

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Configuration Guide

Manage Emissions Data using SAP Build Process Automation or SAP Workflow Management

Table of Contents

Table of Contents	2
Overview	3
Features.....	3
Solution Diagram	3
Artifacts	4
Process	4
Process Variants	5
Import Manage Emissions Data and Configure Process Variants with SAP Build Process Automation.....	6
Import Manage Emissions Data and Configure Process Variants with SAP Workflow Management	6
Add additional Approval Step to an existing Process Variant	7
Decisions & Policies.....	7
Approver Determination Strategy	7
Determine Administrators	8
Determine Approvers	9
Determine Task Due Date	10
Vocabulary Business Rule	12
Determine Approvers from External Service.....	13
Process Visibility	13
Configure Visibility Scenarios in SAP Build Process Automation	14
Configure Visibility Scenarios in SAP Workflow Management	14
Access Process Workspace in SAP Build Process Automation.....	14
Access Process Workspace in SAP Workflow Management	15

Overview

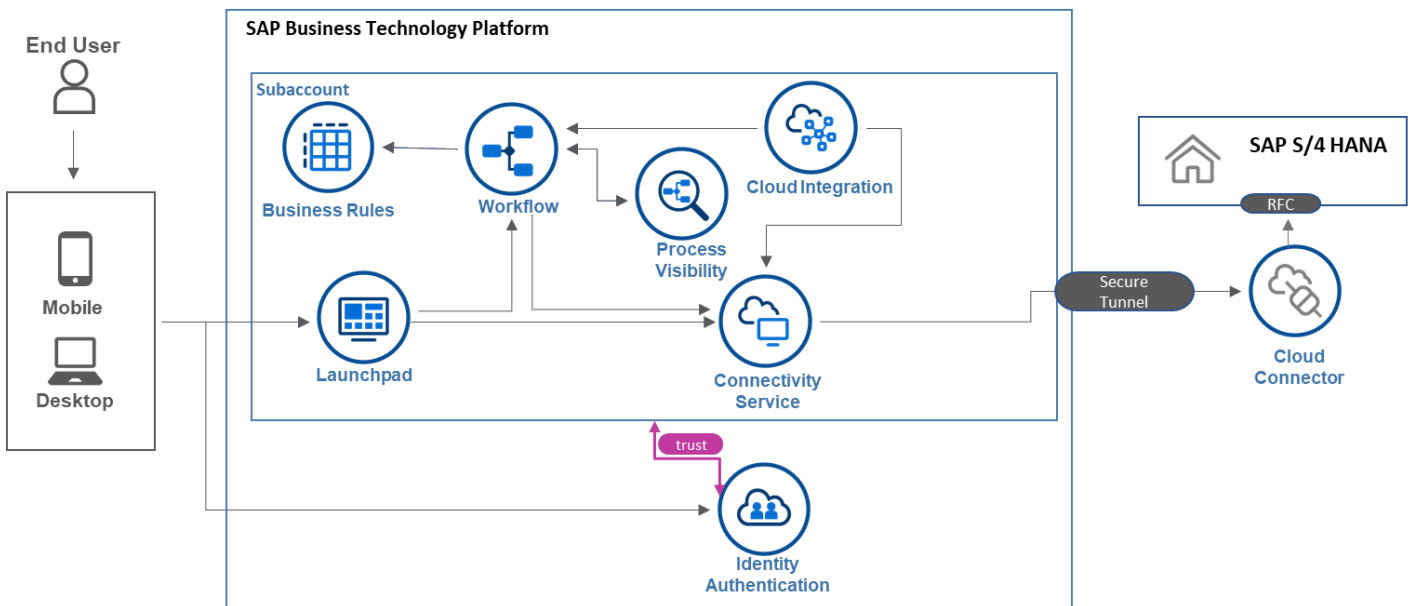
This document provides information about setup steps to consume the package **Manage Emissions Data**. The main audience of this document are Business Process Experts and Process Operators.

The SAP Emission Management process is used to Collect and Monitor the emission data for different frequencies – Hourly, Daily, Monthly, Half-yearly, Yearly. This process is integrated with the Plant Maintenance and Incident Management process.

Features

- Plug and Play with SAP S/4HANA without additional development.
- New Process variants can be configured in a no-code approach.
- Agent/approver determination using Business Rules or external service.
- Pre-built integration content to call SAP S/4HANA from SAP Build Process Automation or SAP Workflow Management
- Out-of-the-box visibility into key process performance indicators.

Solution Diagram



Artifacts

A package consists of process templates, process steps, process variants, decisions, and process visibility models. Please refer [help documentation](#) about these artifacts.

Process

A process template is a set of business activities and tasks that, once completed, fulfills an organization goal. The **Manage Emissions Data** package contains the following process template:

Manage Emissions Data– deals with collection, approval and management of the Emission data collected for various manufacturing processes.

These transactions are usually high value items and business requires to monitor and track them so that these items do not get posted in the system without notice.

A business process can be broken down logically into smaller parts or steps. Each process step is a collection of activities to perform a specific task. For example, an approval process step can contain activity to determine the approvers, approval task, notifications, and handle the approval result. **Table 1** represents the list of process steps/sub flows available to be used in **Manage Emissions Data**.

Table 1. Process Steps

Process Steps	Cardinality	Detailed Description
Emission Report Approval	1..N = Mandatory Step	Workflow for the Emission Report approval step.
Post Emission Data Status	1..1 = mandatory step	Post the Status of the Emission Data status based on the Rework or Approval or Invalidate.

Table 2 Process Step Properties

Process Step	Properties	Detailed Description
Approval	Role	Role of the person who approves/rejects the Emissions data.
	Approval Step	Indicates the levels of approval in the workflow

Table 3. Process Attributes.

Process Attributes	Detailed Description
--------------------	----------------------

Data ID	Data ID to uniquely identify the workflow instance
Value	Value of that Emitted Gas
Period	Data updated based on this period(Monthly/Daily/Yearly)

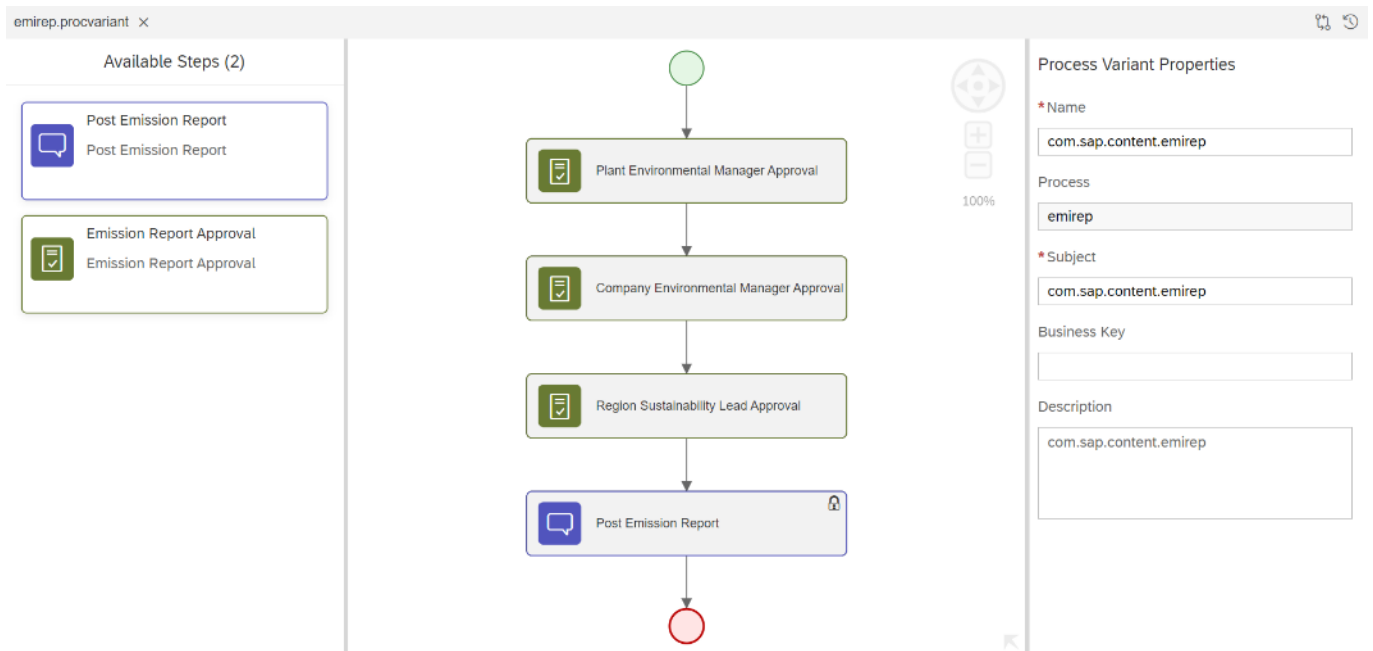
Sample Context

```
{
  "emissionReportDetails": {
    "dataID": "df8f6635-2075-1edc-97df-55cbb6d674f9",
    "year": "2021",
    "month_quarter": "09",
    "chemical": "Carbon dioxide",
    "dataCollectionID": "41",
    "valueChangePercentage": "58.3333",
    "complianceScenario": "Emissions use case - FUT",
    "location": "Plant 4101",
    "period": "Daily",
    "subject": "Daily Carbon dioxide, ppm / ID: 41",
    "value": "1900.0",
    "unit": "ppm",
    "locationID": "0aa316d0-a7c0-1ee9-b5c3-1d590f378646",
    "status": "E",
    "statusDescription": "Exceedance",
    "requesterID": "EXAMPLE",
    "requesterEmailID": "sample@example.com",
    "dataDate": "2021-09-17T00:00:00.000"
  }
}
```

Process Variants

A process variant consists of multiple process steps configured by a line of business expert. It is possible to create multiple variants of the same process.

Please refer [help documentation](#) about how to import content packages and configure a process variant.



Default Variant

Import Manage Emissions Data and Configure Process Variants with SAP Build Process Automation

1. In the [SAP Build Process Automation Store](#), search for live process package Manage Emissions Data 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 Manage Emissions Data. 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 Manage Emissions Data” 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 Manage Emissions Data and Configure Process Variants with SAP Workflow Management

1. In Process Flexibility Cockpit app, search for content package Manage Emissions Data and import the same. Please refer the standard help document about [how to import a content](#)

[package](#). This content package has one process template and process variant(s) for that template.

2. Open content package in Flexibility Cockpit and click Process Variants tile.
3. Click New Process Variant.
4. Enter Name of the new Process Variant (ex, default) and select “Manage Emissions Data” as Process.
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 Manage Emissions Data” 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 Workflows – Workflow Definition app in SAP Fiori Launchpad.

Add additional Approval Step to an existing Process Variant

It is possible to add/remove additional approval steps

1. Open content package Manage Emissions Data in Flexibility Cockpit and click on Process Variants tile
2. Select the variant that you want to modify
3. Drag and drop “Emission Report Approval” as an additional step before “Post Emission Report” step
4. Modify the step name in the properties pane
5. Modify the Approval Step property as needed
6. Save and Activate the new Process Variant

Decisions & Policies

Decisions allow to encapsulate the business logic from core applications and supports the reuse of business rules across different business processes. Decisions enable customers to adopt changes in processes without changing the underlying workflows or application logic. SAP Build Process Automation or SAP Workflow Management has business rules capabilities that enables customers to centrally manage all decisions. Please go through the [business rules capabilities](#) in SAP Build Process Automation or SAP Workflow Management.

Manage Emissions Data enable customers to flexibly configure decisions to gain flexibility to

1. Approver Determination Strategy
2. Determine Task Due Date
3. Determine Administrators
4. Determine Approvers

Approver Determination Strategy

Based on the business requirement approver can be determined by external service or business rules.

Rule Service Name: Approver Determination Strategy

Input:

Name	Label	Description	Business Data Type
ApprovalStep	Approval Step	Unique identification of the approval step.	String

Output:

Name	Label	Description	Business Data Type
DeterminationStrategy	Determination Strategy	Approver Determination Strategy can either "Business Rule" or "External Service" depending on Emission details.	String

Rule Definition

Rule Name	ApproverDeterminationStrategy
Input	Result
EmissionReportDetails.ApprovalStep	DeterminationStrategy
= 'Regional Sustainability Lead'	'External Service'
= 'Company Environmental Manager'	'Business Rules'
= 'Plant Environmental Manager'	'External Service'

Determine Administrators

Determine administrators in case of any errors in fetching the approvers for Manage Emissions Data Approval.

Rule Service Name: Determine Administrators

Input:

Name	Label	Description	Business Data Type
ApprovalStep	Approval Step	Unique identification of the approval step.	String

Output:

Name	Label	Description	Business Data Type
Userid	User ID	User ID of the administrator.	String >
UserGroup	User Group	Group ID of the administrator.	String >
Email	Email	Email address of the administrator.	String >

Rule Definition

Input	Result		
EmissionReportDetails.ApprovalStep	Email	UserGroup	Userid
= 'Plant Environmental Manager'	'email@example.com'	'Admin_GroupId'	'Admin_Userid'
= 'Company Environmental Manager'	'email@example.com'	'Admin_GroupId'	'Admin_Userid'
= 'Regional Sustainability Lead'	'email@example.com'	'Admin_GroupId'	'Admin_Userid'

Determine Approvers

Determine approvers for an approval step in Manage Emissions Data Approval.

Rule Service Name: Determine Approvers

Input:

Name	Label	Description	Business Data Type
ApprovalStep	Approval Step	Unique identification of the approval step.	String >

Output:

Name	Label	Description	Business Data Type
Userid	User ID	User ID of the approver responsible for Emission Report approval.	String >
UserGroup	User Group	Group ID of the approvers responsible for Emission Report approval.	String >
Email	Email	Email address of the approvers responsible for Emission Report approval.	String >
SupervisorEmail	Supervisor Email	Email address of the supervisor.	String >
DueDuration	Due Duration	Due Duration	Number >
UnitofTime	Unit of Time	Unit of Time	String >

Rule Definition

Input	Result			
EmissionReportDetails.ApprovalStep	SupervisorEmail	Email	UserGroup	Userid
= 'Plant Environmental Manager'	'example@example.com'	'example@example.com'	'example@example.com'	'example@example.com'

= 'Company Environmental Manager'	'example@example.com'	'example@example.com'	'example@example.com'	'example@example.com'
= 'Regional Sustainability Lead'	'example@example.com'	'example@example.com'	'example@example.com'	'example@example.com'

Determine Task Due Date

Determine the due date duration for each step of the Manage Emissions Data Approval

Rule Service Name: Determine Task Due Date

Output:

Name	Label	Description	Business Data Type
UserId	User ID	User ID of the approver responsible for Emission Report approval.	String
UserGroup	User Group	Group ID of the approvers responsible for Emission Report approval.	String
Email	Email	Email address of the approvers responsible for Emission Report approval.	String
SupervisorEmail	Supervisor Email	Email address of the supervisor.	String
DueDuration	Due Duration	Due Duration	Number
UnitofTime	Unit of Time	Unit of Time	String

Rule Definition

Text Rule

▼ If

Emission Report Details.Approval Step = 'Environmental Technician'

Then

Unit of Time:

Due Duration:

Text Rule

- > If
- ▼ Else If (1)

Emission Report Details.Approval Step = 'Plant Environmental Manager'

Then

Unit of Time: 'D'

Due Duration: 1

Text Rule

- > If
- > Else If (1)
- ▼ Else If (2)

Emission Report Details.Approval Step = 'Company Environmental Manager'

Then

Unit of Time: 'D'

Due Duration: 1

Text Rule

- > If
- > Else If (1)
- > Else If (2)
- ▼ Else If (3)

Emission Report Details.Approval Step = 'Regional Sustainability Lead'

Then

Unit of Time:

Due Duration:

Vocabulary Business Rule

Name	Label	Description	Business Data Type
subjectName	Subject Name	Name of the Emission Subject	String
collectionID	Collection ID	Collection ID	String
location	Location	location of the Plant	String
emissionValue	Emission Value	Value of Emission	Number

Determine Approvers from External Service

API Attributes	Values
Path	/http/getApproveremissionwfm
HTTP Method	GET
Payload sent by workflow (sample data)	<pre>{ "d": { "locationID":Local ID of that Subject, "roleID" : Role of the Approver } }</pre>
Response Payload from integration flow	<p>RESPONSE STATUS, Ex 200 OK</p> <pre>{ "data": { "status": "SUCCESS", "userID": "example", "emailID": "email@example.com ", "name": "example", "message": "Data Fetched Successfully" } }</pre> <p>Note: When Status is not 200, then it is considered a failed service call.</p>
Payload Type	Application / JSON

Process Visibility

Process Visibility capability in SAP Build Process Automation or SAP Workflow Management enables Process Owners and Process Operators to gain real time visibility on processes and key process performance indicators. It also enables customers gain out of the box process visibility into their deployed processes. Please refer [help documentation](#) for more details.

Manage Emissions Data process content package provide out of the box visibility on all the process variants in SAP Build Process Automation or SAP Workflow Management. Line of business expert will be able to enhance the visibility scenario to their requirements.

Configure Visibility Scenarios in SAP Build Process Automation

1. Go to the Application Development Lobby.
2. Select Manage Emissions Data Project.
3. Click to open **Manage Emissions Data** scenario.
4. Click Activate button.

Please go through the [help documentation](#) on how to configure the visibility scenario.

Configure Visibility Scenarios in SAP Workflow Management

1. Go to Process Flexibility Cockpit.
2. Select Manage Emissions Data tile.
3. Click Visibility Scenarios tile.
4. The following process is configured

Emission Report: Contains approval process events and context, sent by SAP Workflow Management.

Access Process Workspace in SAP Build Process Automation

1. The process visibility scenario can be accessed using SAP Launchpad Service. Refer to the help document for [creating UI applications on central SAP Fiori Launchpad](#) for SAP Build Process Automation.
2. Once you have added the applications process Visibility Scenario Instances (with app ID com.sap.spa.pv.instances) and Visibility Scenario Dashboard (with app ID com.sap.spa.pv.ovp), follow the below steps to add a tile to access the Manage Emissions Data dashboard.
 - a. Navigate into "Visibility Scenario Dashboard".
 - b. On the screen that opens, choose Create a Local Copy.
 - c. To use custom texts, choose Edit and adapt the texts in the General section.
 - d. You can use a custom title, description, and subtitle for the tile.
 - e. Choose the Navigation tab.
 - f. Under the Intent section, ensure that the value in the Action tab is unique for every application.
 - g. Under the Parameters section, provide the following:

Parameter Name	Parameter Value
Name	scenariold
Default Value	com.sap.content.approval.emissionreport.Emission_Report
Required	Toggle to Yes

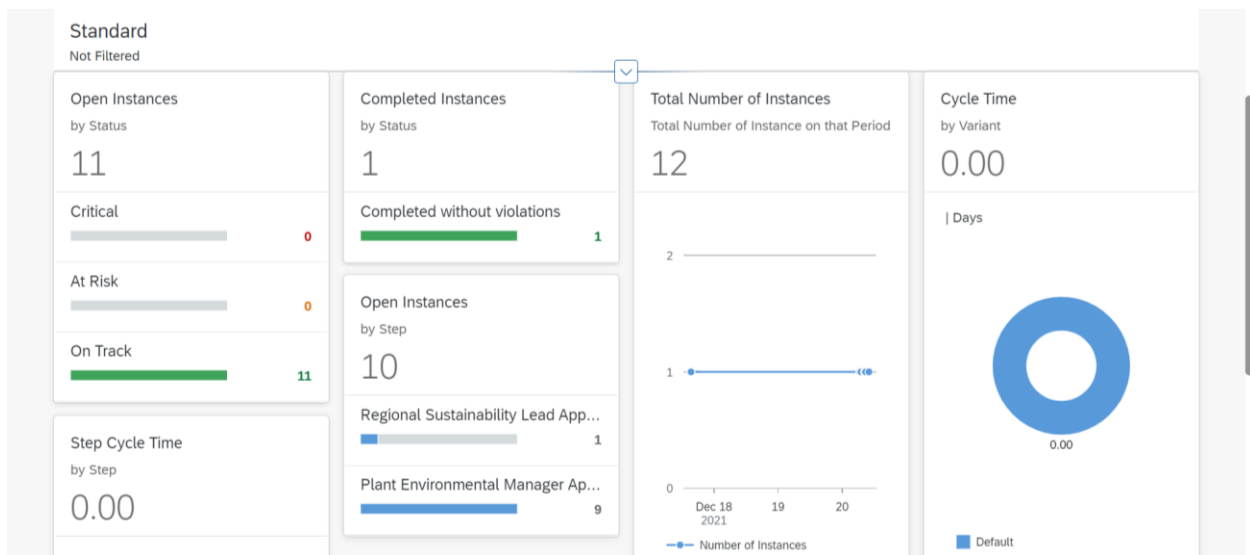
- h. Choose Save.

- i. Assign the local copy to a group and make sure that they're visible to users. For more information, see [Assign Apps to a Group and to a Catalog](#) and [Assign Content to a Role](#).

3. Once created, select app that corresponds to "Manage Emissions Data".
4. User will see the process visibility dashboard below.

Access Process Workspace in SAP Workflow Management

1. Go to Process Flexibility Cockpit
2. Select **Emission Report** tile.
3. Click Live Process Insights – Emission Report
4. User will get the following screens



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