is under-performance, a penalty (malus) may be charged to the service provider, which comes down to giving a discount to the customer.

See [Bonus - malus calculations](#) to understand how calculations are made based on the bonus-malus settings.

See [Terms for time - fields](#) to learn more about bonus-malus settings.

See [Service terms - general and specific](#) to learn more about **Terms for time** and other service terms.

Bonus - malus calculations

The formula for calculating a malus is determined by the **Calculation method** you selected on the Terms for time. The following methods are available:

- **Base amount & Variable** calculation method

Calculation basis = [Weighting factor](#)

Calculation = `((Weighting factor (BD+PID*PI)) * (-1))`

Calculation basis = [Direct](#)

Calculation = `BD + (PID*PI) * (-1)`

Key:

BD=Base discount,

PID=Penalty interval discount,

PI=Penalty interval

PI is taken as the lowest of **Penalty** and **Max. no. of penalty intervals** values.

The formula to calculate the penalty interval value is:

`PI=floor((ceil(RRT-ART))/PT)`

Key:

RRT=Real recovery time,

ART=Allowed recovery time,

*PT=Penalty threshold (hours),
ceil rounds up the value,
floor rounds down the value.*

Example 1: (Calculation basis = Weighting factor)

Weighting factor=4,
BD=30,
PID=20,
PT(hours)=5 hours,
Max. no. of penalty intervals=1,
Insert moment=10:00,
Fixed on=17:00,
ART=2 hours,
RRT=7 hours

$PI = \text{floor}((\text{ceil}(\text{RRT}-\text{ART}))/\text{PT}) = \text{floor}((\text{ceil}(7-2))/5) = \text{floor}((\text{ceil}(5))/5) = \text{floor}(1)$

$PI=1$, Total revenue = (Weighting factor(BD+PID*PI))*(-1) = (4(30 + 20*1))*(-1) = -200

Example 2: (Calculation basis = Direct)

BD=500,
PID=150,
PT(hours)=1.5 hours,
Max. no. of penalty intervals =2,
Insert moment=12:00,
Fixed on=16:45,
ART=2 hours,
RRT=4.45 hours

$PI = \text{floor}((\text{ceil}(\text{RRT}-\text{ART}))/\text{PT}) = \text{floor}((\text{ceil}(4.45-2))/1.5) = \text{floor}((\text{ceil}(3))/1.5) = \text{floor}(2)$

$PI=2$, Total revenue = (BD+PID*PI)*(-1) = (500 + 150*2)*(-1) = -800



To allow for targeted malus revenue calculations, you can link **Weighting factor** to **Space usage (1) / Spaces (2) / Space categories (3)**. During the revenue calculations, the system will check the service agreement for any space-related weighting factors in the above priority order. See the field descriptions in **Spaces & Workspaces** for information on the space-related weighting factor.

- **Variable only** calculation method

Calculation = $(BD + (RRT / PF)) * (-1)$

Key:

BD=Base discount,

RRT=Real recovery time (hours),

PF=Partial factor



Real recovery time = Actual completion date-time - Original reporting date-time (if the **Original reporting date-time** is not filled, the **Reported on** date-time is used).
Allowed recovery time = Requested completion date-time - Original reporting date-time.
These fields are available on the main order.

Example:

BD=80,
PF=0.3,
Insert moment=12:00,
Fixed on=16:00,
RRT=(12:00pm - 16:00) = 4 hours

Total revenue excl. VAT = $BD * (RRT/PF) * (-1) = 80 * (4/0.3) * (-1) = -1066.67$
euro

See [Terms for time - fields](#) to find out more about bonus-malus settings.

See [Bonus - malus](#) to understand what bonus-malus is all about.

Customer contracts

Contracts are binding agreements that are made between service providers and their customers. In a contract, you specify the contract details, the related service agreements and terms per service location.

 When configured, it is possible to view 'Contract history' and 'Contract line history' for **Customer contracts** to keep track of specific contract (line) information. History selection steps can be added to the **Customer contracts** TSI at the **Contract lines** level and **Service Agreements** level. For more information on adding these history steps, see [Configuring selection levels and selection steps](#) and [History](#).

 For more information on contract fields, see [Contract data fields](#).

Contract lines for customer contracts

In the Service Providers solution, contract line(s) and their associated service agreements and terms determine the way your revenues are calculated for orders executed under a customer contract. In Planon ProCenter revenues ensuing from a contract + service agreement are calculated via an **SLA amount** contract line. As soon as an order is added, a search mechanism is triggered to find the applicable corresponding contract line, based on the combined information **Customer + Property + Service agreement**.

There are several contract line types available for customer contracts:

- *Standard* - this type applies to regular contractual activities. These contractual activities are carried out because the customer or an operative of the service providing organization found an issue and reported it. This type of contract line is automatically found when searching the right service for an order, based on the combined information **Customer + Property + Service agreement**.
- *Special* - a type that is not found automatically. This type can only be chosen manually on the order for exceptional situations, for example if a warranty still applies to an asset.

- *Proactive* - this type applies to special contractual activities which may be detected and reported *proactively* by an engineer of the service providing organization, usually against lower rates than the standard contractual activities. Proactively reported work should always be registered under a separate **SLA** contract line of type *proactive*, with separate terms attached. Only designated tradespeople and other users with special permissions are allowed to report work proactively. See [Proactive reporting of contractual work](#). If they report an issue, the system will check for associated contract lines of the type *proactive*. If such contract lines are found, the associated terms are applied. If no such contract lines are found, the standard contract line and its associated terms are applied.



'Proactive' contract lines cannot be linked to service levels.

- *Non-contractual work contract line* - if no standard or proactive contract line is found in the process of searching a service, the system will automatically search for a non-contractual contract line for the combination 'customer + property'.
- *Preventive* - this type applies to contractual activities related to *preventive maintenance* contracts. This contract line type can only come from the contract. It is not possible to manually create it on a PPM order. Preventive contract lines allow for flexible revenue calculations on PPM orders. You can link *service agreement services* to this contract line type. Also see the note at the bottom of this topic, about editing an existing contract line.



Per contract line, you can only link 1 service agreement per specified period, of the type **Service agreements-contract lines**, as linked service agreements are not allowed to overlap. The terms (General terms, Labor hour terms, Subcontractor terms, Material terms, Travel terms) related to the service agreement determine how order revenues are calculated for PPM orders.



Preventive contract lines cannot be used for **Customer budgets**.



Typically, you can only *edit* the **Contract line type** field while the contract line is still in the **Inactive** or **Precalculate** status. Depending on the type you select, changing the contract line type may mean that links to Service agreement services or Service levels are no longer applicable. In that case, a warning is displayed and the links will be removed if you proceed. The exception to this editing 'ban' on **Active** contract lines is changing an existing active contract line from **Standard** to **Preventive**. This is possible, by clearing the **Contract line type** field first and saving the empty value, and by selecting **Preventive** next and saving that value. Please note that changing a value on an active contract line is only possible if no general terms or service agreements are linked.

Customers

In Planon, the organizations a service provider is working for are registered as **Customers**. You can register the customer organizations in a hierarchical structure in the **Customers** TSI (3 levels). In addition, you can define service location types and add service locations for these customers. In **Customer contracts** you can link a customer to one or more contracts, as a contracting party.

Depending on your configuration, the **Customers** selection level is available in the following TSIs:

- Customer contracts
- Assets
- Work Orders
- Spaces & Workspaces
- Meters
- Projects
- Open module

See [Defining customer-related data](#), [Adding customers](#), [Adding service location types](#) and [Adding service locations](#) for more information on adding customer-related data.

Proactive reporting of contractual work

Proactively reported work concerns issues that were detected and reported on site by a designated engineer from the Service Providers organization. Typically, different terms and more favorable prices are applied to this type of work. If your configuration supports proactive reporting of work with its own contractual terms, and if the engineer in question is a designated reporter of this type of work, the system will automatically link the right terms to the order.

A customer contract can be configured for proactively reported work by:

- adding an SLA contract line with contract line type *proactive* to the relevant contract in **Contracts** .
- setting the **Proactive reporter of work?** field in **Personnel** to **Yes** for all personnel who are allowed to report this type of work.

Methods for travel terms

You can define a calculation method for fixed travel revenues on a service agreement in **Customer contracts**, at **Methods for travel terms**. This allows you to specify in detail how fixed travel revenues should be calculated. For example, you can have them calculated per day, per internal tradesperson, on the main order only, or for both main and suborders individually. See [Adding a calculation method for fixed travel terms](#).



As with **Terms for travel**, the **Methods for travel terms** are *life cycle aware*. This means that a snapshot record is created for every modification. The life cycles can be viewed in

Service agreements

A service agreement is a 'catch-all' element that brings together the services that must be delivered under a customer contract and the terms under which these services are to be delivered.

There are several subtypes available for **Service agreements** that specify to which areas (service components) a service agreement applies:

- **Service agreements-asset groups.** This type can, for example, apply to all M&E installations.
- **Service agreements-assets.** This type can, for example, apply to one specific air conditioning unit, or a multiple asset, consisting of identical air conditioning units
- **Service agreements-space categories.** This type can, for example, apply to all meeting rooms.
- **Service agreements-spaces.** This type can, for example, apply to one specific meeting room.
- **Service agreements-location types.** This type can, for example, apply to all logistics centers.
- **Service agreements-service locations.** This type can, for example, apply to one specific logistics center.
- **Service agreements-contract lines.** This type applies directly to the linked contract line.

A service agreement can only be applied to the services that are defined in the [Service catalog](#). You link a service agreement to a contract via a contract line.

The execution of a service agreement is detailed further by linking it to all kinds of relevant terms. These terms can have bearing on time, labor hours, travel, subcontractors, materials or bonus-malus.

Service agreement categories

In Planon, you can categorize the services you offer to your customers. This is done in a hierarchical structure. At the highest level you typically add generic categories. This helps you to maintain uniformity in the catalog data and create clear business reports. You can use the lowest level in the hierarchy to differentiate between customers, by creating specific categories and link them to customer services.

For more information on adding service categories, see [Adding service agreement categories](#).

Service agreement services

When defining your internal organization in Planon, you start by setting up a comprehensive service catalog, with all the services on offer. In Planon, these are called *service agreement services* or SA services.

Services can be linked to a contract via a contract line, a [service agreement](#) or one of its subtypes.

Services can be linked to planned maintenance via activity definitions of all types, for example to a **Contract activity definition** or **Survey activity definition**. To establish the link, you can configure a **Service agreement service** reference field on the layout of the relevant type of activity definition.



For more information about working with activity definitions in planned maintenance, see the topics about activity definitions in the *Planned maintenance* user documentation.

Service catalog

A comprehensive service catalog is the reflection of your identity as a service provider. Planon's **Service catalog** fully supports this business process, by enabling you to register all the planned and unplanned [services](#) you can offer to your customers, in a hierarchical structure. You can also group these services logically, by defining various [service agreement categories](#). This will help you filter out relevant data while navigating the software.

See [Defining a service catalog](#) for more information on setting up your catalog.

Service components

As service provider, you deliver services to your customers at many different service locations and for many different types of assets (hard services). The objects for which those services are delivered are called *service components*. The following service components can be registered in Planon:

- **Service location groups**
- **Service locations** (properties)
- **Space categories**
- **Spaces**
- **Asset groups**
- **Assets**

For more information on working with service components in the Service Providers solution, see [Adding service agreements](#).



For more information about registering the above-listed service components in Planon, see the user documentation on [Assets](#), [Spaces & workspaces](#) and [Property details](#).

Service level

In agreement with your customer, you can define various service levels for certain services. These service levels can be used to define specific terms per level and to generate KPIs and revenues accordingly. Example: the introduction of Gold, Silver and Bronze service levels.

When creating a service level, keep the following points in mind:

- You must define service levels per customer.
- You can create any number of service levels per customer.
- Based on the service levels defined for the customer, you can also define applicable service levels per contract line.
- You can define service levels on every type of term, except general terms.
- It is possible to set *one* of the service levels as a default for a customer (though this is not compulsory). However, if you define a default service level, the service level becomes mandatory on the corresponding order.

Service locations

You can register the service location types and service locations of your customers. A service location is a physical location belonging to your customer and it must be unique to this customer. The location details will help you to locate and deliver better services to your customers.



A service location is the same as a property.

Service terms - general and specific

Terms are 'settings' on the service agreement that determine how order revenues and order costs are calculated. The terms will consequently also impact the invoicing process.

In Planon, there are various types of service terms, that must be configured in a specific order:

You start with defining the *general terms* for a service contract. These are service terms that apply to the whole contract.

- **General terms:** defined and applied per contract line. For more information, see [General terms - fields](#).

You continue by defining any exceptions to the general terms. These are *special terms* that are linked to relevant service agreements, based on the order details to which they apply. (Labor hours, Order lines etc.)

- **Labor hour terms:** used to calculate the revenues in case **labor hours** of the types **Work** or **Waiting** are present on an order. For more information, see [Terms for labor hours - fields](#).
- **Subcontractor terms:** used to calculate the revenues in case **subcontractor lines** are present on an order. For more information, see [Terms for subcontractors - fields](#). **Material terms:** used to calculate the revenues based upon the materials specified in the **order lines** of an order. For more information, see [Terms for materials - fields](#). **Travel terms:** are defined to calculate the revenues in case labor hours of type **Travel** exist. For more information, see [Terms for travel - fields](#).
- **Time terms:** used to calculate the requested Time to Respond (TTR), Time to Attend (TTA), Time to Fix (TTF) and Time to Complete (TTC) on an order when the **service agreement** is applied. They are also used to calculate the scores of these KPIs (using the weighting as defined in the term). For more information, see [Terms for time - fields](#).
- **Bonus-Malus terms:** used to calculate a bonus in case of overperformance (if the terms are met with superior results) or malus in case of underperformance (if the terms are not met). For more information, see .

For more information on working with service terms, see [Adding general terms](#) and [Adding specific service terms](#).



Some service terms have additional configuration options for the calculation of revenues. You can configure:

- **Surcharge rates** for General terms and Terms for labor hours. See [Surcharges - general terms and labor hour terms](#)
- **Threshold groups** for the dynamic calculation of surcharges on **Terms for materials** and **Terms for subcontractors** or hourly rates on **Terms for labor hours**. See [Threshold groups - material terms and subcontractor terms](#) and [Threshold groups - labor hour terms](#).
- **Methods for travel terms** by which you can control the way fixed travel revenues are calculated on the order: per day, per internal tradesperson, on the main order only and so on.

Service provider

Service Providers are companies that provide full or partial business process outsourcing. Typically, this outsourcing includes non-core services off-site, such as administrative tasks, customer services, IT services and technical maintenance support.

Subcontractors

A subcontractor is a third-party involved in carrying out (part of) the work ensuing from a customer contract. As a Service Provider, you are likely to outsource work to one or more specialized subcontractors. You may even have multiple agreements with individual subcontractors, covering the scope of work that they carry out. If your organization works with subcontractors, you can configure the necessary data in the **Subcontractors** TSI.

Similar as with your customer, you will also have one or more service contracts with your subcontractor(s). This contract is the legally binding part of the relation with the subcontractor. In addition, you will also enter into a framework agreement with the subcontractor, which is a 'handshake' agreement that includes all planned maintenance work that must be outsourced into a single batch to the subcontractor for a specific customer. Price negotiations for the outsourced maintenance activities are typically registered in this framework agreement. If your organization decides to work with framework agreements and subcontractor contracts, you can configure the necessary data in the **Outsourced maintenance proposals** TSI and **Subcontractor contracts** TSIs.



For more information on configuring the TSIs related to subcontractor data, see [Subcontractors](#).

Subcontractor lines on an order

The costs resulting from outsourcing work to a subcontractor will eventually end up on the corresponding order (reactive work order or planned maintenance order).

After the costs ensuing from the work performed by a subcontractor have been registered on a relevant order in **Subcontractor lines**, Planon can convert these costs to order revenues, based on the applicable **Terms for subcontractors**. You can choose to invoice the subcontractor costs to your customer on the basis of the actual purchase price or on the basis of your own labor hour rates.

Surcharges - general terms and labor hour terms

If you want to define **surcharge terms**, for example to be able to charge extra for emergency situations or overtime, you can do this in the separate **Surcharge terms** TSI. Here, you can define a **Surcharge percentage** or a fixed **Hourly rate-based surcharge amount**. Note: you might need to add the **Surcharge terms** TSI to your navigation panel first and configure its layout. For field descriptions, see: [Surcharge rates - fields](#).



It is not allowed to link *a calendar with deviating hours* to surcharge rates (an applicable calendar must be linked in the **Validity** field at the **Surcharge rates** selection step), nor is it possible to link deviating hours to a calendar that is already linked to surcharge rates. For more information about defining calendars see [Configuring calendars](#).

Once defined, surcharge terms can be linked either to multiple **Terms for labor hours** or to **General** terms. The surcharge rates can be linked to general terms in case the terms for labor hours do not have a specific surcharge.



With regard to labor hour revenue calculation, the new surcharge is only applied to labor hours of work assignments with status **Travel**, **Work** and **Wait**, and only if surcharge rates actually apply. In case an hourly rate-based surcharge applies, the calculation is as follows: **No. of hours * Fixed amount per hour**. This is added as surcharge to the revenue amount.

You can link **Terms for labor hours** or **General** terms to surcharge terms via the **Surcharge terms** reference field on their respective layouts. See also [Terms for labor hours - fields](#) and [General terms - fields](#).

Time aware links

In the Service Providers solution, there are many elements (business objects) that can be linked with one another. Some contractual links are 'time aware', which means that they take the reference date into account and have a clear start and - optionally - an end.

When you create contractual agreements (contract lines, service agreements, terms) between yourself as Service Provider and your customer, you can specify which links to other elements in Planon apply to these contractual agreements. These links are subsequently used to find which contract lines apply to an order, and also for generating revenues, quotations, and estimates.

You can link or unlink 'attributes' to/from contract lines or service agreements, in accordance with the life cycle of the contract line / service agreement. Clicking the **Link** action for the business objects listed below, also allows you to define *when* links are valid. In other words, when they should start and end. By doing so, you create a unique life cycle for each link, across the contract period. Once defined, Planon will make sure that the link is only applied during the specified period.

In Service Providers solution mode, the following links between elements (technical term: business objects) are *time aware*, which means they can have their own unique life cycles.

Contract lines:

See also: [Linking contract lines to services, properties, service levels](#)

- Contract line(s) - Property/-ies
- Contract line(s) - Service level(s)
- Contract line(s) - Service agreement service(s)

Service agreements:

See also: [Adding service agreements](#)

- Service agreement(s) - Property/-ies
- Service agreement(s) - Service agreement service(s)
- Service agreement(s) - Space(s)

- Service agreement(s) - Asset(s)

Customer budget definitions:

See also: [Adding customer budget definitions](#)

- Customer budget definitions - Assets
- Customer budget definitions - Asset groups
- Customer budget definitions - Space categories
- Customer budget definitions - Spaces
- Customer budget definitions - Location types
- Customer budget definitions - Properties
- Customer budget definitions - Contract lines
- Customer budget definitions - Cost centers
- Customer budget definitions - Service agreement services
- Customer budget definitions - Service levels



Terms for labor hours:

Time aware links that are associated with a **contract line**, **service agreement** or **term for labor hours** will be moved in time when the associated business object's **start date** is changed. Any links that end before the new start date will be removed, while other affected links will have their start dates updated.

Threshold groups - material terms and subcontractor terms

It is possible to define groups of thresholds in order to configure 'dynamic' surcharge percentages for the **Terms for materials** and **Terms for subcontractors**. You can configure the thresholds for this dynamic behavior in the **Thresholds for terms** TSI. In this TSI, you create **Threshold groups** with **Thresholds** (each threshold with its own specific threshold amount and percentage). A threshold group can subsequently be linked to **Terms for materials** or **Terms for subcontractors**.



You can only link a threshold group to these terms if their selected **Threshold method** is **Advanced thresholds**.

See also [Terms for materials - fields](#), [Terms for subcontractors - fields](#) and [Defining dynamic thresholds \(threshold groups for terms\)](#).

Threshold groups - labor hour terms

It is possible to define groups of thresholds in order to configure 'dynamic' labor hour rates for the **Terms for labor hours**. The dynamic lies in the fact that you can configure different ranges / thresholds for the hourly rates that must be applied to the total number

of labor hours spent on an order. This determines the final labor hour revenue calculation on an order.

You can configure the threshold groups and thresholds in the **Thresholds for terms** TSI. See [Defining dynamic thresholds \(threshold groups for terms\)](#) for the procedure.

In this **Thresholds for terms** TSI, you first create one or more **Threshold groups** of the type **Hourly rate-based**. On the next selection level, you add the actual labor hour thresholds. A threshold group of the **Hourly rate-based** type can subsequently be linked to **Terms for labor hours**, after which the appropriate hourly rates will be applied to any associated orders, when generating revenues.



Good to know:

- The threshold group is applied as follows: for *non-PPM orders* the hours are totaled up across main order and subs (when linked to the same labor hour term, based on Hour type and linked Trade / Tradesperson category). For PPM orders the hours are totaled up for each order individually.
- Thresholds for hourly rates can only apply to revenue lines to which no *surcharge* applies (provided a surcharge is defined on the **Surcharge terms**). Also see: [Surcharges - general terms and labor hour terms](#). However, if surcharge terms are *percentage-based* the thresholds will apply.

Example of threshold group configuration

Threshold group for Hourly rates	Total no. of hours spent on the order	Applicable hourly rate
Threshold 1	1 - 10 hours	EUR 80
Threshold 2	11 - 20 hours	EUR 75
Threshold 3	21 - hours	EUR 70

The applicable rate is derived from the *total* number of hours spent on an associated order. This means that *threshold 2* is applied if an order is created for a contract with:

- dynamic terms / threshold groups for labor hours
- a total number of labor hours of, for example, 15

Under *threshold 2*, the order's labor hour revenues will amount to 15 x 75 EUR = 1,125 EUR. But if, for example, 25 hours were spent in total on that same order, *threshold 3* will be applied, because the order's labor hour revenues then amount to 25 x 70 EUR = 1,750 EUR.

Tradesperson categories

In the supporting TSI **Tradesperson categories**, you can define relevant categories for tradespeople and fields engineers. These tradesperson categories can be linked to relevant **Terms for labor hours**. With this categorization of skilled workers into specific

groups, you will be able to further refine any revenue calculations that are associated with their labor hours.

See [Terms for labor hours - fields](#) for more information on **Terms for labor hours** data.

Process flow of revenue calculation

When generating order revenues, the system will search per service agreement type for:

1. An applicable **Tradespersons category** (linked to either the **Terms for labor hours** or the **Internal tradesperson**). If such a link is found, it will be applied to the revenue calculation.

If there is no result, the system will search for:

2. An applicable linked **Trade**.

If neither **Tradespersons category**, nor **Trade** are found for the first service agreement type, the system will move to the next type and repeat the search.

Also see **Back-office operations** > [Finding applicable terms for labor hours](#).

Links and references

Tradesperson category links can be added to the layout of **Terms for labor hours**. You can add **Tradesperson category** reference fields to the layouts of the **Labor hours**, **Personnel**, **Revenue estimation lines** (of subtype **Labor hour revenue estimations**) and **Customer quotation lines** business objects.



When using **Tradesperson category** reference fields on **Labor hours**, **Revenue estimation lines** and **Customer quotation lines**, you may want to disable the **Mandatory** setting on the **Trade** field, to be able to only use the **Tradesperson category** criteria for the search process.

Field descriptions

This chapter includes the field descriptions for the main concepts in the Service Providers solution.

Customer fields

Field	Description
General	
Code	Enter a unique code for the customer.
Name	Enter a unique name to identify the customer.
Status	Displays the current status of the customer.
Primary contact	Select the primary contact person at the customer's.
Visiting address	Select the customer's visiting address.
Postal address	Select the customer's postal address.
Phone number	Enter the customer's phone number.
Website URL	Enter the customer's website address.
Domain name	<p>Specify the customer's domain name. This domain name should also be included in the user names of the users who are linked to the customer, as follows:</p> <p><i>[user name]@[domain name].[extension]</i></p> <p>If the domain name is not filled in and included in the user names, you cannot link user accounts for this customer.</p>
Logo	Select the image representing the customer's logo, which is to be displayed in the About box. You can select an existing logo or upload a new one.
Relevant business unit	Select an appropriate business unit to which the customer belongs.



Field	Description
Industry	Select the industry to which the customer belongs.
User code	Displays the customer's user code and name.
Service locations	Displays the service locations linked to this customer.

Billing information



Account manager	Select an account manager from the list.
Account number	Enter an account number.
Billing address	Select the customer's billing address. The addresses in the list are defined in Contact Management .
Billing remarks	Enter remarks (if any) about the billing.
Cash buyer?	Select Yes to indicate that the customer is a cash buyer. No is selected by default.
Chamber of commerce number	Enter the Chamber of commerce number.
Credit number	Enter the credit number.
Debit number	Enter the debit number.
Owner of account	Select an account owner.
VAT number / Tax number	Enter the customer's VAT / Tax number.

General terms - fields

Field	Description
General	
Contract line	Enter the contract line to which the general term applies.
Code	Enter a code for the general term.
Name	Enter a description for the general term.

Field	Description
Comment	Enter a comment on the general terms as required.
General terms	
Minimum no. of hours	If applicable, specify the minimum number of labor hours to be charged. If the number of hours is below a certain threshold, a revenue is created for the difference between the registered hours and the threshold. For example, if the threshold is four hours and revenues are present for three hours, an additional revenue is created for one hour.
Risk percentage	Enter the applicable risk percentage that should be charged over all revenues.
Administrative fee (percentage)	Enter the percentage that you want to charge over all revenues, as an administrative fee. If you would rather specify a specific amount, enter the amount in the Administrative fee (amount) field.
Administrative fee (amount)	Enter the amount that you want to charge as an administrative fee. If you would rather specify a percentage, enter the percentage in the Administrative fee (percentage) field.
<div style="border: 1px solid black; padding: 5px;"> <p> You can only use one of the above fields, so either Administrative fee (percentage) or Administrative fee (amount).</p> </div>	
Calc. sequence - standard deductible	Specify the sequence in which the general term Standard deductible must be applied.
Calc. sequence - administrative fee	Specify the sequence in which the general term Administrative fee must be applied.
Calc. sequence - risk	Specify the sequence in which the general term Risk must be applied.
<div style="border: 1px solid black; padding: 5px;"> <p> For more information on the sequencing of the Calc. sequence fields, refer to .</p> </div>	
No generated revenues - fixed fee	You can use this field for cases where no actual order revenues are generated, because the customer's problem was solved without having to send out an engineer. The setting allows you to charge a <i>fixed fee</i> for time spent on an issue by a service desk or back-office employee. Enter the amount you want to charge in these cases. Subsequently, in applicable cases, the fixed fee

Field	Description
Surcharge terms	<p>amount will be included in the calculation of the general revenues in the Orders TSI.</p> <p>Select the default surcharge terms that must be applied if there are no specific surcharge terms available on the Terms for labor hours.</p>
Usage check required?	<p>Indicate whether a usage check is required for the relevant asset.</p> <p>If maintenance of an asset is handled via a periodic fixed fee or is covered under warranty, the revenues are not going to be invoiced. However, in the case of incorrect usage (such as vandalism) of the asset, the revenues will be invoiced. Also refer to the Invoicing threshold field in this table.</p> <div data-bbox="639 789 1318 978" style="border: 1px solid blue; padding: 5px;"> <p>i If you select Yes, the Qualification of usage field on the main order is checked. The Qualification of usage registered on any suborders order is <u>not</u> checked. Revenues are invoiced based on the option you select. For more information, see .</p> </div>
Warranty check required?	<p>Indicate whether a warranty check is required for the relevant asset.</p> <p>Revenues will not be invoiced if the asset of the main order is covered by warranty. All revenues will be invoiced in case the asset is not covered by warranty. To determine if a warranty applies to an asset, the Reported on date of the request is taken as a reference date to compare against the Warranty expires on date on the asset.</p> <div data-bbox="639 1314 1318 1398" style="border: 1px solid blue; padding: 5px;"> <p>i Assets of any suborders are <u>not</u> taken into account.</p> </div>
Standard deductible amount	<p>Specify an amount that is considered as a periodic <i>fixed fee</i>. This fee will cover all related costs below this amount. Any amount above the standard deductible amount will be invoiced separately. This amount might also depend on the condition of the asset. Refer to the Standard deduction condition-based? field for more information.</p> <p>Good to know: you can indicate for a selected asset from which date the standard deductible amount should no longer apply. See Assets fields for more information.</p>

Field	Description
Standard deduction condition-based?	<p>Select Yes if a discount is given based on an asset's condition. By default, No is selected.</p> <p>All assets related to the suborders are checked. If one of the assets has a worse condition score than specified, the standard deductible amount will not be applied. Example: the contractual agreement may state that all customer requests/issues up to 200 EUR are covered by a periodic fee, except for assets that are in a bad condition. This way, the definition of 'bad' is contractually agreed, based on a mutually agreed condition score.</p>
<p> If Yes is selected, the fields Asset's condition score and Condition valuation must have a value.</p>	
Asset's condition score	<p>Enter the condition score of the relevant asset that is used for determining the condition-based <i>standard deduction</i>.</p>
Condition valuation	<p>Select Ascending or Descending from the pop-up to determine how you want to value the asset condition.</p> <p>If you select Ascending, the highest condition score represents the best asset condition. If you select Descending, the lowest score represents the best condition.</p>
Deduct labor hours from budget?	<p>Field for reporting purposes only: indicate whether or not labor hour costs should be deducted from the budget.</p>
Deduct materials from budget?	<p>Field for reporting purposes only: indicate whether or not material costs should be deducted from the budget.</p>
Deduct subcontractors from budget?	<p>Field for reporting purposes only: indicate whether or not subcontractor costs should be deducted from the budget.</p>
Deduct travel from budget?	<p>Field for reporting purposes only: indicate whether or not travel costs should be deducted from the budget.</p>
<p> Based on the options selected in the 'Deduct from budget' fields, you can report on budget usage and provide timely signals to your customer in case the budget is running low.</p>	

Field	Description
Invoicing	
Invoice labor hours?	Indicate whether or not labor hour costs should be invoiced.
Lump sum threshold for labor hours	Enter a threshold amount for invoicing the total revenue of an order. If the Invoice labor hours? field is set to Yes , the total revenue is checked with the Lump sum threshold for labor hours value. If the total revenue is below the lump sum threshold, the revenues are not invoiced. If the total revenue is above the lump sum threshold, the revenues are invoiced.
Invoice materials?	Indicate whether or not material costs should be invoiced.
Lump sum threshold for materials	Enter a threshold amount for invoicing the total revenue of an order. If the Invoice materials? field is set to Yes , the total revenue is checked with the Lump sum threshold for materials value. If the total revenue is below the lump sum threshold, the revenues are not invoiced. If the total revenue is above the lump sum threshold, the revenues are invoiced.
Invoice subcontractors?	Indicate whether or not subcontractor costs should be invoiced.
Lump sum threshold for subcontractor	Enter a threshold amount for invoicing the total revenue of an order. If the Invoice subcontractors? field is set to Yes , the total revenue is checked with the Lump sum threshold for subcontractors value. If the total revenue is below the lump sum threshold, the revenues are not invoiced. If the total revenue is above the lump sum threshold, the revenues are invoiced.
Invoice travel?	Indicate whether or not travel costs should be invoiced.
Lump sum threshold for travel	Enter a threshold amount for invoicing the total revenue of an order. If the Invoice travel? field is set to Yes , the total revenue is checked with the Lump sum threshold for travel value. If the total revenue is below the lump sum threshold, the revenues are not invoiced. If the total revenue is above the lump sum threshold, the revenues are invoiced.

Field	Description
Grouped invoice	<p>Indicate whether or not all the invoices for a customer should be grouped.</p> <p>With this option you can bring all invoices of a customer together and ultimately generate a single monthly invoice.</p>
Invoice approval required	<p>With this general term you can indicate if approval is required or not before invoicing an order. If you select Yes, the main order and suborders are automatically set to the Approval required status. If you select No, the main order and suborders are set to the No approval required status.</p>
Invoicing threshold	<p>Enter a threshold for invoicing the total revenue of an order. If the total of all revenue lines is equal or below this threshold, the revenues of the order will not be charged to the customer. In that case, every revenue line is set to Not invoiceable.</p>

i an exception is made in case a revenue line was generated because a usage check was required and the **Qualification of usage** field on the order was set to **Incorrect**. The costs for incorrect usage of an asset will always be charged, even if the invoicing threshold is not reached. Also refer to the **Usage check required?** field in this table.

Estimations and quotations

Procurement type	<p>Select the type of procurement you want to obtain. You can choose between No procurement, Revenue estimations and Quotation. If you select Revenue estimations, it is mandatory to fill the Threshold amount field. Selecting the options Revenue estimation or Quotation will invoke status transition on the related order. For more information on this topic, refer to Configuring a procurement procedure.</p>
Revenue estimation threshold	<p>Enter the amount that will be the threshold (defined by the customer) to start work on an order. If the order costs are below the defined threshold, the order will be picked up by the service provider. If they are above the threshold, the order is not picked up and you have to contact the customer.</p>

Field	Description
Administrative costs on quotation	Indicate whether or not administrative costs must be included in the quotation process for generating overhead revenues. By default No is selected.
Risk percentage on quotation	Indicate whether or not a risk percentage must be included in the quotation process for generating overhead revenues. By default No is selected.
Standard deductible on quotation	Indicate whether or not standard deductible must be included in the quotation process for generating overhead revenues. By default No is selected.

Rounding methods for labor hours

Labor hour based rounding	Select the relevant setting for rounding labor hours: None , Time-based or Duration-based .
Time-based rounding	Select the relevant time unit(s) to be applied to time-based rounding: <ul style="list-style-type: none"> • Round off to nearest time unit • Round off to previous time unit • Round off to next time unit • Round the start to previous time unit & round the end to next time unit • Round the start to next time unit & round the end to previous time unit
Time unit for time-based rounding	Select a relevant time-unit to be applied when rounding time: 5, 10, 15, 30 or 60 minutes.
Duration-based rounding for work?	If you want to apply duration-based rounding to working hours, set this field to Yes .
Work - time unit for rounding	Select the relevant time-unit to be applied to labor hours of the type Work when rounding the duration: 5, 10, 15, 30 or 60 minutes.
Duration-based rounding for travel?	If you want to apply duration-based rounding to travel hours, set this field to Yes .

Field	Description
Travel - time unit for rounding	Select the relevant time-unit to be applied to labor hours of the type Travel when rounding the duration: 5, 10, 15, 30 or 60 minutes.


Thresholds for work, travel and waiting tariffs

See also: [Labor hour settings for revenue calculations](#)

Apply threshold to start of work time?

(start is triggered by the **Work** action on the PMFS app)

If you want to apply a tariff threshold to the start of the work time (labor hours) of a linked tradesperson, set this field to **Yes**.

 this setting can be activated irrespective of any selected rounding method.

Apply threshold to end of work time?

(end is triggered by the **End work** action on the PMFS app)

If you want to apply a tariff threshold to the end of the work time (labor hours) of a linked tradesperson, set this field to **Yes**.

Apply threshold to start of travel time?

(start is triggered by the **Travel** action on the PMFS app)

If you want to apply a tariff threshold to the start of the travel time (labor hours) of a linked tradesperson, set this field to **Yes**.

Apply threshold to end of travel time?

(end is triggered by the **Work** action on the PMFS app)

If you want to apply a tariff threshold to the end of the travel time (labor hours) of a linked tradesperson, set this field to **Yes**.

Apply threshold to start of waiting time?

(start is triggered by the **Wait** action on the PMFS app)

If you want to apply a tariff threshold to the start of the waiting time (labor hours) of a linked tradesperson, set this field to **Yes**.

Apply threshold to end of waiting time?

(end is triggered by the **Work** action on the PMFS app)


If you want to apply a tariff threshold to the end of the waiting time (labor hours) of a linked tradesperson, set this field to **Yes**.


Time unit for start time threshold

This field becomes mandatory as soon as you enter a value in one or more of the **Apply threshold to start of [...] time** fields. Select the relevant time-unit to be applied as threshold to

Field	Description
	<p>the start time tariff of the tradesperson: 5, 10, 15, 30 or 60 minutes.</p> <p><i>Example:</i> you want to allow for a window of half an hour at the start of the working day, because you do not want to charge a special tariff to the customer if a tradesperson shows up half an hour early. In that case, select 30.</p>
Time unit for end time threshold	<p>This field becomes mandatory as soon as you enter a value in one or more of the Apply threshold to end of [...] time fields. Select the relevant time-unit to be applied as threshold to the end time tariff of the tradesperson: 5, 10, 15, 30 or 60 minutes.</p> <p><i>Example:</i> you want to allow for a window of an hour at the end of the working day, because you do not want to charge a special tariff to the customer if a tradesperson needs an additional hour. In that case, select 60.</p>

Maintenance plan viewer fields

Field	Description
Search settings	
Search fields	<p>Using the + button, add the fields that must be used for filtering in the Maintenance plan viewer web definition.</p> <p>To create columns, you can also add bars here. Each bar will separate and align the search fields into columns.</p>
Planboard block settings	
Block properties	<p>Using the + button, add the fields to be displayed as labels for the maintenance activity definitions on the Planboard block in the Maintenance plan viewer. If the Sort on field is set to Yes, you can also sort on the selected fields in the Maintenance plan viewer.</p> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p> On the Next activity date-time field sorting is possible, but only on the currently viewed page. Grouping is not possible on this field.</p> </div> <p>In the Max. number of rows field, set the maximum number of rows you want to display per page on the</p>

Field	Description
	viewer. The default value is 50, the maximum number of rows allowed per page is 100.
	 Pagination is applied to the records shown on Maintenance plan viewer , as there is no restriction on the total number of records to be displayed.

Activity details block settings

Details fields Using the **+** button, add the fields to be displayed on the **Activity details block** in the **Maintenance plan viewer**.

Planned activities block settings

Details fields Using the **+** button, add the fields to be displayed on the **Planned activities block** in the **Maintenance plan viewer**.

Hint text settings

Block properties Use the **+** button to add the fields that must be displayed when end users hover over an activity in the **Maintenance plan viewer**.

Methods for travel terms - fields



Settings for the calculation of fixed travel revenues, based on the terms for travel that apply to an order.


Field	Description
Code	Enter a code for the method for travel terms.
Name	Enter a description for the method for travel terms.
Actual start date	Enter the date on which the calculation method for fixed travel terms should be activated.
Start date	Displays the date on which the method was added to the service agreement.
Method for fixed allowance	Select one of the following calculation methods for calculating fixed travel revenues, which are subsequently charged to the customer: <ul style="list-style-type: none"> • Fixed allowance travel revenue - main order only ->

Field	Description
	<p>Travel revenues are only calculated per main order. Also see the Include suborders in Fixed allowance check? field description for an additional setting.</p> <ul style="list-style-type: none"> • Fixed allowance travel revenue - per order -> <p>Travel revenues are calculated per individual order, whether they are main or sub.</p> <p>See the table in Adding a calculation method for fixed travel terms for information on the resulting revenues.</p>
Fixed allowance per day?	<p>If you select Yes, a fixed allowance for travel is charged to the customer per day. You can combine setting this field to Yes, with setting the Fixed allowance per internal tradesperson? and Non-fixed revenues allowed? fields to Yes.</p> <p>See the table in Adding a calculation method for fixed travel terms for information on the resulting revenues.</p>
Fixed allowance per internal tradesperson?	<p>If you select Yes, a fixed allowance for travel is charged to the customer per internal tradesperson. You can combine setting this field to Yes, with setting the Fixed allowance per day? and Non-fixed revenues allowed? fields to Yes.</p> <p>See the table in Adding a calculation method for fixed travel terms for information on the resulting revenues.</p>
Non-fixed allowance revenues allowed?	<p>If you select Yes, flexible travel revenues can also be calculated and charged to the customer, in addition to any fixed travel revenues. You can combine setting this field to Yes with setting the Fixed allowance per internal tradesperson? and Fixed allowance per day? fields to Yes.</p> <p>See the table in Adding a calculation method for fixed travel terms for information on the resulting revenues.</p>
Include suborders in Fixed allowance check?	<p>This setting can be combined with Method for fixed allowance > Fixed allowance travel revenue - main order only. If you select Yes in this field, you allow that suborders are included when your calculation basis is Fixed allowance travel revenue - main order only. The travel revenues are still only generated on the main order, but 'travel labor hours' from suborders are included in the revenue calculation.</p>


Field	Description
Pivot life cycle?	This field indicates whether or not the selected record is the 'active' method for travel terms.
Service agreement	Reference to the selected <i>service agreement</i> , to which the Terms for travel and the Method for travel terms apply.

Terms for labor hours - fields

Field	Description
Code	Enter a code for the labor hours term.
Name	Enter a description for the labor hours term.
Service agreement	Select the related service agreement from the list.
Actual start date	Displays the actual start date of the terms for labor hours. The field is automatically populated by the reference date.
Actual end date	Displays the actual end date of the terms for labor hours.
Start date	Displays the date as of which the information that is displayed on the terms for labor hours is applicable. This date is derived from the life cycle.
End date	Displays the end date of the life cycle, until which the information you see on the terms for labor hours is applicable.
	<div data-bbox="656 1415 1318 1623" style="border: 1px solid black; padding: 5px;"> <p> The start and end date are updated after every life cycle modification.</p> <p> It is possible to change the actual dates via the Add modification action on the life cycle, which will in turn update the start and end dates.</p> </div>
Hour type	Select the hour type that must apply to the labor hours term: Travel , Waiting or Work . You can only add one labor hours term of a particular hour type to a combination of <i>service agreement + trade + service level</i> .

Field	Description
Hourly wage	Enter the relevant hourly wage. This field is life cycle aware. Hence, changes will always be registered.
Type of labor hour term	<p>Select which type of labor hour terms should apply to labor hour revenue calculations:</p> <ul style="list-style-type: none"> • Tradesperson category based; if you select this option the Link tradesperson categories action is enabled on the action panel. • Trade based; if you select this option the Link trades action is enabled on the action panel. • See also Tradesperson categories
Threshold group	<p>Select a relevant threshold group that applies specifically to these terms for labor hours.</p> <div data-bbox="659 1016 1318 1104" style="border: 1px solid blue; padding: 5px;"> <p> Also see Defining threshold groups for terms and Threshold groups for labor hour terms.</p> </div>
Surcharge terms	<p>Select the appropriate surcharge terms from the Surcharge terms TSI that apply specifically to these terms for labor hours.</p>
Standard?	<p>If you want to add a <i>generally applicable</i> labor hours term without linked trades or tradesperson categories and you want that term to be the standard labor hours term, set this field to Yes. Per service agreement, you can only add one standard labor hours term per combination of <i>service agreement + hour type + service level</i>. If you want to add non-generic labor hours terms, linking trades is optional. In that case, keep the default field value (No).</p>
Linked trades	<p>Displays the trades that are linked to the labor hours terms via the Link trades action on the action panel. You cannot link a trade to a term for labor hours if the field Standard? is set to Yes.</p>
Linked tradesperson categories	<p>Displays the tradesperson categories that are linked to the labor hours terms via the Link</p>



Field	Description
	<p>tradesperson categories action on the action panel.</p> <p>You cannot link a tradesperson category to a term for labor hours if the field Standard? is set to Yes.</p>
Calendar	Specify the applicable calendar. Which tariff applies, depends on the working hours defined in this calendar. For work done outside working hours, you can define a surcharge in the Surcharge terms TSI.
VAT tariff / Tax rate	Select the applicable VAT / Tax tariff from the list. This field is life cycle aware. Hence, the changes will always be registered.
Comment	Enter a comment on the labor hour terms as required.

 If required, you can define surcharge rates for labor hours in the separate **Surcharge terms** TSI. See [Surcharges - general terms and labor hour terms](#) for more information.

Terms for materials - fields


Field	Description
Code	Enter a code for the material term.
Name	Enter a description for the material term.
Service agreement	Select the related service agreement from the list.
Material type	Select the applicable material type from the list. Material types can be added and maintained in the Material types TSI. For more information on this subject, see Defining material types .
Calculation basis	<p>Select the applicable calculation basis for revenues in case material costs are present on an order. You can choose one of the following options: Catalog price, Purchase price, Custom purchase price.</p> <p>The catalog price is the original price of an article in the vendor's product catalog. This price may differ from the purchase price of the purchase item, for example if you get a standard discount from the vendor. The custom purchase</p>



Field	Description
	<p>price refers to a purchase price that can be raised by the service provider with a certain percentage.</p> <p>Example:</p> <p>As service provider, you have a special agreement with your supplier for the price of a filter: 1,000 euros. The normal price of this filter is 1,000 + 10%.</p> <p>You have agreed a surcharge of 10% with your customer. The sales price for your customer is calculated as follows:</p> <ul style="list-style-type: none"> If the calculation basis is set to Purchase price: $1,000 * 1,1 = 1,100$ euros If the calculation basis is set to Custom purchase price: $(1,000 * 1,1) * 1,1 = 1,200$ euros
Threshold amount	Specify a threshold amount for material costs. If the total value of the material costs is above / below this amount, a surcharge/discount percentage is applied (refer to the four percentage fields described below).
Percentage above threshold	Specify the percentage that is used if material costs are above the threshold amount.
Custom percentage above threshold	If you selected Custom purchase price in the Calculation basis field, use this field to specify the percentage that is used if material costs are above the threshold amount.
Percentage below threshold	Specify the percentage that is used if material costs are below the threshold amount.
Custom percentage below threshold	If you selected Custom purchase price in the Calculation basis field, use this field to specify the percentage that is used if material costs are below the threshold amount.
Base percentage	If you choose to apply No thresholds or Advanced thresholds , you must enter a base percentage. If no surcharge / discount should be applied, you can set the percentage to 0. The base percentage is applied if there is no threshold. With advanced thresholds, the base percentage is applied to amounts between 0 and the first threshold amount in the linked threshold group.
Threshold calculation	<ul style="list-style-type: none"> Select Singular if you want a threshold based on the amount of the <i>order line, customer quotation line or revenue estimation line</i>

Field	Description
	<p>linked to the order, to calculate the surcharge percentage.</p> <ul style="list-style-type: none"> Select Group if you want to apply a threshold based on the total of all order lines, customer quotation lines and revenue estimation lines that are linked to the same terms for materials. The calculated surcharge percentage that is in range is then applied to each individual line.
	<div style="border: 1px solid black; padding: 5px;">  The group calculation is only possible if your calculation basis is Catalog price / Purchase price. </div>
Threshold method	<p>Select the threshold method you want to apply to the terms for materials:</p> <p>No threshold: only the Base percentage is applied.</p> <p>Simple threshold: the percentage that is used if material costs are above / below the threshold amount.</p> <p>Advanced thresholds: a method where surcharge percentages can be set for various ranges of threshold amounts. A link to a Thresholds for terms > Threshold group is required. The base percentage will be applied to amounts between 0 and the first threshold. Any subsequent thresholds are applicable as configured in the group: the relevant threshold percentage is applied when a defined threshold amount is reached.</p>
	<div style="border: 1px solid black; padding: 5px;">  This method is only possible if your calculation basis is Catalog price / Purchase price. </div>
Threshold group for terms	<p>If you select Advanced thresholds as threshold method, you must select a threshold group in this field, to link it to the terms for materials.</p>
	<div style="border: 1px solid black; padding: 5px;">  Threshold groups can be configured in the dedicated Threshold for terms TSI. See Defining dynamic thresholds (threshold groups for terms). </div>
VAT tariff	Select the applicable VAT tariff from the list.
Comment	Enter a comment on the material terms as required.

Terms for subcontractors - fields

Field	Description
Code	Enter a code for the subcontractor term.
Name	Enter a description for the subcontractor term.
Service agreement	Select the related service agreement from the list.
Calculation basis	Select the applicable calculation basis for revenues in case subcontractor costs are present on an order. You can select one of the following options: Purchase price or Labor hours . Selecting the Labor hours setting means that the labor hours registered by the subcontractor are invoiced as if the order was executed by your own staff, instead of the subcontractor costs.
Generate travel revenues?	Indicate whether or not the travel costs should be charged to the customer. No is selected by default.
Amount for one-way travel	Enter the amount that you want set as a fixed charge per travel. By default this field is empty, but if Charge travel costs? is set to Yes , then you must enter a value.
Subcontractor	Select the relevant subcontractor from the list.
Percentage	Specify the applicable surcharge/discount percentage. If no surcharge / discount should be applied, you can set the percentage to 0.
Threshold calculation	<ul style="list-style-type: none"> • Select Singular if you want a threshold based on the amount of the <i>order line</i>, <i>customer quotation line</i> or <i>revenue estimation line</i> linked to the order, to calculate the surcharge percentage. • Select Group if you want to apply a threshold based on the total of all order lines, customer quotation lines and revenue estimation lines that are linked to the same terms for subcontractors. The calculated surcharge percentage that is in range is then applied to each individual line.

 The group calculation is only possible if your calculation basis is **Purchase price**.

Field	Description
Threshold method	<p>Select the threshold method you want to apply to the terms for subcontractors:</p> <p>No threshold: only the Base percentage is applied.</p> <p>Advanced thresholds: a method where a range of applicable surcharge percentages can be used. A link to a Thresholds for terms group is required. The base percentage will be applied to amounts between 0 and the first threshold. Any subsequent thresholds are applicable as configured in the group: the relevant threshold percentage is applied when a defined threshold amount is reached.</p> <div style="border: 1px solid #00a0e3; padding: 5px; margin-top: 10px;"> <p> This method is only possible if your calculation basis is Purchase price.</p> </div>
Threshold group for terms	<p>If you select Advanced thresholds as threshold method, you must select a threshold group in this field, to link it to the terms for subcontractors.</p> <div style="border: 1px solid #00a0e3; padding: 5px; margin-top: 10px;"> <p> Threshold groups can be configured in the dedicated Threshold for terms TSI. See Defining dynamic thresholds (threshold groups for terms).</p> </div>
Comment	Enter a comment on the subcontractor terms as required.



Terms for time - fields

Field	Description
General	
Code	Enter a code for the time term.
Name	Enter a description for the time term.
Service agreement	Select the related service agreement from the list.
KPI related fields	
Time to attend	Specify the required time to attend (TTA) that applies to the related service agreement and that is used to calculate the requested time to attend on an order when this service agreement is applied.

Field	Description
Time to complete	Select the required time to complete (TTC) that applies to the related service agreement and that is used to calculate the requested time to complete on an order when this service agreement is applied.
Time to fix	Select the required time to fix (TTF) that applies to the related service agreement and that is used to calculate the requested time to fix on an order when this service agreement is applied.
Time to respond	Select the required time to respond (TTR) that applies to the related service agreement and that is used to calculate the requested time to respond on an order when this service agreement is applied.
Applied calendar	Select the calendar to be used for calculating KPIs. You can select one of the following options: Calendar for properties , Calendar for SLAs and No calendar .
Calendar	This field is only enabled if Calendar for SLAs is selected in the Applied calendar field. Here, you can select a calendar specific to the SLA when calculating KPIs.
Validity	The validity calendar specifies the valid date and time for <i>sub-terms for time</i> . Sub-terms for time are considered to be valid during the working hours of the period selected on the calendar.
Weighting	Enter the SLA weighting for the service agreement. The number entered indicates the importance of the terms within the SLA.
Comment	Enter a comment on the terms for time, as required.

Bonus / malus fields

Defect type <i>(life cycle aware field)</i>	<p>Select the applicable defect type for bonus-malus from the list. Select one of the following options:</p> <ul style="list-style-type: none"> • Availability: a penalty applies if there is insufficient availability of the service. The lack of availability is measured
--	--

Field	Description
Incident class <i>(life cycle aware field)</i>	<p>against the selected Incident class.</p> <ul style="list-style-type: none"> • Performance: a penalty applies if the execution of the service is below the agreed standard. <div data-bbox="659 478 1320 636" style="border: 1px solid black; padding: 5px;"> <p> If the Defect type, Incident class, or one of the calculation fields is changed on the main Terms for time, this change is copied to the sub. Only the TTC is not copied.</p> </div> <p>Select the applicable incident class from the list. If a defect type is filled in, this field is mandatory. The following incident classes are available: 01 Health & safety, 02 Laws & regulations, 03 Availability, 04 Comfort and 05 Representation.</p> <p>01 Health & safety will induce the severest penalty, the second item 02 Laws & regulations will induce the second severest penalty etc. The combined selected values in the Defect type and Incident class fields determine which penalty applies in case of under-performance.</p>
Calculation method	<p>This field is mandatory if both Defect type and Incident class are filled in. Select the method that must apply to the bonus-malus calculation: Base amount & variable or Variable only.</p> <div data-bbox="659 1255 1320 1545" style="border: 1px solid black; padding: 5px;"> <p> If you select Base amount & variable, the following fields become mandatory: Base discount, Calculation basis, Penalty threshold (hours), Max. no. of penalty intervals, Penalty interval discount.</p> <ul style="list-style-type: none"> • If you select Variable only, the following fields become mandatory: Penalty interval discount, Partial factor. </div>
Calculation basis	<p>Select the applicable calculation basis for bonus-malus:</p> <ul style="list-style-type: none"> • Weighting factor: you can use a weighting factor on Space category or Space to calculate a discount. This is convenient if the base amount and the penalties are the same for

Field	Description
	<p>the location concerned. In that case, the weighting factor can calculate specific discounts for specific spaces / space categories.</p> <ul style="list-style-type: none"> • Direct
Base discount	Specify the amount for the base non-performance penalty.
Recovery time prohibited	<p>Set this field to Yes if you do not want to allow for recovery time at all. In that case, the Time to complete (TTC) is cleared and made read-only.</p> <p>The default setting is No, to allow for recovery time.</p>
Penalty threshold (hours)	Select the applicable penalty threshold.
Max. no. of penalty intervals	Specify the maximum number of penalty intervals allowed.
Penalty interval discount	Specify the amount of the non-performance penalty.
Partial factor	Enter the factor that must be applied to the penalty interval discount. This field is mandatory for the Variable only calculation method.

Terms for travel - fields

Field	Description
Code	Enter a code for the travel term.
Name	Enter a description for the travel term.
Service agreement	Select the related service agreement from the list.
Service level	Read-only reference to the service level linked to the contract line.
Calculation basis	Select the applicable calculation basis for travel revenues. You can link multiple terms for travel with different calculation bases to a single service agreement.



Field**Description**

Select one of the following options for each 'term for travel':




Be mindful of allowed combinations in case you add multiple terms for travel for the same service agreement. None of the options can be selected more than once.

1. **Fixed allowance:** Travel revenues are calculated as a fixed allowance. The calculation is based on the **Amount per unit field** filled in on the travel term. If an employee registers labor hours as travel time, this is charged as a fixed allowance. Travel terms with this option selected can be combined with all travel terms, except with former option 6.
2. **Fixed allowance of service location:** Travel revenues are based on the fixed allowance of a service location (**Property field: Fixed Travel allowance**). Travel revenues are calculated if labor hours are defined as travel costs (order details). If an employee registers labor hours as travel time, this is charged as a fixed allowance. Travel terms with this option selected can be combined with options 1, 3, 4, 5 and former option 6.
3. **Travel time:** Travel revenues are based on the travel time as defined for the service location (**Property field: Travel time (minutes)**) and on the **Amount per unit value(s)** on the travel term. Travel terms with this option selected can be combined with travel terms that use options 1, 2 and 4.
4. **Distance to property:** Travel revenues are based on the travel distance to a property (= service location). If an employee registers labor hours as travel time, the system checks the travel distance registered for the property (field: **Travel distance**) and charges accordingly. Travel terms with this option selected can

Field	Description
	be combined with travel terms that use options 1, 2, 3 and 5.
	<p>5. Actual travel time: Travel revenues are based on the actual travel time. Travel revenues are calculated if labor hours are defined as travel costs (order details). If an employee registers labor hours as travel time, this is charged accordingly. Travel terms with this option selected can be combined with options 1, 2 and 4. They <u>cannot</u> be combined with other travel terms that use option 3 or 6.</p>
	<p> Prior to release L98, there was an option 6 Fixed allowance & actual travel time, which was basically a combination of options 1 and 5. This option was removed to provide more flexibility in combining travel terms. Existing travel terms using option 6 will remain functional until further notice. As of release L98 however, to get the same result for <i>new</i> travel terms, you can add one travel term with option 1 and one with option 5 to your service agreement / service level. Option 1 and 5 combined will produce the same travel revenues as the former option 6.</p>
	<p> For fixed travel allowances you can further specify a calculation method for the travel revenues. See Adding a calculation method for fixed travel terms and Methods for travel terms - fields.</p>
Amount per unit	Enter the amount charged per time unit.
Amount per unit - outside working hours	Enter the amount charged per unit that is applicable outside working hours.
Calendar	Specify the applicable calendar that defines the working and non-working hours.
Allow multiple revenue records	Specify if multiple travel revenue records are allowed. If this field is set to No , there can be only one travel revenue registration per order, per day, per person.
Comment	Enter a comment on the travel terms, as required.

Service agreement fields

Field	Description
Start date	Enter the start date of the agreement.
Code	Enter a code for the agreement.
Contract line	Select the contract line to which the agreement must be linked.
Comment	Enter a comment on the agreement as required.
End date	Enter the end date of the agreement.
Linked service agreement services	Displays the services that are linked to this agreement. Services can be linked via the action panel.
Name	Enter the name of the agreement.
Service component included in service?	Select No to exclude a specific service component from a service.
	 Currently, the functionality of this field has not yet been implemented.
Service agreement terms	Displays the terms that are linked to the service agreement.

Fields specific to the various subtypes of **service agreements**:

Service location type	If you add a Service agreements-location types subtype, select the relevant service location type via the Select a value button.
Linked service locations	If you add a Service agreements-service locations subtype, this field displays the service locations that you link to the agreement. Service locations can be linked via the action panel.
Space category	If you add a Service agreements-space categories subtype, select the relevant space category via the Select a value button.
Space	If you add a Service agreements-spaces subtype, select the relevant space via the Select a value button.
Asset group	If you add a Service agreements-asset groups subtype, select the relevant asset group via the Select a value button.

Field	Description
Asset	If you add a Service agreements-assets subtype, select the relevant asset via the Select a value button.

Service level fields

Field	Description
Code	Enter a code for the service level.
Name	Enter a relevant name for the service level.
Customer	Select the customer that must be linked to the service level.
Comment	Enter a comment on the service level, as required.
Default?	Indicate if this service level is the default or not. If you select Yes , the Service level field becomes mandatory on the corresponding order.

Surcharge rates - fields

Field	Description
Code	Enter a code for the surcharge rates.
Name	Enter a description for the surcharge rates.
Validity	Select the calendar that should be used to identify the relevant 'out of hours' periods to which the surcharge conditions should apply. Note: you cannot link <i>a calendar with deviating hours</i> to surcharge rates.
Surcharge percentage	If you want to apply a surcharge based on percentage, specify the surcharge percentage that must be applied to generated order revenues. If you fill in this field, the Hourly rate-based surcharge amount field is cleared.
Hourly rate-based surcharge amount	If you want to apply a surcharge based on a fixed hourly-rate, specify the surcharge hourly rate that must be applied to the generated order revenues. If you fill in this field, the Surcharge percentage field is cleared.

Field	Description
Surcharge terms	Reference to the selected Surcharge group for the surcharge terms .

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