

Setting up SAP Real Estate and Facilities Management by Planon

Manual to set-up the solution and all its
components

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Contents

Purpose	5
1. Preparation	6
1.1 Prerequisites SAP	6
1.1.1 SAP systems needed	6
1.1.2 SAP integrations needed	6
1.2 Scope items SAP	6
1.2.1 Required SAP S/4HANA Scope Items	6
1.2.2 Recommended SAP S/4HANA Scope Items	6
1.2.3 Required SAP S/4HANA Scope Items for Integrations on BTP	7
1.3 Prerequisites Planon	8
1.3.1 Planon systems needed	8
1.3.2 Planon licenses needed	8
1.3.3 Recommended Planon Accelerator	8
2. App configuration	9
2.1 Prerequisites	9
2.2 Configuration	9
2.3 Activation	9
3. External System Set-up	10
3.1 Prerequisites	10
3.1.1 SAP preparations	10
3.1.2 App configuration	10
3.2 Configuration	10
4. Functional configuration	12
4.1 Prerequisites	12
4.1.1 Deeplink URL configuration SAP to Planon	12
4.2 Configuration	12
4.2.1 Single or multiple backends	12
4.2.2 Integration flow configuration	12
4.2.3 Deeplink enablement SAP to Planon	13
4.2.4 Deeplink configuration Planon to SAP	14
4.2.5 Specific configurations	14
4.2.6 Specific restrictions	14
4.2.7 Specific upgrade considerations	15
4.2.8 Extensibility	16
4.2.9 Automatic determination logic	16
5. Activation	18
5.1 Prerequisites	18
5.1.1 SAP master data	18
5.1.2 Planon	18
5.2 Settings	18
5.3 Activation in Planon	18
5.3.1 Additional configurable deep-link to ExternalBO	18
5.3.2 Inbound messages	19
5.3.3 Outbound messages	19
5.3.4 Restoring data after missing updates	19
6. Troubleshooting	20
6.1 SAP troubleshooting	20

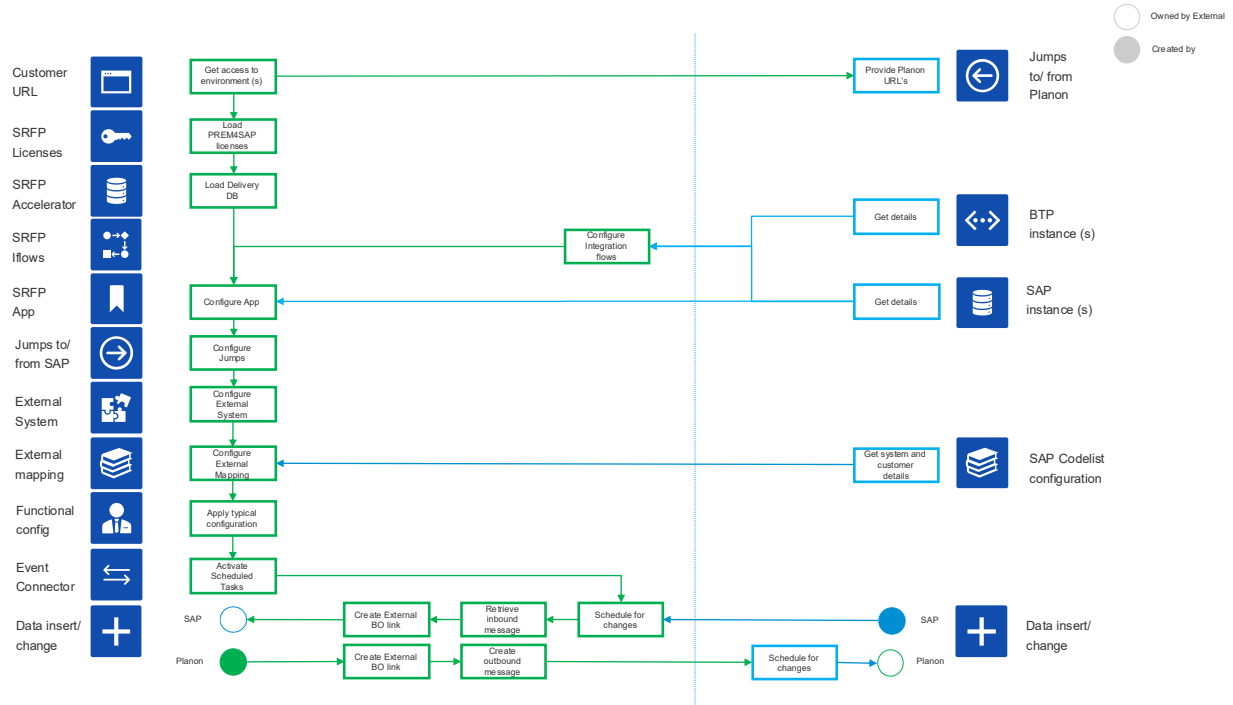
6.1.1	SAP Master Data replication monitoring	20
6.1.2	SAP Real Estate Application Log	20
6.2	Planon troubleshooting	20
6.2.1	Webhelp	20
Annex A		21

Purpose

This document describes how to setup the integration of SAP Real Estate and Facilities Management by Planon (SRFP) by connecting to the SAP Master Data Integration (MDI) service.

As these configuration steps are customer-specific, they cannot be delivered completely by Planon and must be carried out by the customer setting up the Planon solution.

The following figure gives you an overview of the steps and connections.



1. Preparation

1.1 Prerequisites SAP

1.1.1 SAP systems needed

The following is required to setup the system to connect to SAP:

- Subaccount in the Cloud Foundry environment of SAP Business Technology Platform (SAP BTP)
 - o Master Data Integration subscription
 - o Instance of SAP Cloud Integration (Basic Edition)
- Tenant system of SAP S/4HANA Cloud Public Edition (Private Edition not discussed in detail here)
 - o Business roles with the following Business catalogues
 - SAP_CORE_BC_COM (Communication Management)
 - SAP_BR_ADMINISTRATOR (Administrator)
 - o Version supported and later:
 - SAP S/4HANA Cloud Public Edition 2402
 - SAP S/4HANA Cloud Private Edition 2023 FPS0

1.1.2 SAP integrations needed

The following Integration Flows (iFlows) packages are required to connect to SAP and should be copied/configured into the Integration Suite of the customer domain:

- Third Party Integration with SAP Master Data Integration for Real Estate ([here](#))
- Third Party Integration for Multi-Backend functionality ([provided via SAP Notes](#), not via SAP Discover)
- Planon Financial Collection Integration for Purchase Requisition with SAP S/4HANA Procurement (provided via Planon, not via SAP Discover yet)
- Third Party Integration for Cost Allocation with SAP Real Estate Management ([here](#))

Instructions how to set them up can be found [here](#).

1.2 Scope items SAP

Important: to be able to download Scope Items documents, you need to have an S-user account in SAP.

1.2.1 Required SAP S/4HANA Scope Items

1T6 - Lease-In Accounting

This scope item helps you standardize and automate your lease-in credit contract management activities for real estate, as well as for machinery, equipment, vehicles, computer hardware.

1.2.2 Recommended SAP S/4HANA Scope Items

21Q - Lease-Out Accounting

This scope item helps you standardize and automate your lease-out debit contract management activities for real estate, as well as for machinery, equipment, vehicles, and computer hardware.

7EZ – Intercompany Lease Accounting

This scope item allows the company to assign or give certain rights to the sublessee – an affiliate company – that are held under the terms of the own original lease with the lessor. The company handles the sublease contract and related valuation under local GAAP.

J62 – Asset Accounting

This scope item is used to create Fixed Asset Master Data. Asset accounting, a subsidiary ledger of the general ledger, is used to manage and document fixed asset transactions in detail. In general ledger accounting, you update depreciation and changes to asset balance sheet values in asset accounting. You make various account assignments to cost accounting for these transactions.

6N8 – Real Estate Cost Settlement

This scope item covers the distribution of incurred costs to tenants based on the terms and conditions of their lease agreement or the local distribution regulations. Distribution of expenses for a location may be distributed based on the service charge settlement or common area maintenance expense recovery models.

2XT – Central Purchasing

This scope item offers one platform where a procurement specialist can work centrally on purchase requisitions and purchase orders from different backend systems, like Planon. It offers central approval process, central portal, central output management, analytics, and responsibility management of product categories.

1.2.3 Required SAP S/4HANA Scope Items for Integrations on BTP

77V- Master Data Integration of Contract and Lease Management

This solution process covers the real estate master data exchange between SAP Contract and Lease Management (SAP CLM) and third-party solutions. It allows you to create real estate master data for their properties and rental objects in a third-party solution and use the same data in SAP CLM. In addition, contract information from SAP CLM can be exchanged via Master Data Integration (MDI). Third-party solutions can't directly communicate with MDI and therefore Cloud Integration (CI) has to be used and iFlows are provided to communicate via CI with MDI.

In this solution process, two major parts need to be configured:

- Master Data Integration (Including Master Data Orchestration)
- Integration Flow (follow [this knowledge base item](#) for proper URL naming:)

7OD- Setting up Accounting Interface for Contract and Lease Management

This solution process describes the additional configuration steps to setup the exchange between SAP and Planon to be able to send Financial Collections from Planon to SAP's Accounting Notifications using the Accounting Business Transaction Interface (ABTI). They are iFlow-based and used for transactional data, so requires a different type of setup, as described in the documentation.

Set-up of this scope item need to be completed in the S/4HANA system and Integration Suite. The [help page](#) describes the steps:

In Planon, the settings need to align with the SAP settings you make here, typical mapping is:

- **accountingNotificationIflow**

Can be found in SAP Integration Suite -> Monitor -> Integrations and APIs -> Manage Integration Content -> Select the correct record -> URL can be found in the Endpoints tab.

- **costAllocationAccountingNotificationLogicalSystem**

In SAP created when setting up the communication system -> Logical System value

- **s4hanaSystemForNotifications**

Can be found in SAP Integration Suite -> Design -> Integrations and APIs -> Select the correct record -> Open Artifact tab -> Under Actions use the Configure action -> Go to tab More -> Destination 1 - SAP-Log-Sys value

1.3 Prerequisites Planon

1.3.1 Planon systems needed

Planon Cloud instance is required, with either a Development, Test, Acceptance and/or Production environment. This must be requested via Salesforce for customers, internal or partnering have internal forms to request an instance.

The following must be available:

- Environment Management gadget
- Administrator role (SystemAdministrator)

1.3.2 Planon licenses needed

Licenses are requested via Salesforce for customer and/or manually assigned to internal departments/partners. Licenses for product access are marked with RE4S.

Minimum required licenses:

- Generic license (with all required RE4S products, distributed via Salesforce or internally linked)
- App license (to enable planonrealestatemanagementforsap app)

Licenses are automatically loaded in the Cloud Environment after the delivery and the creation of a customer.

1.3.3 Recommended Planon Accelerator

SAP Real Estate and Facilities Management by Planon - Accelerator.

This Accelerator database is configured to provide a quick-start with all required mandatory fields, statuses and roles. There are two options:

- Load a BP Delivery key (no demo-data, just picklists & configuration)
- Load a BP Demo key (demo-data included)

The keys can be provided via the Solution Center (contact your account manager, partner manager or consultant) or internally: on the Accelerator Intouch page.

2. App configuration

In order to connect to Master Data Integration services from Planon, the app 'planonrealestatemanagementforsap' must be configured and activated.

2.1 Prerequisites

To activate the app and complete the set-up, at least the following details must be shared from the SAP configuration:

- SAP S/4HANA frontend URL (only required for single backend, see [here](#))
- SAP S/4HANA integration flows (see [here](#))
- SAP Integration Suite Endpoint URL
- Credentials for SAP Cloud Integration (including Token URL)
- SAP One Domain Model (ODM) Versions (see Annex A for latest version numbers)

2.2 Configuration

The app-installation and configuration can be found on the [Planon Marketplace](#).

2.3 Activation

After completing the configuration, the app-status must be changed to Active. This is required for the functional configuration to be able to start.

3. External System Set-up

In order to integrate data from Planon to SAP and vice-versa, the External system must be configured and aligned with SAP.

3.1 Prerequisites

3.1.1 SAP preparations

To complete the External BO field and code mapping, the code list should have been created on SAP side. SAP already provided their instances with standard content, which is a minimum for the exchange, but customers can choose to add their own lists if they apply [SAP best practices Solution Builder](#). Configuration of field and code mappings can be done via the 'Configure Your Solution' -app. Select Application Area 'Finance' and Sub Application area 'Contract and Lease Management' to find the relevant settings and options.

If they do not apply the Solution Builder, customers will have [Central Business Configurations \(CBC\)](#) in place.

3.1.2 App configuration

The configuration of the 'planonrealestatemanagementforsap' must be completed and when the app is Configured, the External System is automatically created with default content. The default content would consist out of the most expected objects that could be consumed or would be provided to SAP. As there are multiple options to extend the exchange or to apply certain 'switches', it is recommended to continue the setup or delete the irrelevant content.

3.2 Configuration

See for details on the configuration, the following [Webhelp](#) section. Most relevant part of the Configuration are the field and code-mappings, listed in the section, External BO code mapping. They must be aligned with SAP code lists, managed in the 'Configure Your Solution' - app or CBC of SAP.

Here, some specific settings are mentioned:

1. Make Planon company-code currency driven for any collected costs:

The Planon platform is supporting one currency-icon, which can be changed in the System settings - General. As Planon supports multiple company codes that can have their unique localization and currency, the Planon system can be adopted to this logic. For that, the system currency and currency symbol should be removed, to avoid confusion when registering any amount in the system.

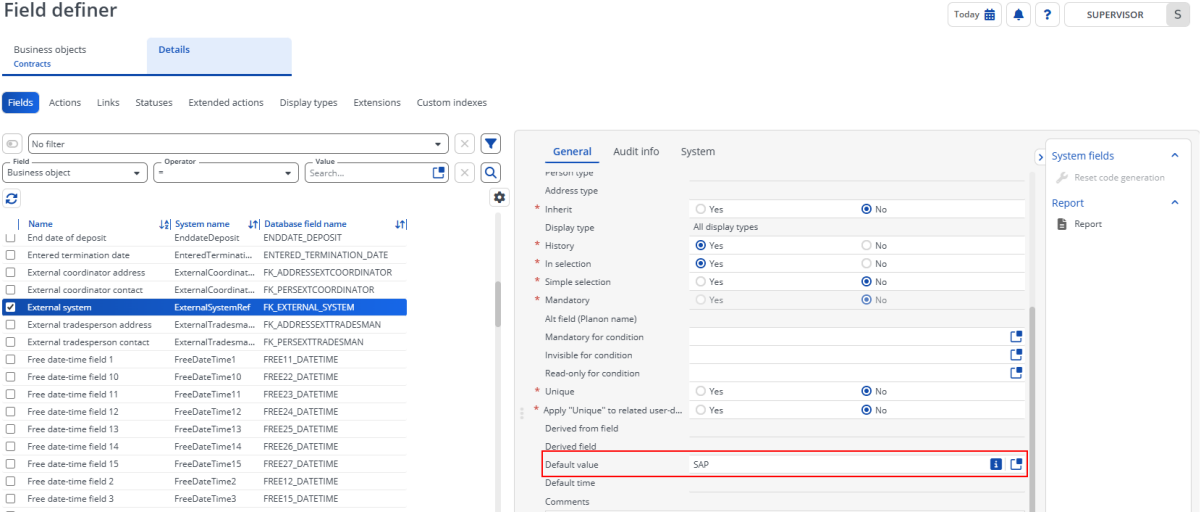
For the exchange to SAP, amounts that are collected or provided will have the inherited Currency from the Company code. Important note: the amounts are not converted, so they should be registered in the Company code currency values. Any Tariff group picklists that are based on company standard for calculating Labor, Reservation or Space-Occupancy-costs will have to be adopted to the different applicable currencies.

2. Suppressing to generate Financial and Accounting Commitments:

The Planon platform initially supported Contract Management which could generate Financial and Accounting Commitments when configured. In Planon, this functionality is fully supported via SAP's Contract and Lease Management, so it should be suppressed in the *Administration settings / configuration* in Planon. For Contracts consumed from SAP, this is suppressed by the Externally Managed Functionality.

For Contracts not consumed from SAP, a reference to the field 'External system' should be configured to get a default value on the Contract and Contract Lines. When this is set-up, these types of Contracts also get the Externally Managed Functionality, to block the generation of Financial and Accounting Commitments.

- Activate the app (see [Activation](#)) to generate the External System.
- Open Field definer. Configure the required user-defined Business Object of either Lease contracts or Service contracts, or use the best-practice options available.
- Select the Field 'External system' (ExternalSystemRef) and change Default value to the code of the installed external system, typically 'SAP'.



4. Functional configuration

4.1 Prerequisites

4.1.1 Deeplink URL configuration SAP to Planon

Based on the URL of the Planon instance that was delivered in step 2.2.1, this URL must be configured in SAP to be able to jump from an SAP Object to a Planon object. Use the [Help Portal](#) of SAP to set-up this UI Integration from SAP to Planon.

4.2 Configuration

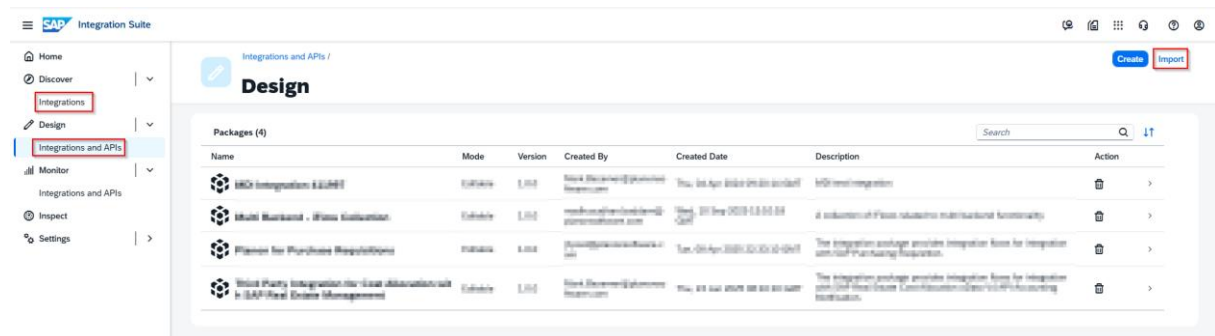
4.2.1 Single or multiple backends

It depends if multiple SAP S/4HANA systems are connected to the Real Estate data (or need to be) to enable additional integration flows which support deeplink enablement from Planon to SAP and route the provided data into the right S/4HANA system.

Apply the appsetting 'useiFlowsForNavigation' to apply for a multi-backend approach, which will change the navigation actions to SAP and do not require any base-URL from the SAP S/4HANA system to be stored inside Planon. As a consequence and because integration flows are required to be setup for the navigation to the right system, each jump is counted as a chargeable message in the Integration Suite. When just one SAP S/4HANA system is connected, the use of this integration flow should be avoided.

4.2.2 Integration flow configuration

Follow generic Help-instructions of SAP how to download integration flows in the Integration Suite. SAP managed integration flows can be downloaded from the Discovery-menu. Planon intends to add the Planon managed integration flows to the Business Accelerator Hub, but they might also be shared via ZIP-files. In this last option, the Import option is recommended from the Design-menu. Find the recommended and available integration flows [here](#).



The screenshot shows the SAP Integration Suite interface. The left sidebar contains navigation options: Home, Discover, Integrations, Design, Integrations and APIs, Monitor, Inspect, and Settings. The 'Design' menu is active, showing a 'Design' sub-menu with 'Integrations and APIs' highlighted. The main content area displays a table of packages available for import. The table has columns for Name, Mode, Version, Created By, Created Date, Description, and Action. Four packages are listed:

Name	Mode	Version	Created By	Created Date	Description	Action
HR Integration Suite	Default	1.0.0	Stefan.Bauer@planon.com	Thu, 08 Apr 2021 08:00:00 GMT	HR Integration	[Trash] [More]
HR Integration - HR Data Collection	Default	1.0.0	Stefan.Bauer@planon.com	Thu, 08 Apr 2021 08:00:00 GMT	A collection of HR related integration flows.	[Trash] [More]
Planon for Purchase Requisitions	Default	1.0.0	Stefan.Bauer@planon.com	Thu, 08 Apr 2021 08:00:00 GMT	The integration package provides integration flows for integration with Purchase Requisition.	[Trash] [More]
Third Party Integration for HR Data Collection via SAP Real Estate Management	Default	1.0.0	Stefan.Bauer@planon.com	Thu, 08 Apr 2021 08:00:00 GMT	The integration package provides integration flows for integration with HR Data Collection via SAP Real Estate Management.	[Trash] [More]

After the package is downloaded, it is required to adjust specific settings for each destination (one is a default) in the artifacts:

- Logsys: should be found via setting up SAP S/4HANA, example: 0M5MQN2
- Credentials: Communication user that is setup for the integration in SAP S/4HANA
- Destination: the URL of the SAP S/4HANA system like <https://myXXXXX.s4hana.cloud.sap:443>

For the specific integration flows, the following 'Address' for the Connection is also required, this should normally not be changed:

- companyCodeLogsysflow: /mappings/cc-to-logsys

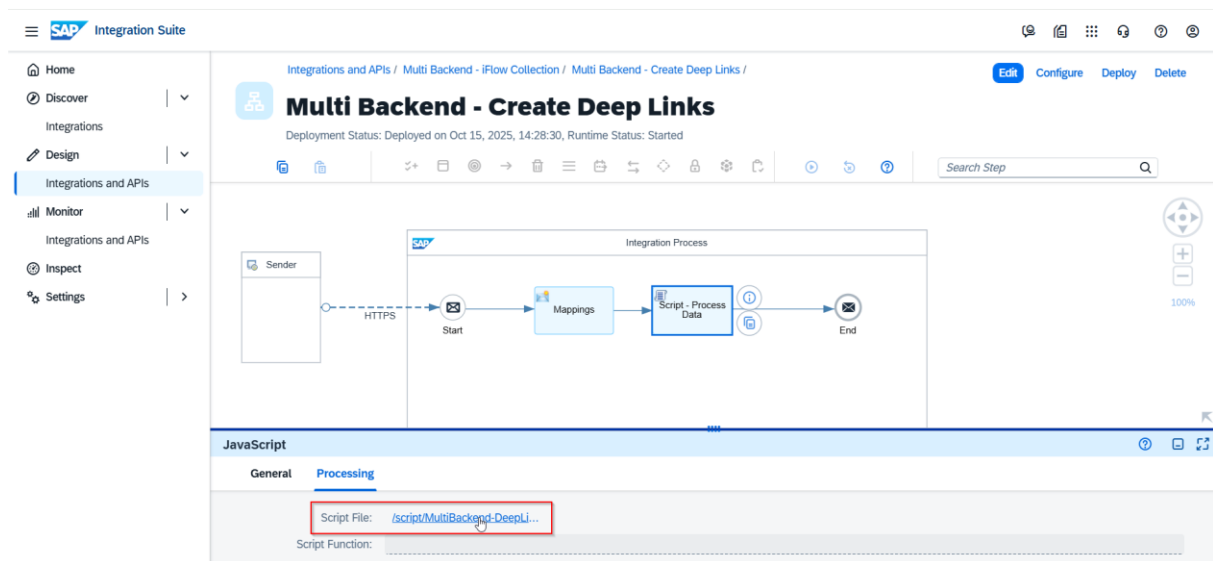
- deeplinkNavigationIflow: /mappings/deeplinks
- purchaserequisitioniflow: /purchaseRequisitionPost
- accountingNotificationIflow: /logsys/AcctgNotification

Once this is set-up the integration flow can be 'Deployed'. In Planon, similar settings must be added to the Module settings in the App:

- s4hanaSystemForNotifications: same as logsys (only required for single-backend)
- companyCodeLogsysIflow: <integration suite url> /http/XXX*/mappings/cc-to-logsys
- deeplinkNavigationIflow: <integration suite url>/http/XXX/mappings/deeplinks
- purchaserequisitioniflow: <integration suite url>//http/purchaseRequisitionPost
- accountingNotificationIflow: <integration suite url>//http/XXX/logsys/AcctgNotification

*XXX is used to highlight the code of the SAP S/4HANA system, like J6O, HVH etc.

For the companyCodeLogsysIflow and deeplinkNavigationIflow, a javascript-file is included to enable specific settings. Not recommended to have them changed, but they need to be adjusted when specific id's or parameters are required. Also, for future additional integrations and jumps to new SAP apps, the file needs to be adjusted.



4.2.3 Deeplink enablement SAP to Planon

Follow the instruction on the [Planon Webhelp](#) to enable Business Objects for Deeplinks.

In the TSI Navigation Links a link with a Business Objects and a specific TSI is made. It depends on the functional configuration and authorization profiles how many combinations of 1 Business Object and TSI's are required.

Currently, only jumps to the following Business Objects are enabled:

- Property
- BaseRentableUnit
- Floor
- Space
- BaseContract
- FinancialCollectionNotification

On SAP side, the URL to Planon needs to be configured in the communication system:

- Environment url : https://<customer>-prod.planoncloud.com/

Based on the authorization of the user logging in, Planon will determine the correct webclient to login to.

4.2.4 Deeplink configuration Planon to SAP

Follow the instruction on the [Planon Webhelp](#) to configure jumps from specific TSI's/Lay-outs in Planon to SAP. They can be configured in relevant business objects like Rentable Units and Contracts. As they have options to filter based on fields, they can be applied on any business object, as long as SAP accepts the filtering field.

Depending on the authorization model, jumps can be enabled to specific TSI's with specific Lay-outs or disabled via a function profile.

4.2.5 Specific configurations

Any typical implementation might be added on top of the settings that are relevant for the functional setup of Real Estate data management, as long as the required fields, statuses and actions are not blocked. Refer to the [Planon Webhelp](#) to see relevant configurations and settings on the specific domain that needs to be implemented.

4.2.6 Specific restrictions

Property-hierarchy: The Property hierarchy is less flexible as it would be in a typical IWMS implementation. The structure (at least the Type of Property and mapping to SAP) needs to align with the structure in SAP. This means that if there is a desire for a Site-level this is always a parent of a Building or Land. A Building cannot be a parent of a Land and a Land cannot be a parent of a Building, they need to be managed as parallel objects. In Planon, the field 'Type of Property' is leading in the mapping-table and can provide a bit of flexibility (for example to have multiple UDBOs in Planon linked to the same Type of Property value).

Land and Building are directly required on Usable Object level in SAP, where sub-architecture object would be possible to link as 'Architecture Object Usages'. All different Usable Objects linked to the same Building or Land (with different Architecture Object Usages) can have the same 'Leading Account Assignment Object', like a Cost center. Its not possible to link both Building and Land to the same 'Leading Account Assignment Object'. It depends on the functional needs and financial reporting how the structure should be setup.

Site: The Site object in Planon can contain a lot of different configuration (just like a Building or Land can) and linked objects (Floors, Spaces, Rentable units, etc.). However the functionality of a Site in SAP is limited, so it is advised to limit the use of Sites to being a top-level for Buildings and Lands. For the architecture type 'Site' SAP has built-in logic to hide this type from linking it when creating Usable Objects (as this is not allowed). For all other user-defined types, this is not the case, so we do not recommend to create a property-type as a parent of Site and exchange that from Planon to SAP. The hierarchy is totally lead by Planon, so it should be consistent and within the possibilities of both platforms.

Examples of allowed hierarchies:

- Site as top-level, Building and Land as parallel sub-properties (recommended!), Floors and Spaces as separated sub-levels.
- City/Region as top-level (not linked to Type of Property), Site as sub-property, Building and Land as sub-sub properties.
- Building and Land as top-level, Wing or Parking as sub-property
- Site as top level, Land as sub-property, Land Area and Parcel as parallel sub-sub properties.

Examples of not aligned or not supported hierarchies:

- City/Region as top-level (linked to Type of Property), Site as sub-property, Building and Land as sub-sub properties
- Land as top-level, Building as sub-property
- City/Region as top-level (not linked to Type of Property), Site and Land as sub-properties, Building as sub-sub property of Site.

Rent to units: On the Rent to units it is important to differentiate External (E), Internal (I) and Vacant (V) using the field for this (RUApplicationTypeRef) and if not using Space management, have Rentable Unit Usages to define the Usages. Planon also consumes Rent to units Intercompany, marked with a different RUApplicationType (G).

LinkedFloorRU: To consume Usable Objects into Rent from units, the reference field to Floors can't be used as a required (mandatory) field. It can either be a complete Property, one or more Floors, or one or more Spaces.

4.2.7 Specific upgrade considerations

As Planon and SAP continuously extend the possibilities of exchanging data, there are specific guidelines mentioned in the various versions of the following components:

- The version of the Planon platform (example: L122)
- The version of the Planon app: planonrealestatemanagementforsap (example: 5.0.1)
- The version of S/4HANA (example: 2508.1)
- The version of the ODM objects which are send and consumed from S/4HANA and the BTP (example for Usable Objects: 9.0.0)

After each upgrade of an individual component, configuration might be required to be adjusted to support the extended use-case. Also, customer-specific implementations might require a phased approach of activated use-cases. The following provides a number of configuration steps to consider when new use-cases are requested:

Consuming new objects from SAP to Planon:

- Apply (when relevant) a new [scope item](#) in SAP S/4HANA to start using the new object.
- Add (when relevant) a new deeplink in S/4HANA to jump to Planon on the new object.
- Create or update a distribution model in the [Master Data Orchestration](#) service for the object to be send and received.
- Apply the version in the distribution model that is aligned with the required version for that object in the Planon app-settings.
- Configure specific mappings for the new object in the External System Configuration in Planon, to consume it in certain User-defined Business Objects and map the required fields or picklists. When the new object supports [extensibility](#), this can be used to map to Planon fields as well.
- Configure typical authorization and UI-components in Planon to be able to view the object and consumed fields.
- Add new deep links from Planon to SAP on the new consumed object, on the authorized layouts and function profiles.
- Apply the switchboard-setting in the Planon-app to consume the new object, which also validates conflicting existing data in the configured Business Objects.
- Update the version in the Planon-app settings for the new object which is compatible with the Planon version and other components.
- Add or update the Scheduled tasks in Planon to request the BTP services for initial load or updates of the new object

For some of the new use-cases, it might be required to migrate data to a better suited object or replace fields that have been used before. When the upgrade requires this, it will be described in releases notes. When this is optional, it should be considered by the customer or project team.

4.2.8 Extensibility

For a limited set of supported integrations, Planon and SAP provide extensibility, which means additional fields can be exchanged, besides the standard fields. Currently this is enabled for:

- Architecture objects (since 2408.1 in Public Cloud)
- Rentable objects (since 2502.1 in Public Cloud)

The extensibility should be set-up in different platforms and in the following order:

- [Master Data Orchestration \(MDO\)](#) > Manage Business Object Type: Enable fields on MDI for the relevant objects.
- S/4HANA system > Extensibility > [Custom Fields](#): Set-up fields from MDI/VDM and make them visible on S/4HANA
- S/4HANA system > Extensibility > [Custom Logic](#): Map field of MDI/VDM to S/4HANA fields
- Planon [Field definer](#): Create or Activate new (free) Fields
- Planon [External System Configuration](#) > Externally managed BO field definitions: set-up Planon fields linked to Planon Business Objects
- Planon [External System Configuration](#) > External field mapping – non-code lists: Map fields of MDI to Planon fields.

Required roles in S/4HANA for setting up this integration: **SAP_BR_EXTENSIBILITY_SPEC**. In Planon, an application manager with access to External Systems and Field definer is required.

To set-up the extensibility, the following should be considered:

- Align on objects that are available for extensibility in the S/4HANA, MDI and Planon version.
- Align field types which are available in S/4HANA, MDO and Planon, like string-fields, date-field or integers.
- Align the allowed field lengths in S/4HANA, MDO and Planon

The following limitations should be considered as part of potentially using the extensibility to exchange updates / workflow related data-changes:

- Planon supports lifecycle-aware fields that relate to a [reference date](#), also in extensibility-options, enabling the option to change the content of a field from a certain moment in time, either in the past or in the future. For the extensibility, the initial value is supported, not the changes in a lifecycle when Planon would send the value to SAP. When Planon consumes it later than initially, the change is applied to the initial lifecycle, so not on a new lifecycle.
- Planon supports to delete a value in a field, but as the extensibility fields are not mandatory for the exchange, the 'empty' value is not send/exchanged.

4.2.9 Automatic determination logic

Settings are required to automate determination logic and to prevent the need to exchange more master data, which is not necessary in Planon to be managed.

G/L Account determination

In the exchange of Purchase Requests, G/L accounts are required to create the Requisition Item. When applying the following sequence, this can be automated:

- Set up a specific Material group
- Set up a specific Valuation Class
- Link the Material Group to the Valuation Class (Entry aids for Item without a Material Master)
- Link Valuation Class to G/L Accounts

G/L Account assignment for Cost Settlement

To classify costs for Cost Settlement that might come from the Accounting Notification, a combination of Cost Elements and G/L Accounts must be set-up.

- Define Cost Element / G/L Account assignment
- Set-up background job in app 'Synchronize Cost Settlement related Items'

5. Activation

Aim is to exchange data from SAP to Planon and from Planon to SAP, to store unique keys in both systems and create a state where users can jump back and from Planon to SAP.

5.1 Prerequisites

5.1.1 SAP master data

Master data objects that Planon must consume, must be initiated from SAP to create an initial load. After this first initiation and the enabled Planon's Scheduled tasks, updates are retrieved automatically. In general, follow the instructions [here](#), how data replication and initiation needs to be set-up. To understand which objects are designed to be provided (Outbound) or are typically designed to be consuming (inbound), it is described [here](#).

An example of a master data object that Planon consumes is the Cost-Center. It is described [here](#), how this can be initiated. Examples of integrations between SAP and Planon are described in [Annex A](#).

5.1.2 Planon

Previous steps like the activation of the app, the configuration of the External systems and the basic settings for the exchange, like visible fields on a lay-out should be finished before the Activation can be triggered.

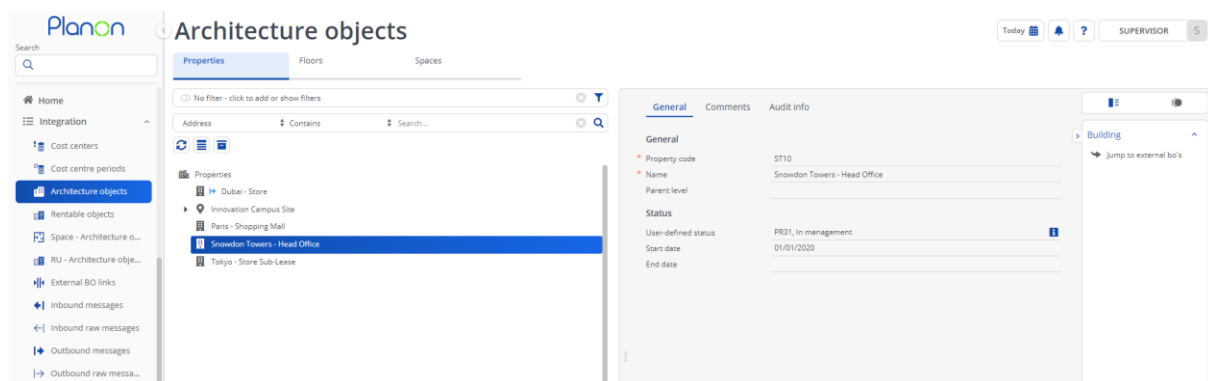
5.2 Settings

Settings that must be applied in order to activate the retrieval of master data can be read in the [Planon Webhelp](#). The Task User extensions currently must be created manually and activated once everything is checked.

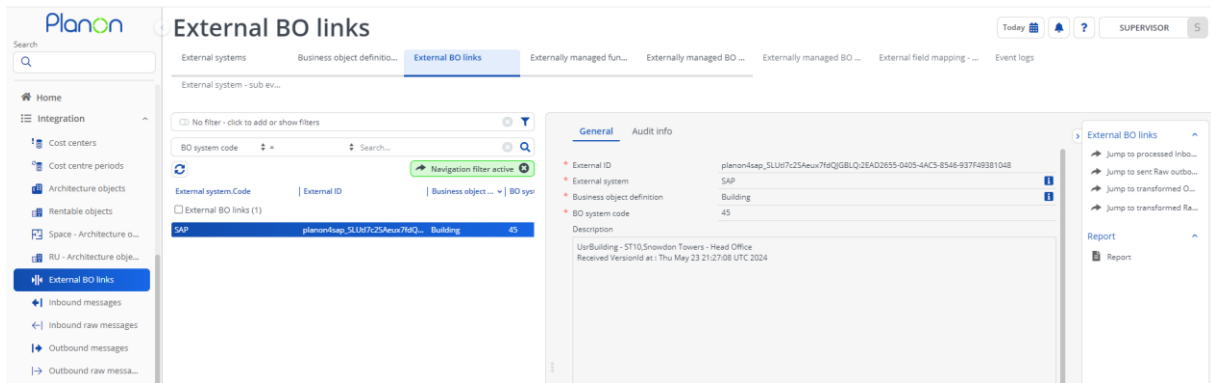
5.3 Activation in Planon

5.3.1 Additional configurable deep-link to ExternalBO

An optional External BO link can be configured in Planon on relevant Business Objects to jump directly from that object to the External BO.



From that location, a user can access the Inbound or Outbound messages as well. It is not recommended to share this Jump to functional/end users, as this is more a technical use-case to check if information was provided or consumed.



5.3.2 Inbound messages

After activating of the Scheduled Tasks and Task User Extension, the relevant master-data should reach Planon. A message that is accepted by Planon will be visible in:

- Inbound (raw) messages

A message could be pending if it is not accepted, and after 9 attempts it is stored in the Failed inbound messages-menu. If a message is pending because of a missing configuration in Planon, it can be manually recreated after a fix.

When the messages are accepted and transformed, an External BO link is created and the data is stored in the Planon database. When configured, a jump is possible from any created Business Object to the External BO to find its details and see if there were any new incoming messages.

The Schedule Task to check for new messages runs every 5 minutes, so an update on SAP side could be taking maximum 5 minutes to reach Planon.

5.3.3 Outbound messages

After activating business objects like Architecture and Rentable Objects, an External ID should be created and an Outbound message should appear in the Outbound (raw) message TSI.

A Schedule Task on SAP side to consume Architecture Objects or Rentable Objects from Planon runs every 5 minutes, so an update on Planon side could be taking maximum 5 minutes to reach SAP.

5.3.4 Restoring data after missing updates

Planon consumes and posts data to the BTP. For the items in the MDI, updates will be stored. If somehow, updates are missed or any of the connected system was restored, there is an option in the External System configuration to synchronize again.

For each object that is consumed, an action 'BOMSync' will reset the delta link from the local storage. In a next scheduler run an initial load will be picked up, updating any missed updates.

For each object that is posted or provided to SAP, the action 'BOMSync' will either:

- Reset the delta link in the linked storage for all entities of the object
- Full re-sending of the included entities, which also re-creates the External BO links.

For this option, a warning message is included to choose the one or the other.

A use-case that is supported with this feature, is that MDI is completely renewed, although the Planon system has already consumed objects. A second use-case is that all Buildings were already activated and send, but the SAP system has been refreshed or cleaned. In that case, the post sync will update all entities in one job.

6. Troubleshooting

6.1 SAP troubleshooting

6.1.1 SAP Master Data replication monitoring

To monitor the replication of master data, monitoring options are described [here](#).

6.1.2 SAP Real Estate Application Log

Within the “Administrator - Leasing“ (RECM_ADMINISTRATOR) role you find the “Analyze Logs” application with which message (errors, warnings or success) can be monitored from a business end user point of view.

In the selection screen please use “REMDI” as object parameter and “INBOUND” or “OUTBOUND” as sub object parameter depending on the case you want to analyse.

6.2 Planon troubleshooting

6.2.1 Webhelp

Planon’s Webhelp to learn about the generic functions can be found in the Planon Webhelp. Especially for application managers, there are [several types of logs](#) that can be checked.

A specific [location](#) in the Webhelp is dedicated for troubleshooting.

Annex A

Examples of supported integrations:

S/4HANA object	SAP API	SAP ODM	SAP Version	Distribution Mode*	Planon Switch	Planon Scheduler	Planon Service	Planon BO
Company Code	MDI_CHANGE_COMPANY_CODE / MDI_LOG_COMPANY_CODE	sap.odm.orgunit.CompanyCode	4.0.0	Push/Pull	FinanceObjects	FinancialObjectsUpdateTask	CompanyGetEntityMessageService	Company
WBS Element	MDI_CHANGE_PROJECT_CONTROLLING_OBJECT / MDI_LOG_PROJECT_CONTROLLING_OBJECT	sap.odm.finance.costobject.ProjectControllingObject	3.7.0	Push/Pull	FinanceObjects	FinancialObjectsUpdateTask	ProjectControllingObjectGetEntityMessageService	ProjectControllingObject
Cost Center	MDI_CHANGE_COST_CENTER / MDI_LOG_COST_CENTER	sap.odm.finance.costobject.CostCenter	3.1.0	Push / Pull	FinanceObjects	FinancialObjectsUpdateTask	CostCenterGetEntityMessageService	CostCenter / CostCenterPeriod
Business Partner**	MDI_CHANGE_BUSINESS_PARTNER / MDI_LOG_BUSINESS_PARTNER	sap.odm.businesspartner.BusinessPartner	3.3.0	Push / Pull	BusinessPartners	PersonOrAddressUpdateTask	PersonOrAddressGetEntityMessageService	Person / Address
Architecture Objects	MDI_LOG_REAL_ESTATE_ARCHITECTURE_OBJECT	sap.odm.realestate.architecture.RealEstateArchitectureObject	9.0.0	Pull***	ArchitectureObjects		PropertyPostMessageService / FloorPostMessageService / SpacePostMessageService	Property / Floor / Space
Usable Objects (Regular / Intercompany)	MDI_CHANGE_REAL_ESTATE_USABLE_OBJECT / MDI_LOG_REAL_ESTATE_USABLE_OBJECT	sap.odm.realestate.rentalobject.RealEstateUsableObject	9.0.0	Push / Pull	RentableObjects	LettableUnitUpdateTask	LettableUnitGetEntityMessageService	LettableUnit / RentableUnitLinkedFloor / RentableUnitAccountingObject
Rentable Objects (Intercompany / Regular)	MDI_LOG_REAL_ESTATE_RENTABLE_OBJECT / MDI_CHANGE_REAL_ESTATE_RENTABLE_OBJECT	sap.odm.realestate.rentalobject.RealEstateRentableObject	9.1.0	Push / Pull	RentableObjects	LettableUnitUpdateTask	RentableUnitGetEntityMessageService / RentableUnitPostMessageService	RentableUnit / RentableUnitLinkedFloor / RentableUnitAccountingObject
Contract	MDI_CHANGE_REAL_ESTATE_CONTRACT / MDI_LOG_REAL_ESTATE_CONTRACT	sap.odm.realestate.contract.RealEstateContract	7.0.0	Push / Pull	LeaseContracts	ContractUpdateTask	ContractGetEntityMessageService	LeaseContract / LeaseContractLine / ContractParty
Fixed Asset	MDI_CHANGE_FIXED_ASSET / MDI_LOG_FIXED_ASSET	sap.odm.finance.accounting.FixedAsset	9.1.0	Push / Pull	FixedAssets	FixedAssetUpdateTask	FixedAssetGetEntityMessageService	Fixed Assets

Detailed settings:

- *All 'Push' models need to be set to 'Continuous Distribution'
- **Business Partners is currently a SOAP based integration, this requires a more technical implementation, please request (technical) assistance to set it up.
- ***For Architecture Objects, Planon is leading, so there is only a pull distribution model from MDI to S/4 required.