



PUBLIC

SAP Build Process Automation

# Mass Creation of Measuring Documents Configuration and User Guide

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## Change Log

Version	Date	Description
1.0.0	December 19, 2023	Document created
1.0.1	October 23, 2025	Document updated to include Shared Environment help link in Release and Deploy section

This document contains 3 sections. Each section covers different information about this template content package.

**1. Overview:** In this section, you will get a quick overview of the use case, what high-level components are used and how the template works in a nutshell. Prerequisite section provides information of different services of SAP Business Technology Platform (BTP) that are required to use this template.

**2. Configuration Guide:** It contains sections which will guide you to setup your (a) SAP BTP Account with destination, cloud connector, user roles etc., (b) SAPUI5 application via SAP Business Application Studio and (c) Import and configure the template using SAP Build Process Automation design studio.

**3. User Guide:** This section provides details about different artefacts that are used in this template like process definition, decision diagram, action project details, forms, email notifications etc. to better understand how different capabilities are used in this template.

**Notes:**

- This documentation is not a detailed guide to setup SAP BTP services. It assumes that IT admin who is setting the content is skilled with SAP BTP environment. Configuration section must be mandatorily followed to import and configure the template.
- This template content is to accelerate your solution development. You must modify this template according to your requirements to achieve the desired business goal. To use this template content, you need to have basic knowledge and understanding of SAP Build Process Automation and its capabilities.

## Overview

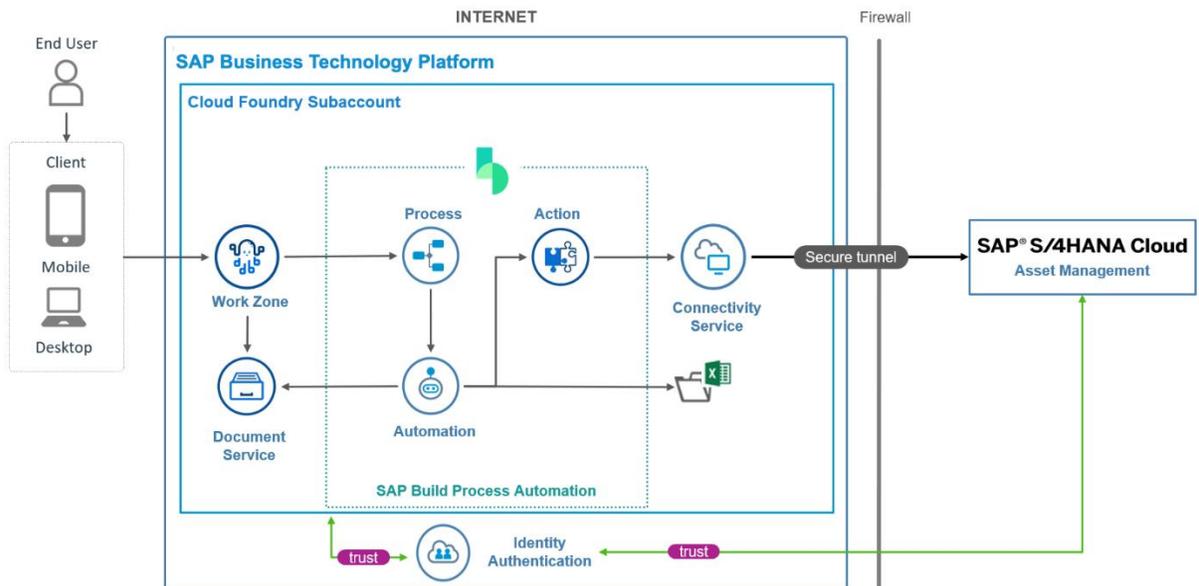
This document provides information about setting up the SAP Business Technology Platform account to consume the SAP Build Process Automation **Mass Creation of Measuring Documents** template. The main audience of this document are technical IT/system administrators.

This package facilitates fetching of measuring document details and creation of the measuring document in SAP S/4HANA system.

**Features:**

- This package provides functionality to get measurement documents details from SAP S/4HANA system based on the selected data in start UI & updates the excel template with fetched data. It sends email to requestor with fetched data.
- After user uploads the updated excel into upload UI, the template enables the creation of measurement documents in SAP S/4HANA system.
- It includes automation to automatically generate the log file and send the email to requestor with log file attached.

## Process Flow Diagram



### Steps:

1. In Start UI, fill in the required selection criteria and request for download using read UI option.
2. Data fetched from SAP S/4HANA system updated in excel template.
3. Email is sent to the requestor with generated excel file of fetched data from SAP S/4HANA.
4. User will upload the updated excel through Upload UI and posting will be done to create measurement documents in SAP S/4HANA system.
5. Email is sent to the requester with final log report.

## Prerequisites

The following SAP Business Technology Platform services are required to consume the content package **Mass Creation of Measuring Documents**:

- SAP Build Process Automation to orchestrate the process.
- SAP Cloud Identity Services - Identity Authentication (Optional)
- SAP Connectivity service to establish access to SAP S/4HANA, Public Edition
- SAP Business Technology Platform, Cloud Foundry runtime
- SAP Business Application Studio for SAP UI5 application
- SAP Document Management Service, Integration Option

## Other Prerequisites

For this template to run successfully the following other prerequisites are needed

- SAP Desktop Agent 3.18 or higher
- Outlook mailbox configured on the system where the automations will run to send mails with attachments.
- Measurement Date field always needs to be in MM/DD/YYYY format in input excel.

### Note:

- This package is designed only to work with the provided folder structure & input template file structures. DO NOT CHANGE any column properties and structure.
- If any changes done in the input template structure, related process & automation implementation also need to be updated to handle those changes.
- You can decide the folder by the key parameters where the input template should be placed.
- Input template is placed as file artifact. If this file is not active, the file will not be executed in automation.
- The input excel has 2 sheets 'Field List' and 'Header'.
  - In **Field List**, the field details are updated.

Sheet Name	Group Name	Field Name (Technical)	Field Description	Importance	Type	Sample Value
<b>Header (mandatory)</b>						
		Equipment	Equipment	Optional	Text	10000042
		Functional Location	Functional Location	Optional	Text	
		Measuring Point	Measuring Point	Mandatory	Text	2
		Measuring Point Description	Measuring Point Description	Optional	Text	Bearing Temperature
		Measurement Reading	Measurement Reading	Mandatory	Text	80
		Measurement Reading UoM	Measurement Reading UoM	Mandatory	Text	K
		Measurement Date	Measurement Date	Mandatory	Text	11/21/2023
		Measurement Time	Measurement Time	Mandatory	Text	06:40:12
		Description of Measurement Reading	Description of Measurement Reading	Optional	Text	Bearing Temperature

- In the **Header** sheet the data will be fetched from the SAP S/4HANA.

Equipment	Functional Location	Measuring Point	Measuring Point Description	Measurement Reading	Measurement Reading UoM	Measurement Date	Measurement Time	Description of Measurement Reading
Text		Text		Text	Text	Text	Text	Text
Equipment	Functional Location	Measuring Point	Measuring Point Description	Measurement Reading	Measurement Reading UoM	Measurement Date	Measurement Time	Description of Measurement Reading

- The fetched data will be downloaded and saved in the excel file "**Create Measurement Document Template\_<Timestamp>.xlsx**" in the folder "Downloaded" which is placed in the path which is provided by user on download UI.
- Once user uploads the updated excel file from upload UI and submit, then file will be downloaded and saved in **ToBeProcessed** folder which is placed in the path you have mentioned in environment variable (**DownloadFolderPath**).
- After Posting the Data the file "**Create Measurement Document Template\_<Timestamp>.xlsx**" in **ToBeProcessed** folder will be moved to the folder **Processed** which is placed in the path you have mentioned in the environment variable (**DownloadFolderPath**).
- The Log template has one sheet 'Header'.
  - In Header sheet measurement document details will be fetched with the post status and error or success message
- After POST call the Log report will be generated in the name of "**LogReport\_<Timestamp>.xlsx**" and will be saved in the **Report** folder which is placed in the path you have mentioned in the Environment variable (**DownloadFolderPath**) and notifies the requester through email about the completion with the log report attached to it.

**Note:** **Processed** and **Report** folder excel files are not deleted for reference perspective. Archive files based on your requirement.

## Configuration Guide

**Mass Creation of Measuring Documents** template requires SAP Build Process Automation subscription or CPEA contract. Follow the [setup and configuration section](#)

### Setup SAP S/4HANA

#### Configure SAP S/4HANA Destination

Configure Destination to connect to SAP S/4HANA cloud system.

Destination Property	Value
Name	<Name>
Type	HTTP
URL	<SAP S/4HANA endpoint> Example: https://<s4system-name>-api.xxxxxxxx
Proxy Type	Internet
Authentication	Basic Authentication

Username	<Username> of the SAP S/4HANA Communication User
Password	<Password> of the SAP S/4HANA Communication User

**Note:** For SAP S/4HANA Cloud and on-premise, the API should be accessible over internet proxy type, as iRPA Automation does not support on-premise as proxy type as explained in the [SAP Note](#).

**Note:** Add the following additional properties to the destination

Destination Additional Property	Value
HTML5.DynamicDestination	True
sap.applicationdevelopment.actions.enabled	True
sap.processautomation.enabled	True

Name: \*

Type:

Description:

URL: \*

Proxy Type:

Authentication:

User: \*

Password:

Additional Properties

HTML5.Dynam...	true	
sap.application...	true	
sap.processaut...	true	
TrustAll	true	

## Setup Communication

To run this template, you must have a communication user, create communication arrangements between the communication user and the following communication scenarios, and assign those communication arrangements to a communication system.

Steps to Create Communication System and Communication Arrangement are available in below documentation links:

[How to Create Communication Systems | SAP Help Portal](#)

[How to Create a Communication Arrangement | SAP Help Portal](#)

[Configuration and Role Details for accessing "Communication Systems" application.](#)

[Configuration and Role Details for accessing "Communication Arrangements" application.](#)

List of communication scenarios to be configured.

Communication Scenario	Related API
Asset Management Master Data Integration(SAP_COM_0395)	<a href="#">Overview   Measuring Point   SAP Business Accelerator Hub</a>
Plant Maintenance Execution Integration(SAP_COM_0398)	<a href="#">Overview   Measurement Document   SAP Business Accelerator Hub</a>

## Setup Business Technology Platform Cockpit

### Configure SAP Document Management Service

In this template, the Input template document for **Mass Creation of Measuring Documents** can be uploaded which are then made available as attachments for posting data into SAP S/4HANA system. To upload the document from UI, you will need SAP Document Management Service or equivalent CMIS repository and a corresponding destination in SAP BTP to connect to the repository.

- Follow the instructions to configure [SAP Document Management Service for Attachments](#)
- Add service instance and service key (follow [this](#)) and repository (follow [this](#)) to configure the destination
- Configuring destination, refer [Configure SAP Document Management Service Destination](#)

**Note:** The destination needs to be created with **sap\_process\_automation\_document\_store** name.

### User Roles Configuration

To access this template, the business user will need these roles:

Role Collection Name	Purpose
Process Automation Developer	Standard Business User, can model and publish processes
ProcessAutomationParticipant	To execute (like running the automations, etc.) this content package, you need to have this role assigned to the respective user.
ProcessAutomationAdmin	To perform process admin activities like accessing monitoring applications etc., you need to have this role assigned to the respective user.

Business_Application_Studio_Administrator	Allows administrators to manage (export and delete) user data.
Business_Application_Studio_Developer	Allows developers to load and develop applications using SAP Business Application Studio.

For more information about SAP Build Process Automation roles, see [Authorizations](#)

## Setup Build Process Automation Content

Standard automation packages released by SAP will be available at the [SAP Build Store](#)

### Import Content

This template can be downloaded from the Store:

1. Navigate to the Store in your SAP Build Process Automation account.
2. Select the Project Type filter as “process automation.”
3. In the Search bar type “**Mass Creation of Measuring Documents**”
4. Select the “Create from Template” button to add the template into your lobby.
5. After successfully adding the template, navigate back to the lobby to find the “**Mass Creation of Measuring Documents**” template available for use.

**Caution:** Be sure to select the **Project Type** as “**Process Automation**” in the filters.

## Configuration & Modification

Once you have added the content to your lobby, you will find the project in your project list. Adapt the content template based on your requirements, and then release and deploy from the Lobby. In case any enhancement needs to be made then follow the reference links below.

### Create an Automation

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/create-automation-process-automation>

### Create a Business Process

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/create-business-process>

### Create a Datatype

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/create-data-type-process-automation>

## Configure Destination Settings

Actual destinations that are created in SAP BTP cockpit will be required when you deploy the process. These destinations will be mapped with the destination environment variables during deployment.

For this package following destination needs to be configured in the SAP BTP cockpit:

- **S4HANA\_CLOUD**
- **sap\_process\_automation\_document\_store**

**Note:** Above destination names have been configured in BTP but can be named as per the project requirement.

To configure destination,

- Click on **Settings**.
- Select **Destinations** from the left panel.
- Click **New Destination**

Select these destinations to be added (Created in the above section). For more information and screen shots, please refer to the below link:

<https://help.sap.com/docs/build-process-automation/sap-build-process-automation/manage-destinations?q=destination%20setting>

## Release and Deploy the Process

After configuring your process, it's time to publish, test and run it. To run a process, you must first release and deploy it.

**Release** - This locks the version of your process, meaning that no further edits can be made to that version. At this stage, the process can't be run and isn't available to participants yet.

To release a version of your process,

- First ensure that the status is listed as 'Editable'.
- Then click 'Release'.

Name	Description	Type	Last edited	Last edited by	Created On
Create Folder in Local System	Automation to create folder in the specified folder path in the local system.	Automation	2 hours ago		December 28, 2023
Create Measurement Document Template.xlsx	Standard input template for mass creation of measurement documents	File	2 hours ago		December 28, 2023
Delete DMS Folder	Automation to delete folder from document management service using folder object id after the processing and send email to requestor or user if any error occurs while deleting folder in document management service.	Automation	An hour ago		December 28, 2023

If this is the first time you've released the process, a version labelled 1.0.0 is released. For subsequent releases, you're prompted to select a version type before the process is released.

For more information please visit: [SAP Build Process Automation](#)

**Deploy** – This takes a released version of a process and enables it to be actively run and monitored. A deployed version of this approval process unlocks the request form, allowing participants to submit requests and the approvers to view items in their inbox.

To deploy a released version of your process,

- First ensure that the status is listed as 'Released'.
- Then click 'Deploy'.

To deploy your project, you will be prompted to provide a Destination as an environment variable. Select the destination from the drop-down and fill other environment variables as well.

- **S4HANA\_Destination:** Provide SAP S/4HANA System Destination
- **DMS\_Destination:** Provide document management service destination.
- **DownloadFolderPath:** Provide folder path where files will be stored after upload operation.

**Note:** If you do not map your destination environment variable with actual SAP BTP destination during deployment, then the process will enter erroneous state when it tries to connect to the external system.

For more information on deploying the project in a shared environment, refer to the link: [Deploy a Project | SAP Help Portal](#)

For information on Sharing an Environment, refer to the link: [Share an Environment | SAP Help Portal](#)

## Configure SAP Build Work Zone

Configure SAP Build Work Zone to access the start UI for this automation. Please refer help documentation Configuring [SAP Build Work Zone](#)

Once SAP Build Work zone is configured, perform the following steps to create the tile for the start UI:

1. Open Content Manager and click on the HTML5 Apps
2. Select the Measurement Documents Creation Start UI from the list of apps and choose Add.

The screenshot shows the SAP Site Manager - Content Manager interface. At the top, there is a search bar with the text "Search in Title, Description, ID" and a dropdown menu set to "All Items". Below the search bar, there are buttons for "Create", "Content Explorer", "Import", and "Export". The main area displays a table of items under the heading "All Items (27)". The table has columns for "Type", "Title", "Description", "ID", "Channel", and "Last Modified". The item "Measurement Documents Creation Start UI" is highlighted with a red box. Below the table, there is a pagination bar showing "Items (1-27)".

Type	Title	Description	ID	Channel	Last Modified
	Complete RFQ and Supplier Quotation	Complete RFQ and Supplier Quotation Start UI	com.sap.CompleteRFQO...	HTML5 Apps	20/12/2023
	GR Creation	A start UI application for GR creation	com.sap.GRCreationStart...	HTML5 Apps	20/12/2023
	AdhocSubcontractingPR_StartUI	Adhoc Subcontracting PR Start UI application	AdhocSubcontractingPRS...	HTML5 Apps	20/12/2023
	Measurement Documents Creation Start UI	Measurement Documents Creation Start UI Application	com.sap.MeasurementDo...	HTML5 Apps	20/12/2023
	Everyone	Content assigned to this role is visible to all users	sap_subaccount_everyone	Local	18/12/2023

3. Add the relevant roles to the user. The Measurement Documents Creation application start UI will be available to the user as a tile in the launchpad.

## SAP Business Application Studio for SAP UI5 Application

### Import and deploy SAPUI5 application:

Following steps can be followed to utilize the SAP UI5 application provided with this process package:

- Download the SAPUI5 application file from the imported store project, it will be available under the file section in the package.
- Open Business Application Studio and import the previously downloaded SAPUI5 project.
- Ensure that you have already created the SBPA instance and the same instance details need to be updated in the mta.yaml file available in the SAP UI5 application project.
- Update your process definition id (Package needs to be deployed) in the Property.json file (property: downloadDefinitionId, uploadDefinitionId) as shown in the following snippets (definition id only needs to be updated in start UI application).
- **downloadDefinitionId** process will be used to read and download the data.
- **uploadDefinitionId** process will be used for creation of measuring documents.

```

1  |
2  |   "downloadButtonVisible": true,
3  |   "uploadButtonVisible": false,
4  |   "sendEmailToState": "None",
5  |   "saveToFolderState": "None",
6  |   "attachmentFlag": false,
7  |   "uploadInvisibleFlag": false,
8  |   "sendEmailTo": "",
9  |   "saveToFolder": "C:\\",
10 |   "downloadDefinitionId": "eu10.store-content-dev-acc.masscreationofmeasuringdocuments.getMeasurementDocumentDetailsProcess",
11 |   "uploadDefinitionId": "eu10.store-content-dev-acc.masscreationofmeasuringdocuments.postMeasurementDocumentDetailsProcess",
12 |   "userEmailId": "",
13 |   "equipmentAPI": {
14 |     "service": "API_EQUIPMENT",
15 |     "entityset": "Equipment"
16 |   },
17 |   "functionalLocationAPI": {
18 |     "service": "API_FUNCTIONALLOCATION",
19 |     "entityset": "FunctionalLocation"
20 |   },
21 |   "measuringPointAPI": {
22 |     "service": "api_measuringpoint/srzd_a2x/sap/measuringpoint/0001",
23 |     "entityset": "MeasuringPoint"
24 |   }
25 | }

```

- Build SAPUI5 project using mta.yaml file & the generated project (generated mtar file will be available in the mta\_archives folder) file can be deployed.
- After successful deployment of the project, it can be accessed using SAP standard work zone & user can provide the required details & submit the form for the approval & posting.

## User Guide

### Capabilities

The following are the capabilities of this template:

Icon	Type	Name	Description
	Automation	Update Excel for Read Operation	Automation to update the input excel template with data getting from fetch measurement document details automation
	Automation	Create Folder in Local System	Automation to create folder in the specified folder path in the local system.
	Automation	Delete DMS Items	Automation to delete item from document management service using object id and send email to user or requestor if any error occurs while deleting items from document management service.
	Automation	Deletion of Folder in DMS	Automation to delete folder from document management service using folder object id after the processing and send email to requestor or user if any error occurs while deleting folder in document management service.

	Automation	Download DMS Document	Automation to download excel from document management service and fill the data received from GET API into the excel.
	Automation	Fetch Measurement Document Details	Automation to get measurement document details from SAP S/4HANA system
	Automation	Generating Log Report	Automation to generate log report for measurement documents after posting into SAP S/4HANA system
	Automation	Get DMS Folder Content	Automation to get folder content like object id, object name, object type from document management service and send notification email to user or requestor if any error occurs while getting content from document management service folder.
	Automation	Get measurement document details and update excel	Automation to get measurement document details from SAP S/4HANA system and generate excel with data and sent to requestor via email.
	Automation	Posting Measurement Document Details	Automation to download and read document from document management service and post the measurement document data into SAP S/4HANA System
	Automation	Read the Excel and Get Data	Automation to read the excel data and prepare payload to post the data into SAP S/4HANA System
	Automation	Remove DMS Folder Content	Automation to remove the folder content and folder details from document management service.
	Automation	Send Email to Requestor	Automation to send email to requestor with the excel template file attachment.
	Process	Get Measurement Document Details	Process to get measurement document details from SAP S/4HANA system based on the filter criteria and generate the excel with data and send to user or requestor
	Process	Post Measurement Document Details	Process to read the measurement document details from input excel and post them into SAP S/4HANA system and send the log report to requestor or user.
	Data type	DMS Object Data type	Data type used to store objectId, name and objectType for document management service file and folders
	Data type	Read Data	Data type for maintaining the input data received from download form of start UI.
	Data type	UploadScreenData	Data type used to store the user email id, file object id, file name which is received from upload form of start UI
	File	Create Measurement Document Template.xlsx	Standard input template for mass creation of measurement documents

For detailed information about different artifacts, please refer [help documentation](#).

## **Actions**

### **Measuring Point - Read**

This action is responsible for reading the measuring point details like equipment, function location based on filter query from SAP S/4HANA system. measuring points are located on technical objects such as pieces of equipment or at functional locations.

### **Measurement Document – Post**

This action is responsible for creation of measurement documents into SAP S/4HANA system.

## **Automation**

### **Update Excel for Read Operation**

Automation to update the input excel template with data getting from fetch measurement document details automation.

### **Create Folder in Local System**

Automation to create folder in the specified folder path in the local system.

### **Delete DMS Items**

Automation to delete item from document management service using object id and send email to user or requestor if any error occurs while deleting items from document management service.

### **Deletion of Folder in DMS**

Automation to delete file folder from document management service after the processing using folder object id and send email to requestor or user if any error occurs while deleting folder in document management service.

### **Download DMS Document**

Automation to download excel from document management service and fill the data coming from get API into the excel.

### **Fetch Measurement Document Details**

Automation to get measurement document details from SAP S/4HANA system.

### **Generating Log Report**

Automation to generate log report for measuring document after posting into SAP S/4HANA system.

## Get DMS Folder Content

Automation to get folder content like object id, object name, object type from document management service and send notification email to user or requestor if any error occurs while getting content from document management service folder.

## Get measurement document details and update excel

Automation to get measurement document details from SAP S/4HANA system and generate excel with data and sends to requestor via email.

## Posting Measurement Document Details

Automation to download and read document from document management service and post the measurement document data into SAP S/4HANA System.

## Read the Excel and Get Data

Automation to read the excel and get the data and prepare payload and post the data into SAP S/4HANA System.

## Remove DMS Folder Content

Automation to remove the folder content and folder details from document management service after approval process.

## Send Email to Requestor

Automation to send email to requestor with the excel template file attachment.

## Process

### Get Measurement Document Details

Process to get measurement document details from SAP S/4HANA system based on the filter criteria and generate the excel with data and send to user or requestor.

### Post Measurement Document Details

Process to read the measurement document details from input excel and post them into SAP S/4HANA system and send the log report to requestor or user.

## User Interface

### Start UI

- This template provides read option in start UI which user can use to get the measurement document details from SAP S/4HANA system.
- Users can select from F4 Help or can enter data manually for filter criteria then click "Submit" button to trigger **Get Measurement Document Details** process to download the data.

< **SAP** Create Measurement Documents ▾ Q AK

**Download** **Upload**

Equipment: <input type="text"/>	Functional Location: <input type="text"/>
Measuring Point: <input type="text"/>	Send Email To: * <input type="text"/>
Save To Folder: * C:\ <input type="text"/>	

**Submit** Cancel

- This template also includes upload option in start UI where the user can upload the create measurement document details template with data to post it into SAP S/4HANA system.

< **SAP** Create Measurement Documents ▾ Q AK

**Download** **Upload**

Attachments (0) Upload



**No files found.**

Drop files to upload, or use the "Upload" button.

**Submit** Cancel

## Support

There is no support available for template content. If you experience general issues with SAP Build Process Automation, raise an incident via SAP Support Portal on **BPI-PA-BPC** component.

This template can be modified using SAP Process Automation. For example: add business rules to determine the approver based on a certain business logic or add an action to post collected information to backend SAP system.

Refer [Help Portal](#) for more details.

[www.sap.com](http://www.sap.com)