

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

# Configuration & User Guide

S/4 HANA Project Budget Approval Process using  
SAP Workflow Management or SAP Build Process  
Automation

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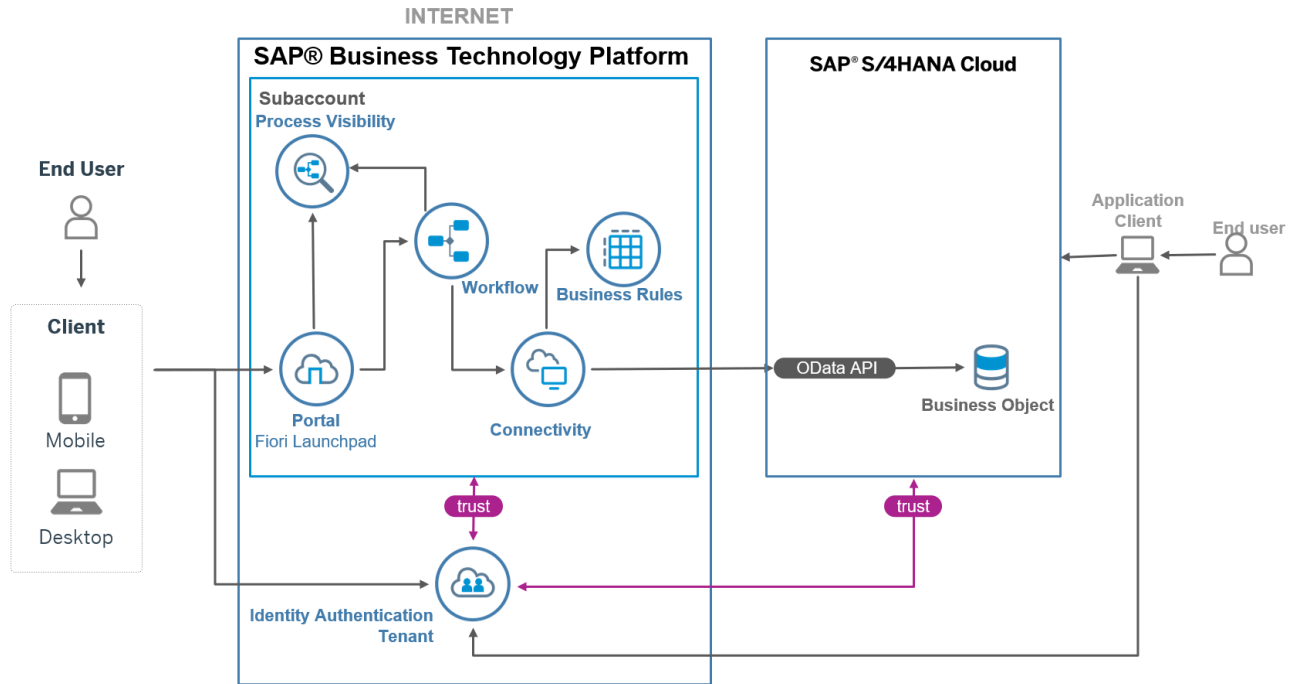
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# Overview

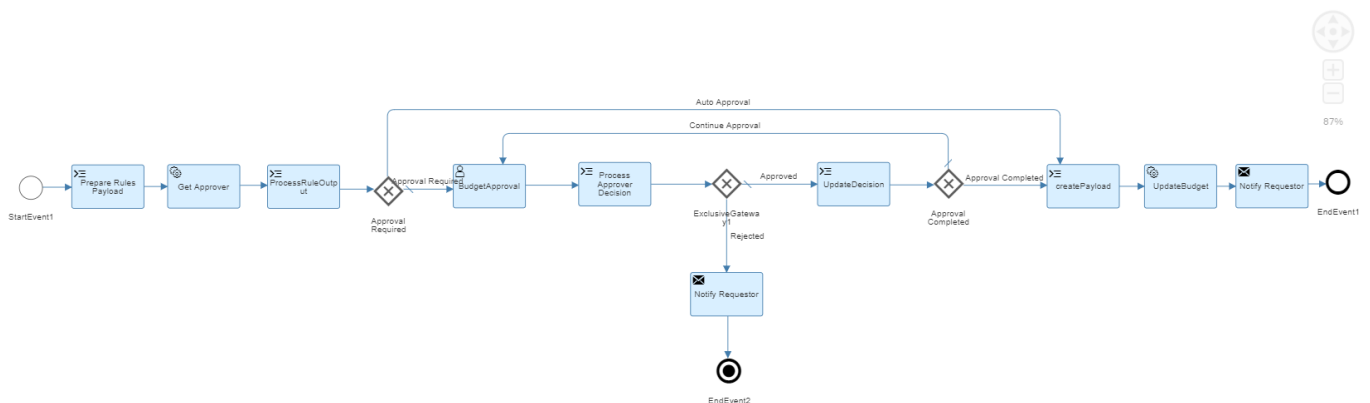
This document provides information about what needs to be configured to make S/4 HANA Project Budget Approval Process run. The main audience of this document are Project Managers or Member of the project team who use S/4 HANA Projects for budget planning purposes.

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

## SAP S/4HANA Extension – Budget Approval



Budget Approval Process enables customers to automate approvals or review of planned budget involving multiple business users from different organizations before posting the planned budget items into S/4 HANA.



The following steps are included as a part of Budget Approval Process:

- Business user (Requester) uploads a budget template in excel and request for approval.
- Approver groups are determined using Total Budget Amount and Currency.

## Decision Table

Decision Table

If		Then	
Budget Request.Global Currency	Budget Request.Total Budget Amo...	Approver Group	Approval Required
= 'USD'	> 50000	'CFO'	true
= 'USD'	> 1000	'FinanceController'	true
= 'USD'	> 1000	'ProjectManager'	true
= 'USD'	<= 1000	"	false

- Approvers access My Inbox to claim their tasks, review the budget line items and choose one of the following decisions.

### Approve

- Upon selecting "Approve" option, the workflow completes the step and the next approval step is initialized (if present).

### Reject

- Upon selecting "Reject" option, Requester is notified via email about rejection of the request and the process is terminated.

- When the request is accepted by all Approvers, email notification is sent out to Requester informing about full approval and the process is completed.

SAP Workflow Management or SAP Build Process Automation shall not be used to store or process sensitive personal data. This service can be used if you have a legal ground to process personal data.

# Required SAP Business Technology Platform Services

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

- SAP Application Runtime Service
- SAP Workflow Management or SAP Build Process Automation
- SAP Cloud Portal Service / SAP Launchpad Service
- SAP Document Management Service, Integration option
- SAP Cloud Identity Services - Identity Authentication (optional)

# Setup and Configuration

The **Project Budget Approval** content package requires SAP Build Process Automation or SAP Workflow Management subscription or a CPEA contract. Based on which service you plan to use, follow the appropriate section to configure either SAP Build Process Automation or SAP Workflow Management

## Configure for SAP Build Process Automation

Follow the setup and configuration section of SAP Build Process Automation:

1. [Subscribe to SAP Build Process Automation \(Standard Plan\)](#)
2. [Configure Destinations for Live Process Projects](#)
  - a. Import Package Destination
3. [Optional] [Configure SAP Launchpad Service for SAP Build Process Automation](#)

### Configure Process Automation Destination

A HTTP destination is required in the BTP subaccount where SAP Build Process Automation is subscribed. Create a destination with name "sap\_process\_automation\_service" with the following configuration if it doesn't exist already. Please refer how to [create a HTTP destination](#) OAuth 2.0 Authentication (client credentials).

Name	sap_process_automation_service
Type	HTTP
Proxy Type	Internet
Authentication	OAuth2ClientCredentias
URL	<"endpoints"."api">
Client ID	<"uaa":"clientis">
Client Secret	<"uaa":"clientsecret">
Token Service URL	<"uaa":"url">/oauth/token

Note: While creating the service instance for SAP Build Process Automation service, make sure that at least the required scopes are assigned (help documentation to enable technical authentication to [access the SAP Build Process Automation APIs](#)). If the scopes are not assigned, you can also [update the service instance](#) with the required scopes.

### Configure OAuth2ClientCredentias SAP Build Process Automation Destination (Service Instance)

Ignore this step if there is already a destination using SAP Build Process Automation service instance created.

Create new destination to call SAP Build Process Automation APIs using a service route from SAP UI5 component. For more details, follow the help document:

<https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/685f383cebb54c009b2fac633b32c90f.html>.

Destination Configuration Blank Template Service Instance

Service Instance: \*

Name: \*

Description:

Additional Properties New Property

Next Cancel

Destination Configuration

Name: \*

Type:

Description:

URL: \*

Proxy Type:

Authentication:

Use mTLS for token retrieval

Client ID: \*

Client Secret:

Token Service URL Type: \*

Token Service URL: \*

Token Service User:

Token Service Password:

Additional Properties

endpoints	{ "api": "https://..." }	
html5-apps-...	{ "app_host_id": "..."	
saasregistry...	true	
sap.cloud.s...	com.sap.spa.process...	
sap.cloud.s...	spa	

Use default JDK truststore

Save Cancel

## Configure SAP Workflow Management

Follow the [setup and configuration section](#) of SAP Workflow Management.

Note: While creating the service instance for Workflow service, make sure that at least the following scopes are assigned (help documentation to [enable technical authentication](#) to access the workflow APIs). If the scopes are not assigned, you can also [update the service instance](#) with the following scopes.

- WORKFLOW\_INSTANCE\_GET
- WORKFLOW\_INSTANCE\_START
- WORKFLOW\_INSTANCE\_CANCEL

### Configure Workflow Email Destination

Configure workflow email destination. For more information on configuring destination, see

[configure workflow email destination.](#)

### Configure OAuth2ClientCredentials Business Rules Destination

Configure a Business Rules destination with the following parameters:

Name: *	BusinessRules
Type:	HTTP
Description:	
URL: *	https://bpnruntime. . . . .om/rules-ser...
Proxy Type:	Internet
Authentication:	OAuth2ClientCredentials
Client ID: *	sb-clone-d8 . . . . .4 bpnrulebr...
Client Secret: *	*****
Token Service URL: *	https://bpm- . . . . .and.com/oauth/t...
Token Service User:	
Token Service Password:	

Please refer help documentation [how to get URL, Client ID, Client Secret and Token Service URL](#)  
For more information refer to how to [create a HTTP destination](#) and [how to access business rules APIs](#) using OAuth 2.0 Authentication (client credentials).

### Configure OAuth2ClientCredentials Business Rules Destination (Service Instance)

Ignore this step if there is already a destination using Business Rules service instance created.  
Create new Destination to call Business Rules Service APIs using a service route from SAP UI5 Component.

- Click New Destination.
- Select **Service Instance** as Destination Configuration.
- Select Service Instance as BusinessRules.
- Enter Name as BusinessRules\_CFLP and click Next button.
- Click **Save** button.

### Configure OAuth2ClientCredentials Workflow Destination (Service Instance)

Ignore this step if there is already a destination using Workflow service instance created.  
Similarly, create new Destination to call Workflow Service APIs using a service route from SAP UI5 Component. For more details, follow the official help document:

<https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/685f383cebb54c009b2fac633b32c90f.html>.

## Configure S/4 HANA Cloud API for Creating Budget to be used in



# BTP Destination

## Procedure

1. Access the SAP Fiori launchpad.
2. Go to the [Communication Arrangements](#) app in catalog [Communication Management](#).
3. To create a new communication arrangement, choose [New](#).
4. To create a communication arrangement for Financial Planning API, select `SAP_COM_0087`.
5. Adapt the [Arrangement Name](#) if required.
6. Choose [Create](#).
7. In the [Common Data](#) section, from the input help, select the [Communication System](#) that was also used during the setup of the other APIs/ CDS- Views.
8. The technical user is automatically added to the Inbound Communication section.
9. Save your changes. (The status should change to Active)

Please refer [SAP API Business Hub](#) for more details about the API.

For **SAP S/4HANA on-premise** landscape, configure cloud connector to enable secure tunnel to SAP BTP tenant. Please refer the help documentation to [configure Cloud Connector](#).

## Configure a Destination to SAP S/4HANA or S/4 HANA Cloud system

Create a destination to connect to either SAP S/4HANA or SAP S/4HANA Cloud system. For example, in this case you see the destination to connect to SAP S/4HANA Cloud system. Configure a destination with the name as "S4HANA", with Type as HTTP, Proxy Type as Internet, URL as hostname of your SAP S/4HANA Cloud tenant, and authentication as BasicAuthentication. Please refer how to [create an HTTP destination](#)

### Destination Configuration

Name: *	<input type="text" value="S4HANA"/>
Type:	<input type="text" value="HTTP"/>
Description:	<input type="text" value="S/4 HANA Cloud tenant for LP content"/>
URL: *	<input type="text" value="https://[redacted].api.s4hana.ondemand.com"/>
Proxy Type:	<input type="text" value="Internet"/>
Authentication:	<input type="text" value="BasicAuthentication"/>
User: *	<input type="text" value="[redacted]"/>
Password:	<input type="password" value="*****"/>

---

## Import Content Package with SAP Build Process Automation

1. In the [SAP Build Process Automation Store](#), search for live process package Project Budget Approval and import the same. This content package has one process template and process variant(s) for that template.
2. In the Application Development [Lobby](#), click to open the package with name Project Budget Approval. This opens the package in a new tab/window.
3. Click the + icon next to the process template to create a new process variant.
4. Enter Name of the new Process Variant (ex, Two Step Approval).
5. Click the newly created Process Variant tile to save and activate the process variant.
6. The process variant has a default implementation with two steps and at least one level of approval.
7. It is possible to remove steps like "Approval for Project Budget Approval" from a process variant only if there are multiple approvals. Please note that whether a step is mandatory or optional, and how many a times any step can be used within a variant, are dependent on the constraints defined on the process steps.
8. Save and activate the variant. A successful activation will create a new workflow definition in the account that can be viewed in the [Monitor Processes and Workflows app](#).

## Import Content Package with SAP Workflow Management

1. Open the **SAP Workflow Management** or **SAP Build Process Automation** app. For information on accessing the app, see [Subscribe to SAP Workflow Management or SAP Build Process Automation](#).
2. Import content package S/4 HANA Project Budget Approval. Refer to the standard help document about [how to import a content package](#).

## Configure Business Rules

This content package includes a Business Rule (Budget Approval, Revision 2105) to determine approval steps and approver group. The standard rules content enables a process expert to configure the number of approval tasks and the responsible group. An approver group is determined based on the Project Id, total amount of budget and currency. Depending on the rules configuration it is possible to have multiple approval tasks executed sequentially in the workflow. This business rule is only a sample rule. Customers can modify based on their requirements. Please go through the [business rules capabilities](#) in SAP Workflow Management or SAP Build Process Automation.

Rule Service Name: **DetermineBudgetApproverGroups**

Revision: 2015

Input: **BudgetRequest**

Attribute	Type	Description
-----------	------	-------------

ProjectID	String	Project ID
GlobalCurrency	String	Global Currency used in the budget request
TotalAmount	Number	Total amount of the budget request

Output: ApproverGroups

Attribute	Type	Description
ApproverGroup	String	Aprpover Group name responsible.
ApprovalRequired	String	Approval required or not.

## Configure SAP Central Fiori Launchpad Site for SAP Workflow Management

Configure Fiori Launch Pad site to access Workflow Monitoring applications, My Inbox, Process Visibility Workspace and Start UI application to create approval requests.

Please refer help documentation [how to configure a start ui tiles on Central Fiori Launchpad](#).

### Add Workflow start UI in Fiori Launchpad Site

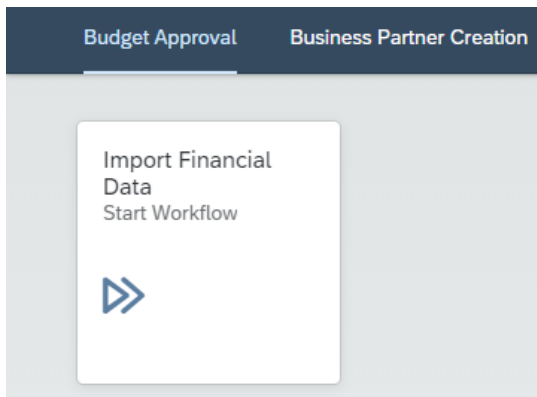
- Open SAP Launchpad site manager application.
- Select **Content Manager** and **Content Explorer**.
- Search **com.budget.financialData** and select SAP UI5 component.
- Click Add to My Content button to include the UI5 component.
- Select **My Content** tab and Search **Everyone**.
- Click **Everyone** from the result and navigate to the details.
- Click Edit button to enable all users to access the new Start UI tile.
- Search for **Budget Approval** and select Document Centric Approval Request.
- Click the **+** button and Save the changes.
- Click **New** button and Select **Group** to create a new group.
- Add a **Title** for eg: Budget Approval Request under **PROPERTIES**.
- Search Budget Approval and Select Budget Approval.
- Click **+** button and **Save** button.

# Using the Budget Approval workflow

The applications that are part of Budget Approval content package will be available in the SAP Business Technology Platform Fiori Launchpad. Check with your administrator for the link to access the same.

## Creating Budget Approval Request

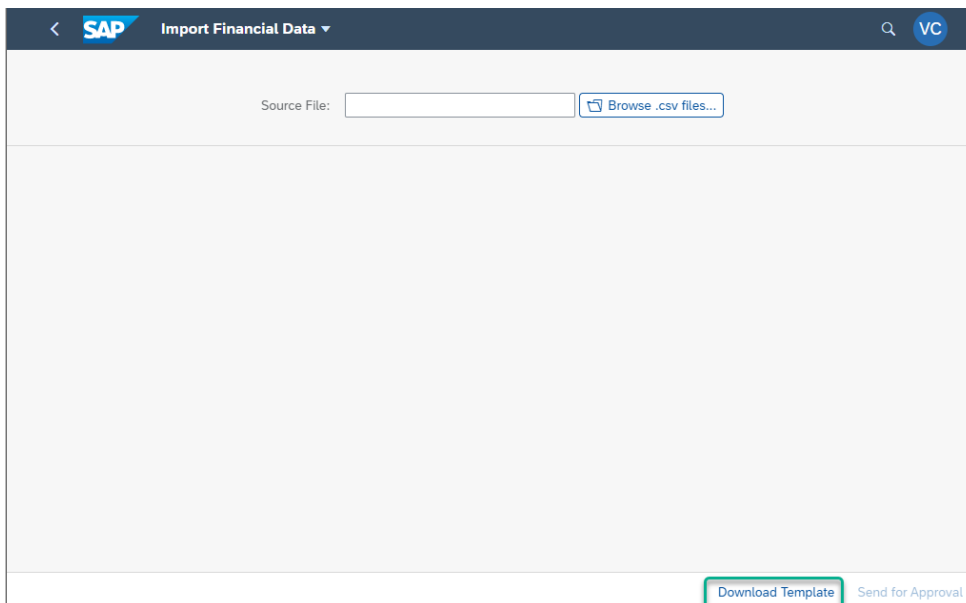
The application for submitting a excel template for approval can be accessed from a tile in SAP Fiori Launchpad.



- .Import a budget template with the Project definition and Fiscal year and click Send for Approval.

You can download the budget approval template embedded within the app. For latest template we encourage you to review the latest template from S/4 HANA and fill in the data in the predefined format.

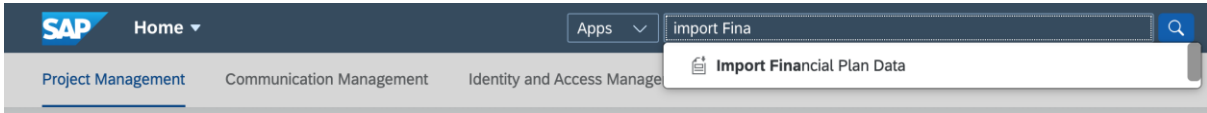
### Download template using this app



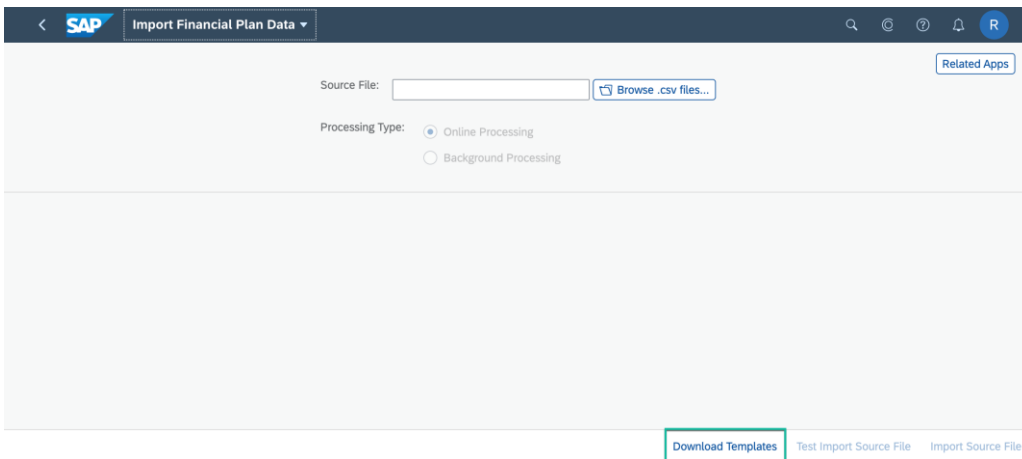
## Download template using S/4 HANA

In case you wanted to refer to latest template, you can use the below steps to download the same

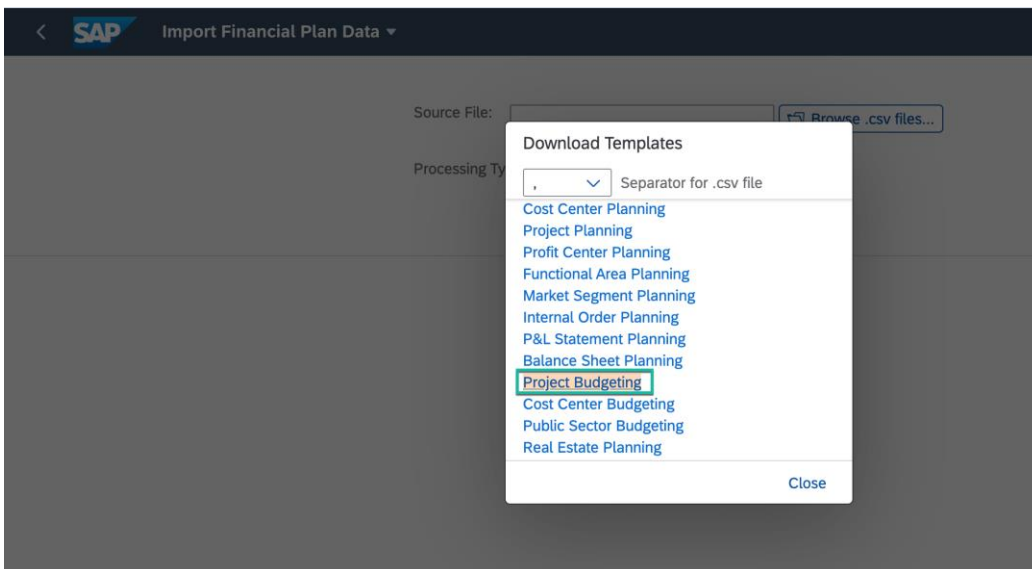
1. Load Import Financial Plan Data app in your S/4 Hana system



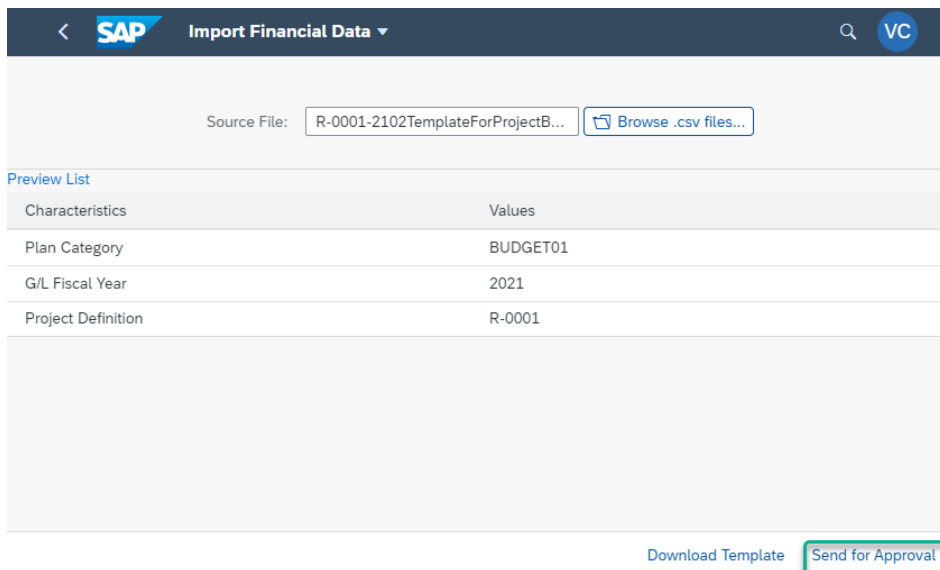
2. Click on Download templates



3. Select Project Budgeting option to download latest template.



Once the relevant budget data is uploaded, requestor can trigger the approval process, by clicking the option "Send for Approval"



## Approving Budget Request

Once Requester has submitted approval request, approver groups are determined using a business rule based on the total budget and currency. There will be multiple approvers involved in the workflow depending on how the Business Rules are configured. Approvers can access their My Inbox embedded in their Fiori Launchpad.



Click My Inbox tile to open and see the tasks. You can filter your task based on creation date, task definition, priority etc.

Approver reviews the data provided by Requester and the History of approval request, specifies a comment (optionally) and chooses one of four decision options:

- **Approve:** the approval request will continue with the next step, or complete if this was the last configured step. The decision data is stored in the History of the request.
- **Reject:** the approval request will immediately be stopped. No further approval steps are executed. Requester is notified about the decision via email.
- **Forward:** the approval request is forwarded to another user. For this, Approver enters the

user to whom the request should be forwarded.

The Project section shows more details on the Project.

The Financial Data section shows the individual line items which can be approved or rejected by clicking the required Action from the Action column after entering required comments in the Comment column.

The user can select one or more items and select Approve or Reject using the buttons at the table.

By default all the items are marked as Approve.

The screenshot displays a web interface for budget approval. On the left, there is a sidebar with a search bar and a list of tasks. The top task is 'Budget Approval - R-0001' with a 'Win' status and a 'Medium' priority, due on Oct 15, 2022, and marked as 'Within a Week'. Below it are three 'Approval Task for Local Manager' and one 'Approval Task for Area Manager', all with 'Overdue' status. The main area shows 'BudgetApproval' details for 'Approve Financial Data - ProjectManager'. It has tabs for 'Project', 'Financial Data', 'History', and 'Comments'. The 'Financial Data' tab is active, showing a table of 'Project Budget Approval Items(36)'. The table has columns for Plan Category, G/L Fiscal Year, Posting Period, Project Definition, WBS Element, Account Number, Amount, Global Currency, Reason, and Action. All items are currently set to 'Approve'.

Plan Category	G/L Fiscal Year	Posting Period	Project Definition	WBS Element	Account Number	Amount	Global Currency	Reason	Action
BUDGET01 Approve	2021	4	R-0001	R-0001-01	61003000	1000	USD		✓ ✕
BUDGET01 Approve	2021	4	R-0001	R-0001-01	61004000	500	USD		✓ ✕
BUDGET01 Approve	2021	4	R-0001	R-0001-01	61005000	500	USD		✓ ✕
BUDGET01 Approve	2021	4	R-0001	R-0001-01	61007000	2000	USD		✓ ✕
BUDGET01 Approve	2021	4	R-0001	R-0001-01	65100000	2000	USD		✓ ✕
BUDGET01 Approve	2021	4	R-0001	R-0001-01	65008300	3000	USD		✓ ✕
BUDGET01 Approve	2021	4	R-0001	R-0001-01	94311000	1000	USD		✓ ✕

If any items are Rejected, they are listed in the “Rejected Items” column and are not available for “Approve” action in the subsequent levels of approval.

An approver can add a comment before approving or rejecting the overall budget. Approver click Approve or Reject or Forward action depending on the decision.

If the approver has completed the step with decision as Approve, the next approval step will be created depending on how it is configured in the business rule. The subsequent approvers will be able to see the previous approvers and their comments in the history.

Successful completion of the approval workflow will send email notification to the requestor.

## Process Visibility Scenario

The content package includes a process visibility scenario enable you to get real time visibility into the Project Budget Approval workflow. There are some performance indicators enable business users to gain transparency on how these workflows are performing. The process visibility configuration tool enables customers to further enhance the performance indicators to fulfill their requirements. Please go through [help documentation](#) on how to model a visibility scenario.

Please go through [help documentation](#) on how to access process workspace.