



PUBLIC

SAP Build Process Automation

Project Budget Approval Configuration and User Guide



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

1. **Overview:** In this section, you will get quick overview of the use case, what are high-level components used and how the template works in nutshell. Prerequisite section provides information of different services of SAP Business Technology Platform that are required to use this template.
2. **Configuration Guide:** It contain sections which will guide you to setup your (a) SAP Business Technology Platform Account with destination and user roles etc. (b) Integration Content via SAP Integration Suite, (c) SAPUI5 application via SAP Business Application Studio and (c) Import and configure the template using SAP Build Process Automation design studio and (d) SAP Work Zone to access the My Inbox or Task Center and other applications.
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.

Note:

- Learning contents are published only for demo and reference purposes. We do not provide any support to learning / sample content.
- This documentation is not a detailed guide to setup SAP Business Technology Platform services. It assumes that IT admin who is setting the content is skilled with SAP Business Technology Platform environment. **Configuration section must be followed.**
- 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, SAP Integration Suite, and its capabilities.

Overview

This document provides technical information about what needs to be configured to make the package - Project Budget Approval run. The main audience of this document are technical personas like IT Administrators or Developers. The document tells what needs to be done to make the solution run. It mainly focusses on technical configuration like destinations for example.

It also focusses on business configuration that can be done by a key user or Business Process Expert, like how to configure a process, a decision or visibility scenario.

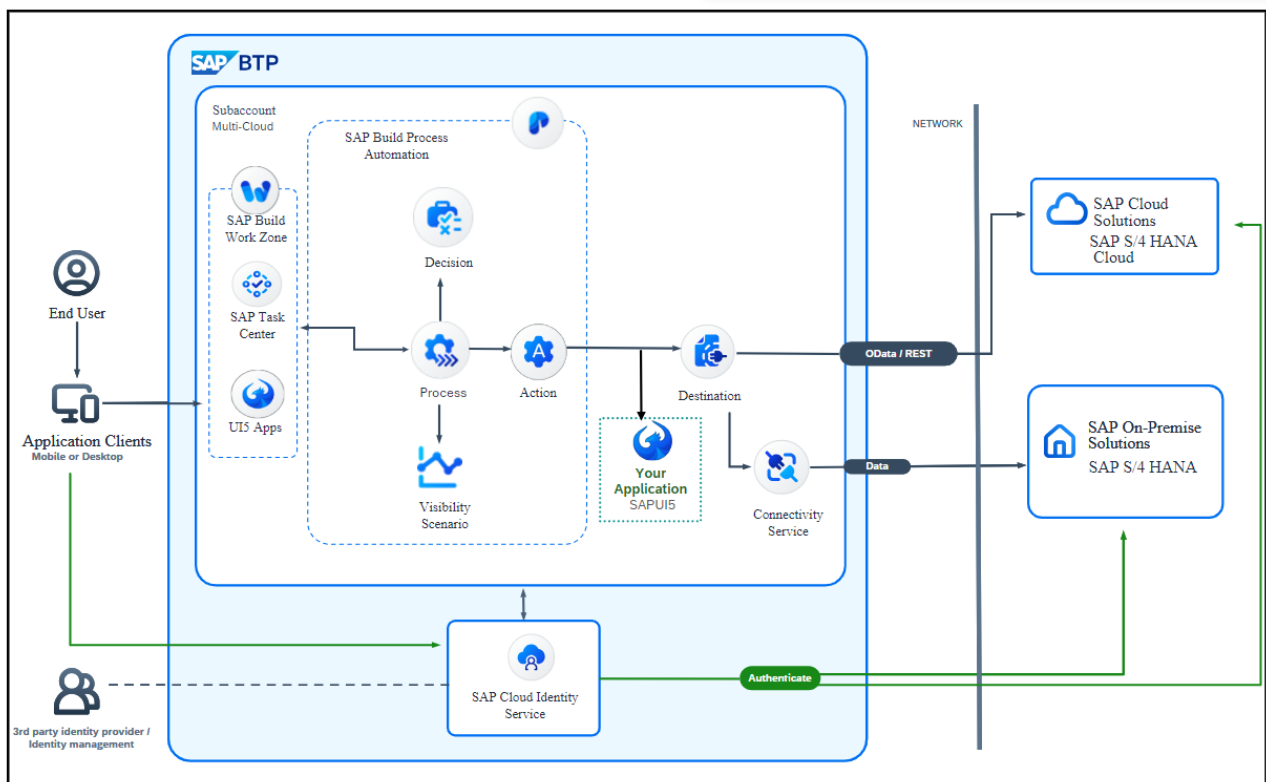
The package enables customers to accelerate the digitalization of their budget approval in a transparent way and provide flexibility to meet business requirements.

A budget approval that requires external approval will automatically trigger a process variant in SAP Build Process Automation. The process variant will do the following:

1. Initiate process when external approval is required.
2. Based on the decisions table process will trigger to approvers.
3. Finally, based on the approvals, release or reject the budget.

This content package can be used with both SAP S/4HANA Cloud Private Edition (2023 onwards) and S/4HANA Cloud Public Edition (2502 onwards).

Process Flow Diagram



Solution Flow:

1. Users uploads the expense excel sheet to 'Import Financial Data' application (start ui) in the SAP Work Zone and triggers the process.
2. The process checks whether the approval is required or not from the decision, if approval is required then it determines the approvers from data maintained in the decision and sends the task to respective approvers.
3. Else the approval process is skipped, and the process updates the financial data of project in SAP S/4HANA system.
4. If approver rejects the request, a rejection notification email is sent to the requestor and the process ends.
5. If approver approves the request, an approved notification email is sent to the requestor and the process updates the financial data of the project in SAP S/4HANA system.
6. After data is successfully posted in the SAP S/4HANA system, a notification email is sent to the requestor.

Required SAP Business Technology Platform Services

The following SAP Business Technology Platform services are required to consume the package - **Project Budget Approval**:

- SAP Build Process Automation
- SAP Connectivity service
- SAP Work Zone, standard or advanced
- SAP Cloud Identity Services - Identity Authentication (optional).
- SAP Business Application Studio
- SAP Business Technology Platform, Cloud Foundry runtime.

Prerequisites

- Get access to your SAP Business Technology Platform account.
- You need a valid user account in SAP S/4HANA system.
- SAP Desktop Agent 3.28 or higher.

Configuration Guide

Project Budget Approval template requires SAP Build Process Automation subscription. Follow the [setup and configuration section](#).

Setup SAP S/4HANA

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
Financial Planning Data - Write	Overview Financial Planning Data - Write SAP Business Accelerator Hub

Setup SAP Business Technology Platform Cockpit

Configure SAP S/4HANA Destination

Configure Destination to connect to SAP S/4HANA cloud system.
This content package can be used with both SAP S/4HANA Cloud Private Edition (2023 onwards) and S/4HANA Cloud Public Edition (2502 onwards). Please create destinations accordingly.

Destination Property	Value
Name	<Destination 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

Configure SAP Build Process Automation Email Destination

Mail notifications are used in this template to send notifications to requestor and approver during different stages of the process. Follow the instructions to setup mail destination in your SAP Business Technology Platform Account.

- Configuring destination, see [Configure Mail Destination](#) .
For more information refer to Create [HTTP Destinations](#) and [OAuth User Token Exchange Authentication](#).



User Roles Configuration

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

Role Name	Purpose
ProcessAutomationDeveloper	Standard Business User, can model and publish processes
TaskCenterAdmin	Permission to execute calls to the connector status API and monitor configured destinations and running background jobs.
ProcessAutomationParticipant	To execute (like accessing My Inbox, 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_Developer	Allows developers to load and develop applications using SAP Business Application Studio.
Business_Application_Studio_Administrator	Allows administrators to manage (export and delete) user data.

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

Setup Content Package

Import SAP Build Process Automation content

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

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 “**Project Budget Approval**”
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 “**Project Budget Approval**” template available for use.

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

Import and deploy SAPUI5 application

The content package requires the SAP UI5 user interface which is available in **Project Budget Approval** content package. There are two UI5 interfaces in the UI5 project:

- ProjectBudgetApproval-ui
- Start UI – financialData

- Task UI - approveFinancialData

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 SAP Build Process Automation instance and the same instance name need to be updated in the mta.yaml file available in the SAP UI5 application project as shown below at line no. 88.

```
onTriggerWorkflow: function (oEvent) {
    this.getView().getBusy(true);
    var jsonData = sap.ui.getCore().getModel("csv").getData();
    var metadata = this.getView().getModel("metadata").getData();
    var temp = {};
    temp.d = jsonData;
    temp.metadata = {}
    temp.metadata["category"] = metadata[0].value;
    temp.metadata["year"] = metadata[1].value;
    temp.metadata["project"] = metadata[2].value;
    temp.requestorEmail = sap.ushell.Container.getService("UserInfo").getUser().getEmail();
    jsonData = { definitionId: ,
    //Start Workflow
    $.ajax({
        url: this._getWorkflowRuntimeBaseUrl() + "/xsrf-token",
        method: "GET",
        headers: {
```

- Right click on mta.yaml file to build SAPUI5 project. The generated mtar will be available in the mta_archives folder.
- Deploy the generated mtar file.

Note: In case of Start UI, after successful deployment of the project, it can be accessed using through SAP standard Work Zone & user can uploads expense excel sheet & submit for the project budget approval.

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.

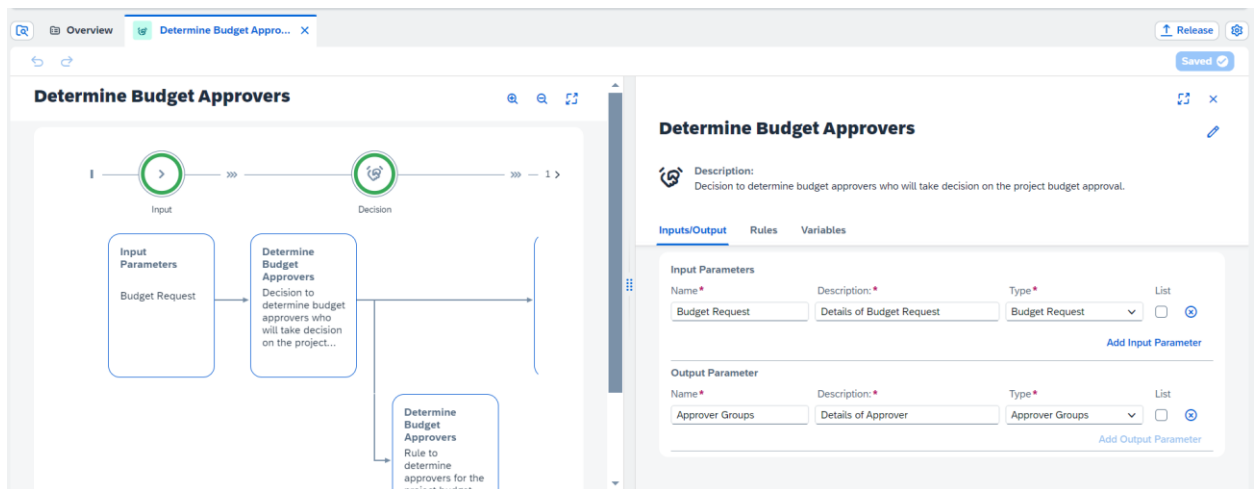
Configure Decisions

There is one decision in this template which must configured as per the instructions below, based on the requirements.

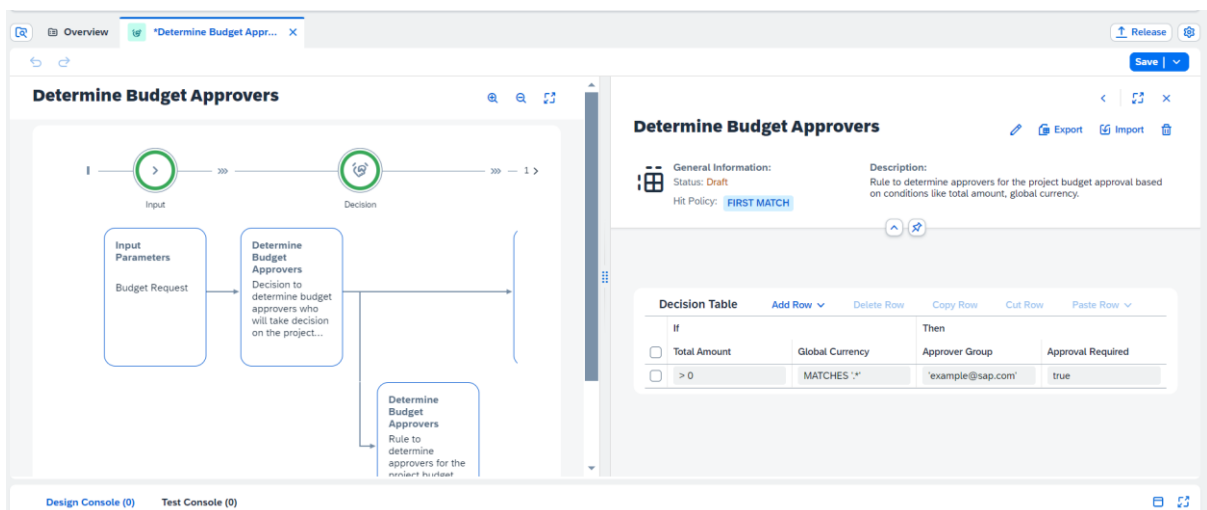
1. Determine Budget Approvers

Decision to determine the budget approver who holds the financial authority and responsibility within the organization to take decision on the project budget request. This typically involves selecting an individual with the appropriate expertise to review and authorize budget allocations. To modify the decision:

- In process editor, double click to open the decision.
- Select the rule from the decision diagram.



- Edit the rule to add more rows or update existing value.



Configure Email

Email notifications are sent to requestor and approver at different places during process and task execution. All the email artefacts in the process have default template body which can be changed.

To update the email body content, do the following:

- Select the mail artefact in the process.
- From the Settings in the right-side panel, check the mail header to confirm the To field (or email recipients) and the Subject. You can adjust the subject and recipient, if needed.
- You may also add someone in CC.

- Click to Open 'Mail Body Editor'.

The screenshot shows a 'Mail Body' editor window. The email body text is as follows:

Dear Sender,
Your project budget request <>> project is approved.
Project Details:
Project - <>> project
Category - <>> category
Year - <>> year
Requestor - <>> requestorEmail

This is system generated email. Please do not reply to this email

A 'Close' button is located at the bottom right of the editor.

- The mail editor allows you to write and adjust text according to your needs. You can also reuse information that has been collected during the process. If you want to use additional process context data, you can simply drag the fields from the left menu to the editor on the right.

For more information on email configuration and text, refer to this [link](#).

In case any further extension needs to be made then follow the reference links below.

Create Process

[Create a Business Process | SAP Help Portal](#)

Create Forms

[Create a Form | SAP Help Portal](#)

Create Automation

[Create an Automation | SAP Help Portal](#)

Create Decision

[Create a Decision | SAP Help Portal](#)

Create Process Visibility Scenario

[Configure a Visibility Scenario | SAP Help Portal](#)

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'.

For more information please visit : <https://help.sap.com/docs/build-process-automation/sap-build-process-automation/releasing-project>

Note: 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.

Import Destination

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

To configure destination,

- click on **Control Tower**.
- Select **Destinations** from the right panel.
- Click **Add**

Select the destinations created in the setup section to be added.

For more information and screen shots, please refer to the below link:

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'.

For more information and screen shots, please refer to the below link: [Deploy Project](#).

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

- **S/4HANA_Destination:** Business Technology Platform destination to connect with SAP S/4HANA system.

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

Configure and Deploy Start UI

- Open business application studio.
- Update your process definition id in the Homepage.controller.js file as shown below at line no. 192.

Note:

The definition id can be found in the Monitoring section, inside Process and Workflow Definitions. You need to enter the project name and go to the main process which is triggered from start UI. The ID mentioned in the process would be the definition id. Refer [determine the workflow definition ID](#) for more details.

```
188 temp.metadata["category"] = metadata[0].value;
189 temp.metadata["year"] = metadata[1].value;
190 temp.metadata["project"] = metadata[2].value;
191 temp.requestorEmail= sap.ushell.Container.getService("UserInfo").getUser().getEmail();
192 jsonData = { definitionId: " ", "category": " ", "year": " ", "project": " ", "requestorEmail": " " };
193 //Start Workflow
194 $.ajax({
195     url: this._getWorkflowRuntimeBaseURL() + "/xsrf-token",
196     method: "GET",
197     headers: {
198         "X-CSRF-TOKEN": "fetch",
199     }
200 });
```

- Build and Deploy UI5 Application.

Configure SAP Work Zone

Configure SAP Work Zone to access the start UI for this automation.

Once SAP 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 Import Financial Data Start UI from the list of apps and choose Add.
3. Add the relevant roles to the user. The Purchase Info Record application start UI will be available to the user as a tile in the SAP Work Zone.

If you plan to use SAP Work Zone service, then configure [SAP Work Zone with SAP Build Process Automation Applications](#) using help documentation.

User Guide

Capabilities

This template consists of following capabilities.

Please refer [help documentation](#) about these different artifacts.

Type	Name	Description
Automation	Calculate Number of Approved and Rejected Items	Automation to calculate the total number of approved and rejected items after the approver has successfully taken an action.

Automation	Calculate Total Amount	Automation to calculate total amount for project budget request. This is to find aggregated amount for the budget request which is used to determine the approvers.
Process	Project Budget Approval	Process to determine approvers, send for approval and update project budget approval in SAP S/4HANA system.
Form and approval	Budget Approval	Approval task UI for budget approvers to take decision on project budget approval. The proposed budget is sent to the designated stakeholders or approvers for approval.
Visibility Scenario	Project Budget Approval Dashboard	Project Budget request requires multiple approvals depending on the total amount and project. This visibility scenario enables project managers to keep track of all budget approval requests and gain real time insight into this process area.
Decision	Determine Budget Approvers	Decision to determine budget approvers who will take decision on the project budget approval.
Data Type	Approver Groups	Data type for maintaining approver details like approver group and approval required.
Data Type	Financial Data	Data type for maintaining financial details of project.
Data Type	Project Details	Data type for maintaining project budget request details.

Actions

Create Financial Planning Data Action

The service exports financial plan data between systems. This API call is based on the OData protocol and can be consumed in Fiori apps and on other user interfaces.

Method	API	API Path	Purpose
POST	API_FINPLANNINGDATA_SRV	/sap/opu/odata/sap/API_FINPLANNINGDATA_SRV/FinancialPlanData	Creates financial data for the project budget in the SAP S/4HANA system. It adds new entity to FinancialPlanData.

Support

There is no support available for template content. If you experience general issues with SAP Build Process Automation, please follow the links below:

- [Troubleshoot Support Guided Answer](#)
- [Test an Automation Help portal Article](#)
- [Test an Application Help portal Article](#)
- [Get traces Support Guided Answer](#)

If the issue persists, please raise an incident via SAP Support Portal on **BPI-PA-BPC** component.

This template can be modified using SAP Build Process Automation. For example: add decisions 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.

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