Oracle Project Portfolio Management Cloud
Implementing Project Financial Management and Grants Management

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Preface

This preface introduces information sources that can help you use the application.

Using Oracle Applications

Using Applications Help

Use help icons 🎬 to access help in the application. If you don’t see any help icons on your page, click your user image or name in the global header and select Show Help Icons. Not all pages have help icons. You can also access Oracle Applications Help.

Watch: This video tutorial shows you how to find help and use help features.

You can also read Using Applications Help.

Additional Resources

- **Community:** Use Oracle Cloud Customer Connect to get information from experts at Oracle, the partner community, and other users.

- **Guides and Videos:** Go to the Oracle Help Center to find guides and videos.

- **Training:** Take courses on Oracle Cloud from Oracle University.

Conventions

The following table explains the text conventions used in this guide.

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates user interface elements, navigation paths, or values you enter or select.</td>
</tr>
<tr>
<td><strong>monospace</strong></td>
<td>Monospace type indicates file, folder, and directory names, code examples, commands, and URLs.</td>
</tr>
<tr>
<td>&gt;</td>
<td>Greater than symbol separates elements in a navigation path.</td>
</tr>
</tbody>
</table>

Documentation Accessibility

For information about Oracle’s commitment to accessibility, visit the Oracle Accessibility Program website.

Videos included in this guide are provided as a media alternative for text-based help topics also available in this guide.
Contacting Oracle

Access to Oracle Support
Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit My Oracle Support or visit Accessible Oracle Support if you are hearing impaired.

Comments and Suggestions
Please give us feedback about Oracle Applications Help and guides! You can send an e-mail to: oracle_fusion_applications_help_ww_grp@oracle.com.
1 Overview of Financial Management and Grants Management

Overview of Implementing Project Financial Management and Grants Management

To implement Project Financial Management and Grants Management, you must have the Application Implementation Consultant role (ORA_ASM_APPLICATION_IMPLEMENTATION_CONSULTANT_JOB) and must have opted in to the offerings applicable to your business requirements. To manage the opt-in and setup of your offerings, refer to the Oracle Applications Cloud Using Functional Setup Manager guide.

Project Financial Management and Grants Management Offering

Use this offering to configure how you manage projects, including how to plan, budget, forecast, manage awards, collect costs, bill customers, and report performance.

Let’s take a look at the primary functional areas available in this offering. For the full list of functional areas and features in this offering, use the Associated Features report that you review when you plan the implementation of your offering.

<table>
<thead>
<tr>
<th>Functional Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Organizations</td>
<td>Configure how you manage project units, project classifications, organization hierarchies, and business unit options.</td>
</tr>
<tr>
<td>Project Foundation</td>
<td>Configure how you manage project organizations, create projects, plan project tasks, and review project details. This common foundation is shared across the Project Financial Management applications.</td>
</tr>
<tr>
<td>Burdening</td>
<td>Configure options used to calculate, group, and apply indirect costs to project expenditure items to report and account for the total cost of a project.</td>
</tr>
<tr>
<td>Grants Management Foundation</td>
<td>Configure how you create and maintain awards, award funding, and award projects.</td>
</tr>
<tr>
<td>Project Control</td>
<td>Configure how you monitor project execution, progress, budgeting, and forecasting.</td>
</tr>
<tr>
<td>Project Billing</td>
<td>Configure how you invoice customers and recognize revenue for project contracts, including contract management, intercompany billing, and the calculation of estimated taxes on invoices.</td>
</tr>
<tr>
<td>Project Costing</td>
<td>Configure how you collect, monitor and influence the costs associated with the delivery of the project and management of capital assets.</td>
</tr>
<tr>
<td>Project Costing - Project Costing Base</td>
<td>Configure how you collect, monitor, and influence the costs associated with the delivery of the project.</td>
</tr>
</tbody>
</table>
# Overview of Financial Management and Grants Management

<table>
<thead>
<tr>
<th>Functional Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Costing - Capital Projects</td>
<td>Configure how you record asset costs, calculate capitalized interest, and create events to group costs and assets.</td>
</tr>
<tr>
<td>Project Billing - Project Contracts</td>
<td>Configure the funding and billing relationships between the external parties who require the project and the parties who deliver the project.</td>
</tr>
<tr>
<td>Project Billing - Project Billing Base</td>
<td>Configure how you invoice customers and recognize revenue for project contracts.</td>
</tr>
<tr>
<td>Project Billing - Internal Project Billing</td>
<td>Configure how you use internal invoices to share costs and revenue across projects and organizations.</td>
</tr>
<tr>
<td>Project Performance Reporting</td>
<td>Configure how you collect and review project performance data against defined performance areas.</td>
</tr>
<tr>
<td>Budgetary Control and Encumbrance Accounting</td>
<td>This enterprise-level functional area option is typically used by public sector customers. Enable this functional area if you plan to use budgetary control with or without encumbrance accounting in any part of your organization.</td>
</tr>
<tr>
<td>Project Business Intelligence Analytics</td>
<td>Enable business intelligence reporting and analytics capabilities for project management data.</td>
</tr>
<tr>
<td>Project Revenue and Billing Business Intelligence Analytics</td>
<td>Enable business intelligence reporting and analytics capabilities for project revenue and billing data.</td>
</tr>
<tr>
<td>Project Performance Business Intelligence Analytics</td>
<td>Enable business intelligence reporting and analytics capabilities for project performance data.</td>
</tr>
<tr>
<td>Project Control and Costing Business Intelligence Analytics</td>
<td>Enable business intelligence reporting and analytics capabilities for project control and costing data.</td>
</tr>
</tbody>
</table>

Refer the following guides for more information:

- Securing ERP
- Implementing Common Features
- Using Functional Setup Manager

**Related Topics**

- Securing ERP guide
- Implementing Common Features guide
- Using Functional Setup Manager guide
2 Rapid Implementation of Project Financial Management Applications

Overview of Rapid Implementation

Project application administrators can use the rapid implementation feature to set up the Project Financial Management offering by populating and loading the Rapid Implementation for Project Financial Management Applications macro-enabled Microsoft Excel spreadsheet. This spreadsheet has worksheets for uploading data for key business objects and tasks, such as resources, burdening, and project roles. The Setup and Maintenance work area has a specific task list for rapid implementation. The Define Project Financial Management Configuration for Rapid Implementation task list includes tasks to download the Rapid Implementation for Project Financial Management Applications spreadsheet and to load the setup data.

When the upload completes, the offering is configured based on the setup information that you provide. You can upload the spreadsheet multiple times during the initial implementation until your setup is complete.

The rapid implementation feature enables you to:

- Define the most important attributes that are required to set up the Project Financial Management offering. Use the ProjectsDataUpload.xlsm spreadsheet which has worksheets for key business objects. The worksheets contain the most important attributes you must define. Additional attributes are automatically populated during the upload process.
- Implement the best practices as default setup options. Use setup values based on common best practices. You can disable any value that isn’t applicable to your organization.
- Set up project organizations without hierarchies for simple organization structures. Implement Project Financial Management without an organization hierarchy if:
  - You have a simple organization structure.
  - You don’t require the advanced functionality that uses organization hierarchies, such as capitalized interest.
- Reduce the need for application domain experts. Enter the setup data into the spreadsheet and upload the data without any technical training.
- Minimize the overall time and effort for your implementation by avoiding intense data entry.
- Enter and account transactions immediately after creating project templates.

Prerequisites

You must consider the following points before rapid implementation:

- Setting up chart of accounts, legal entities, ledgers, and business units as part of Oracle Fusion General Ledger setup before configuring rapid implementation.
- Completing the application user setup if you want to use persons in rate schedules or resource breakdown structures.
- Setting up departments and jobs is optional. If you don’t create departments and jobs, the spreadsheet creates them.
- Creating Units of Measure other than currency and hours.
After you load the spreadsheet, you must create project templates and manage user access.

**Note:** Use the spreadsheet only for the initial implementation. If you use the spreadsheet for subsequent data uploads, the upload process can reset the settings you edited.

### Using Rapid Implementation

Access the **Rapid Implementation for Project Financial Management Applications** spreadsheet from the Setup and Maintenance work area. Search for the **Define Project Financial Management Configuration for Rapid Implementation** task list.

The following table lists tasks to create and upload the setup data.

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create Project Financial Management Setup Data in Spreadsheet</td>
<td>Use this task to download the Rapid Implementation for Project Financial Management Applications spreadsheet. Enter the set up data for key business objects. For example, resources, burdening, and project roles.</td>
</tr>
<tr>
<td>Load Project Financial Management Setup Data</td>
<td>Use this to upload the setup data into the application.</td>
</tr>
</tbody>
</table>

This task list also has tasks to manage users, project templates, and data access.

After downloading the spreadsheet you can:

1. Enter your setup data.
2. Navigate to the **Projects Workbook Instructions** worksheet and click **Generate CSV File**. If a warning is displayed indicating a problem with the data, click **OK** to view the **Validation Report** worksheet.
3. Correct your data and regenerate the CSV files. The workbook generates the ProjectsWorkbook.zip file that includes CSV files for each business object.

**Note:** Don’t alter or make any changes to the .zip file as this may cause the upload process to fail.

4. Use the **Load Project Financial Management Data task** to upload the .zip into the Setup and Maintenance work area.
5. The spreadsheet can’t detect all errors, and there are some errors that can only be found during the upload process. Correct any errors found during the uploading process and reload the entire spreadsheet.

**Related Topics**
- Overview of Project Financial Management and Grants Management Offerings

### Configure Rapid Implementation

Project application administrators can use the rapid implementation feature to set up the Project Financial Management offering. Use the Rapid Implementation for Project Financial Management Applications macro-enabled Microsoft Excel.

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*ORACLE*
spreadsheet to enter setup data and generate the ProjectsWorkbook.zip. Upload this .zip file to the Setup and Maintenance work area. When the upload completes, the offering is configured based on the setup information that you provide.

Perform the following steps to configure rapid implementation for the Project Financial Management offering:

- Prepare setup data.
- Generate CSV files.
- Upload setup data.
- Correct errors, if any, and reload the data.

Preparing the Setup Data

Enter your data in the spreadsheet sheets to upload project organizations, project types, expenditures types, subledger accounting, and so on. Perform the following steps to prepare your data:

1. Navigate to the Setup and Maintenance work area and search for the Define Project Financial Management Configuration for Rapid Implementation task list.
2. Click the Define Project Financial Management Configuration for Rapid Implementation link.
3. Click Create Project Financial Management Setup Data in Spreadsheet to download the Rapid Implementation for Project Financial Management Applications spreadsheet.
4. Open the ProjectsDataUpload.xlsm spreadsheet. If a security warning is displayed, click Options, select Enable this content, and click OK.
5. Review instructions for loading the implementation data and uploading the spreadsheet on the Projects Workbook Instructions worksheet.
6. Click the Options worksheet. Notice that Professional Services is the default value selected in the Industry field, and the burdening option is set to No.
7. Click the Update Spreadsheet button to show or hide spreadsheet columns based on your selections. As a result the spreadsheet displays the Burden Structure and Burden Schedule worksheets. If you change the industry to Higher Education, the Burdening option changes to Yes. The Enable Burdening column is now available in the Project Types worksheet.
8. Review all the worksheets and enter the data as per your requirement. Review the description on each worksheet for additional information.
9. Save the ProjectsDataUpload.xlsm spreadsheet on your desktop.

Generating CSV Files

Generate CSV files to load the data after you finish entering the setup data for rapid implementation. Use the ProjectsDataUpload.xlsm spreadsheet to generate a .zip file that contains CSV files for each business object.

1. On the Projects Workbook Instructions worksheet and click Generate CSV File.

   ✍️ Note: If a warning is displayed indicating a problem with the data, click OK to view the Validation Report worksheet. The Validation Report worksheet displays two types of errors:
   - Allow Resource Changes at Project Level: You must provide a value for the attribute Allow Resource Change at Project Level.
   - Resource Format: You must provide a value for the attribute Resource Format.

2. Fix the errors by entering valid data. Review the description on each worksheet for additional information.
3. Return to the Project Workbook Instructions worksheet and click Generate CSV File to validate the updated data.
4. Save the ProjectsWorkbook.zip file and click OK.

**Note:** Don’t alter or make any changes to the .zip file as this may cause the upload process to fail.

### Uploading the Setup Data

Use the **Load Project Financial Management Setup Data** task to upload the setup data into the application. During your initial implementation, you can upload the spreadsheet multiple times. Use the spreadsheet only for the initial implementation.

1. Navigate to the Setup and Maintenance work area and select the **Load Project Financial Management Setup Data** task.
2. Browse for the ProjectsWorkbook.zip file that you generated and click **Submit**.

**Note:** If you use the spreadsheet for subsequent data uploads some settings in application may be overridden with the default values set by rapid implementation.

### Correcting the Errors

Review the output of the **Load Project Financial Management Setup Data** process for any errors that occurred during the load process. Correct the data in the spreadsheet, generate the CSV files, and load the ProjectsWorkbook.zip file again. You can load the spreadsheet multiple times until you correct all errors.
Options to Implement Project Financial Management Without an Organization Hierarchy

If you have a simple organization structure and don’t need the advanced functionality that uses organization hierarchies, such as capitalized interest rate schedules, you can implement Project Financial Management without an organization hierarchy. Choosing this option facilitates rapid implementation and provides a simplified user experience for mid-sized customers.

Changing Organization Hierarchy Type
You can change the organization hierarchy type to None on the Manage Organization Hierarchies and Classifications page. This includes changing the hierarchy type from None to a department or organization hierarchy, or from a department or organization hierarchy to None.

When you change the hierarchy type, existing burden schedules continue to use their original hierarchy. However, you can’t select hierarchies with the old hierarchy type when you create new burden schedules.

When you change the hierarchy type from an HCM hierarchy to None, the project and task owning organization hierarchy and the expenditure organization hierarchy for all business units are updated as follows:

- Organization Hierarchy: No Organization Hierarchy
- Hierarchy Version: No Hierarchy Version

Using Upload Configuration Packages
You can’t use the import configuration packages process to change the hierarchy type in the target environment. To change the organization hierarchy type, you must use the Manage Organization Hierarchies and Classifications page in the Setup and Maintenance work area.

You can import all burden schedules regardless of the hierarchy type used in the target environment. However, if a burden schedule uses a hierarchy, the hierarchy must exist in the environment. You can only import capitalized interest rate schedules when there is a department or organization hierarchy type in the target environment.

Creating Burden Schedules
You can create burden schedules without an organization hierarchy. You can also assign multipliers to each organization individually or a single multiplier to all the organizations.

Impact on Existing Transactions
Changing the organization hierarchy type can impact existing project transactions. Before changing the organization hierarchy type from None to a department or organization hierarchy type, you must ensure that the new organization hierarchy includes all the organizations used with the existing transactions.
Using Capitalized Interest Rates
Capitalized interest rates require a department or organization hierarchy. When the hierarchy type is None, you can’t create new capitalized interest rate schedules because the Default Organization Hierarchy and Organization Hierarchy lists on the Manage Capitalized Interest Rate Schedules page don’t display any values.

Running the Maintain Project Organizations Process
You must run the Maintain Project Organizations process after you add organizations, project classifications, or business units and after you update project organization classifications or hierarchies.

Verifying Business Unit Setup
You must verify the business unit setup if the organization hierarchy list is empty or it’s missing when you try to create a project or project template.

1. If the organization list is completely empty, the organization setup is incomplete and you must verify if:
   a. The tree version is active.
   b. The tree was denormalized using the Row Flattening action.
   c. The Maintain Project Organizations process was run.
2. If one or more organizations are missing, you must:
   a. Verify the organizations have been added to the tree.
   b. Navigate to the Manage Project Organization Classifications page.
      i. Verify the organization is classified as a project and task owning organization.

Project Unit Organizations

Set Up Organizations for Project Financial Management
This example describes the creation of three organizations for use in Project Financial Management applications. One organization is the project unit, the second organization can own projects and tasks, and the third organization can incur project expenditures. This example also describes the selection of the organization hierarchy type that controls the hierarchies that can be assigned to business units, and the association of project units and organizations to business units.

The following table summarizes key decisions for this scenario.

<table>
<thead>
<tr>
<th>Decisions to Consider</th>
<th>In This Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>What organizations do I want to classify as project units?</td>
<td>Project Operations</td>
</tr>
<tr>
<td>What organization hierarchy type will be used by Project Financial Management?</td>
<td>HCM Organization Hierarchy Tree Structure</td>
</tr>
<tr>
<td>What organizations will own projects or tasks?</td>
<td>Vision Operations</td>
</tr>
</tbody>
</table>
Decisions to Consider | In This Example
--- | ---
What organizations will incur project expenses? | Vision Corporation
What project units will be associated with business units? | Project Operations, Project Manufacturing, Project Services

To set up organizations for projects, complete the following tasks:

- Classify organizations as project units
- Classify organizations to own projects and tasks or incur costs on a project
- Select the organization hierarchy type for Oracle Fusion Project Portfolio Management
- Select organization classifications that are relevant to projects
- Select organization hierarchies for the business unit
- Associate project units with business units
- Run the process to maintain project organizations

**Prerequisites**
Verify that the implementation team completed the following prerequisite steps.

1. Set up organization hierarchies, organization classifications, and organizations.
2. Enable the Project Accounting business unit function for all project business units.

**Classifying Organizations as Project Units**
To create a project unit organization, either enable an existing organization as a project unit or create a new organization as a project unit. After the project unit is enabled for an organization, the project unit appears in searches on the Manage Project Units page.

1. Navigate to the Setup and Maintenance work area and click Search.
2. On the Search page, search for the Manage Project Unit Organizations task.
3. Click Create on the Manage Project Unit Organizations page.
4. On the Manage Project Unit Organizations page, complete the fields, as shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create new</td>
<td>Selected</td>
</tr>
<tr>
<td>Code</td>
<td>PROJECT_OPS</td>
</tr>
<tr>
<td>Name</td>
<td>Project Operations</td>
</tr>
</tbody>
</table>

5. Click Save and Close.
Classifying Organizations to Own Projects and Tasks or Incur Costs on a Project

Specify which organizations can own projects and tasks, and incur project expenses. If an organization can be a project and task owning organization, you also specify whether the organization allows indirect, capital, and contract projects, that is used during the project definition flow to control the list of organizations that can own the project.

1. Navigate to the Setup and Maintenance work area and click Search.
2. On the Search page, search for the Manage Project Organization Classifications task.
3. In the Search: Organization region of the Manage Project Organization Classifications page, enter the name Fusion Operations and click Search.
4. In the Search Results: Organization region, select the Fusion Operations row and click Edit.
5. In the Change All Selected region of the Edit Project Organization Classifications page, complete the fields, as shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classify as Project Task Owning Organization</td>
<td>Selected</td>
</tr>
<tr>
<td>Allow indirect projects</td>
<td>Selected</td>
</tr>
<tr>
<td>(Using this option, organizations can own projects that are used to collect and track costs for overhead activities.)</td>
<td></td>
</tr>
<tr>
<td>Allow projects enabled for capitalization</td>
<td>Selected</td>
</tr>
<tr>
<td>Allow projects enabled for billing</td>
<td>Selected</td>
</tr>
</tbody>
</table>

For organizations that can own capital contract projects, select the options to allow projects enabled for capitalization and enabled for billing options.

6. Select Save and Close, then proceed to the next step to specify a project expenditure organization.
7. In the Search: Organization region of the Manage Project Organization Classifications page, enter the name Fusion Corporation and click Search.
8. In the Search Results: Organization region, select the Fusion Corporation row and click Edit.
9. In the Change All Selected region of the Edit Project Organization Classifications page, complete the field, as shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classify as Project Expenditure Organization</td>
<td>Selected</td>
</tr>
</tbody>
</table>

10. Select Save and Close.
Selecting the Organization Hierarchy Type for Oracle Fusion Project Portfolio Management

Select the organization hierarchy type for use in Project Financial Management applications, which enables you to assign organization hierarchies, such as the project and task owning organization hierarchy and project expenditure organization hierarchy, to project business units.

1. Navigate to the Setup and Maintenance work area and click Search.
2. On the Search page, search for the Manage Organization Hierarchies and Classifications task.
3. In Project Financial Management applications on the Manage Organization Hierarchies and Classifications page, go to the Organization Hierarchy Types region. Organization hierarchies are optional. If you don’t want to use an organization hierarchy, select the None hierarchy type.
4. If you want to use organization hierarchies, select an HCM hierarchy tree structure as the organization hierarchy type for Project Financial Management applications.

If you use an organization hierarchy, you must use the same organization hierarchy type in both Project Financial Management applications and Oracle Fusion Global Human Resources applications.

Run the Maintain Project Organizations process after you:
- Classify organizations as project and task owning or project expenditure owning organizations.
- Add or classify new organizations.
- Change organization hierarchy type.

Selecting Organization Classifications that are Relevant to Projects

Oracle Fusion applications support many organization classifications, although some of the organization classifications may not be relevant to a project. Only organizations with the classifications that you select in this task are available in choice lists in areas of the application where a specific organization classification is not required, such as during set up of capitalized interest rate schedules.

1. Navigate to the Setup and Maintenance work area and click Search.
2. On the Search page, search for the Manage Organization Hierarchies and Classifications task.
3. In the Organization Hierarchies region, use the Available column to select the organizations that are relevant to projects, as shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available</td>
<td>Asset Organization</td>
</tr>
<tr>
<td></td>
<td>Business Unit</td>
</tr>
<tr>
<td></td>
<td>Partner Organization</td>
</tr>
<tr>
<td></td>
<td>Project Expenditure Organization</td>
</tr>
<tr>
<td></td>
<td>Project Manufacturing Organization</td>
</tr>
<tr>
<td></td>
<td>Project Task Owning Organization</td>
</tr>
<tr>
<td></td>
<td>Project Unit Classification</td>
</tr>
</tbody>
</table>

4. Click the right arrow to move the selected items to the Selected column.
To select multiple organizations, hold down the control key as you select the desired organizations, then click the right arrow.

Selecting Organization Hierarchies for the Business Unit

Associate project and task owning organizations to the business unit to restrict the project owning organizations in the project creation flow. Associate project expenditure organizations to the business unit to restrict which organizations can incur costs on the project. Specify an entire organization hierarchy to associate with the business unit by selecting the top node on the tree, rather than individually associating organizations with the business unit. Specify part of an organization hierarchy by selecting an organization at any level of the hierarchy as the starting node on the tree. Oracle Fusion Project Portfolio Management associates all organizations in the hierarchy from the starting node down with the business unit.

The following conditions are required for an organization to be eligible to be a project and task owning organization:

- You must assign the Project and Task Owning Organization classification to the organization.
- The organization must belong to the hierarchy that you specify in the project implementation options for the business unit.

The following conditions are required for an organization to be eligible to be a project expenditure organization:

- You must assign the Project Expenditure Organization classification to the organization.
- The organization must belong to the hierarchy that you specify in the project implementation options for the business unit.

1. Go to the Configure Project Accounting Business Function setup page for the Vision Corporation Enterprise business unit.
2. On the Project Setup tab, Project Task Owning Organization region, complete the fields, as shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Name</td>
<td>Corporate Tree Structure</td>
</tr>
<tr>
<td>Tree Version Name</td>
<td>Corporate Tree Structure Version 1</td>
</tr>
<tr>
<td>Organization</td>
<td>Project Operations</td>
</tr>
</tbody>
</table>

3. Select the Expenditures tab.
4. In the Project Expenditure Organization region, complete the fields, as shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Name</td>
<td>Corporate Tree Structure</td>
</tr>
<tr>
<td>Tree Version Name</td>
<td>Corporate Tree Structure Version 1</td>
</tr>
<tr>
<td>Organization</td>
<td>Corporate Operations</td>
</tr>
</tbody>
</table>

5. Click Save and Close.
Associating Project Units with Business Units

1. Navigate to the Setup and Maintenance work area and click Search.
2. On the Search page, search for the Manage Organization Trees task.
3. Open the Configure Project Accounting Business Function setup page.
4. On the Configure Project Accounting Business Function page, select the **Project Units** tab.
5. In the **Available Project Units** column, select the project units to associate with this business unit, as shown in this table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Project Units</td>
<td>Project Services</td>
</tr>
<tr>
<td></td>
<td>Project Manufacturing</td>
</tr>
<tr>
<td></td>
<td>Project Operations</td>
</tr>
</tbody>
</table>

6. Click the right arrow to move the selected items to the **Selected Project Units** column.
7. Click **Save and Close**.

Running the Maintain Project Organizations Process

You must run the process to maintain project organizations to ensure the organization changes are completed.

1. Navigate to the Scheduled Processes page.
2. Click **Schedule New Process**.
3. Search for and select the Maintain Project Organizations process.
4. In the Process Details window, click **Submit**.

FAQs for Project Unit Organizations

**What happens if I disable an organization as a project expenditure organization that has pending transactions?**

You may encounter errors in transaction processing. Enable the organization as project expenditure organization and process the outstanding transactions. Disable the organization as project expenditure organization after the transactions processing is complete.

If you disable the organization as project and task owning organization you only prevent the organizations from appearing in the relevant project and task creation flows. You can enable or disable an organization as a project and task owning organization anytime.

> **Note:** You must run the Maintain Project Organizations process each time you enable or disable the organization as a project expenditure or project and task owning organization.

Project Unit Options
Manage Project Unit Options

You can use the Manage Project Unit Options task to set up the general and reporting options for your project unit. In this example, you’re setting up the options for the Project Operations project unit.

Here’s a summary of the decisions you made about setting up the options for the Project Operations project unit.

<table>
<thead>
<tr>
<th>Decisions to Make</th>
<th>In This Example</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>What’s the default reference set for projects in this project unit?</td>
<td>Enterprise Set</td>
<td>The set for each reference data object comes from the default set that’s specified in the Manage Project Units: General Properties page. You can use the Manage Project Unit Set Assignments task to assign sets to project units to determine how reference data is shared across different lines of business in a company.</td>
</tr>
<tr>
<td>What method should I use for project numbering?</td>
<td>Method: Manual</td>
<td>The methods are Manual or Automatic. The default value is Automatic.</td>
</tr>
<tr>
<td></td>
<td>Type: Alphanumeric</td>
<td>If you select Manual, then project managers and project administrators must enter the project number when creating the project. The project number can be either alphanumeric or numeric. If you want the application to assign numbers to projects, then select Automatic. Enter the first project number, and the application will use subsequent numbers during project creation.</td>
</tr>
<tr>
<td>Which business units should I associate with this project unit?</td>
<td>Corporate Enterprise</td>
<td>You select the business units that are accountable for financial transactions for projects in this project unit.</td>
</tr>
<tr>
<td></td>
<td>Corporate Manufacturing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Internal Systems and Support</td>
<td></td>
</tr>
<tr>
<td>What transactions can I include in project performance data summarization?</td>
<td>Requisitions</td>
<td>You select the commitment types that you want to include in the project performance data summarization.</td>
</tr>
<tr>
<td></td>
<td>Purchase orders</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplier invoices</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other commitments</td>
<td></td>
</tr>
</tbody>
</table>

Before You Start

This example assumes that the following set up tasks are complete before you start setting up the options for the project unit:

1. Set up organization hierarchies, organization classifications, and organizations.
2. Enable the Project Accounting business unit function for all project business units.
3. Classify organizations as project units.
Set Up General Properties

1. Click Navigator Setup and Maintenance, and search for the Manage Project Unit Options task.
2. Click the Manage Project Unit Options link.
3. On the Manage Project Units page, Search Results region, select the Project Operations project unit, and click Edit.
4. On the Manage Project Units: General Properties page, complete the fields as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Set</td>
<td>Enterprise Set</td>
</tr>
<tr>
<td>Project Numbering - Method</td>
<td>Manual</td>
</tr>
<tr>
<td>Project Numbering - Type</td>
<td>Alphanumeric</td>
</tr>
</tbody>
</table>

5. Click Next.

Set Up Related Business Units

1. On the Manage Project Units: Related Business Units page, select the business units in the Available Business Units column to associate them with this project unit.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Business Units</td>
<td>Corporate Enterprise</td>
</tr>
<tr>
<td></td>
<td>Corporate Manufacturing</td>
</tr>
<tr>
<td></td>
<td>Internal Systems and Support</td>
</tr>
</tbody>
</table>

2. Click the right arrow to move the selected business units to the Selected Business Units column.
3. Click Next.

Set Up Reporting Options

1. On the Manage Project Units: Reporting Setup page, Commitments region, complete the fields as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Include in Summarization Value</th>
<th>Status Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requisitions</td>
<td>Selected</td>
<td>All</td>
</tr>
<tr>
<td>Purchase orders</td>
<td>Selected</td>
<td>All</td>
</tr>
<tr>
<td>Supplier invoices</td>
<td>Selected</td>
<td>All</td>
</tr>
<tr>
<td>Other commitments</td>
<td>Not selected</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

2. In the Planning Amount Allocation region, complete the field as follows.
3. Click **Save and Close**.

4. Click **Done**.

Run the Maintain Project Organizations process from the Scheduled Processes page after you:

- Classify organizations as project and task owning or project expenditure owning organizations.
- Add or classify new organizations.
- Change the organization hierarchy type.

### Project Unit Components

Project units are operational subsets of an enterprise that conducts business operations using projects and enforces consistent project planning, management, analysis, and reporting. Project units often represent lines of business, such as Consulting Services, Sales, and Research and Development. You must set up at least one project unit to use in Oracle Project Portfolio Management.

Maintain independent setup data for each project unit while sharing a common approach to financial management across all project units. The following graphic shows two project units that share a common approach to financial management and data. Each project unit maintains separate reference data for managing projects.

#### General Properties

General property options include the default reference data set the application uses for any new reference data object associated with the project unit. You can override the default set for each reference data object. The method of project number creation, either manual or automatic, is also included in general properties.
Set Assignments
Assign sets to project units to determine how the application shares reference data across different lines of business in a company. A project unit is a set determinant for the following objects.

- **Project Definition:** Includes set-enabled reference data for the project definition including:
  - Class code
  - Financial plan type
- **Project Transaction Types:** Includes set-enabled reference data for project transactions including:
  - Project expenditure type
  - Project work type

Set assignment configuration includes the following options for each project unit.

- **Reference Data Object:** For the project definition and project transaction types.
- **Reference Data Set Code:** By default, the set for each reference data object is from the default set specified for the project unit.

Related Business Units
You associate business units with a project unit to identify the business units that are accountable for financial transactions of projects in each project unit. You can change the project unit and business unit association if you haven’t used the combination on a project or project template. If a business unit isn’t associated with any project unit, then the business unit is valid for all project units.

Reporting Setup
Project performance reporting configuration includes the following options for each project unit.

- Commitments to include in the summarization.
- Planning amount allocation basis for summarization.

Example of Using Multiple Project and Business Units
A project unit defines a set of rules and options for creating and managing the nonfinancial aspects of projects, such as project definition, scheduling, and reporting. You can define one or more project units based on how granular you want to separate processing options, reference data, security, and other controls. The list of project units can be different and independent from the list of business units that perform your enterprise financials functions, such as payables and receivables.

Following are two examples of associating project units and business units.
Single Project Unit with Multiple Business Units
A consulting company has offices in the US, Canada, and Mexico. Each location uses local purchasing and payables practices. The company uses projects to track time and expenses for billing through contracts. The following graphic illustrates an example of single project unit that is associated with multiple business units.

Multiple Project Units with Multiple Business Units
A products and services company has main offices in the US and a warehouse and sales office in Canada. Due to operations in two different countries, the company partitions financial data by using two business units. The research processes are the same in both countries, so a single project unit facilitates common project management practices. The company has an information technology (IT) services project unit that is associated with US business unit. It also has a sales and consulting project unit that is associated with both the US and Canadian business units. The consulting line of business uses projects to manage consulting engagements and provide billing details to contracts. The internal real estate line of business uses projects
to manage the US and Canada facilities, including new construction and repairs. The following graphic illustrates an example of multiple project units that are associated with multiple business units.

Possible project configuration

### Project Performance Data Summarization

Run the Update Project Performance Data process to summarize performance data for a project unit, business unit, a range of projects, or projects managed by a project manager. This process:

- Summarizes data for different data sources, such as actual costs, commitments, contract revenue, invoice amounts, budgets, control budgets, allocations, forecasts, and awards.
  - Summarizes data in the project currency, project ledger currency, and transaction currency.
  - Summarizes data in the accounting and project accounting calendars.
  - Summarizes only those contracts that are associated with the project.
- Generates KPI values and determines the overall project health status.
- Updates the financial project plan with summarized amounts from actual cost transactions.
- Updates Oracle Essbase cubes so that you can view the summarized data using Oracle Smart View for Office.

### Summarized Data

Once the Update Project Performance Data process completes, summarized data is displayed on several pages in the application for project analysis. Use the summarized data to analyze the health of projects and drill down to the causes of any deviation from set thresholds.

You can complete the following tasks using summarized data:

- Analyze project performance data.
- Analyze KPI categories and KPIs.
- Track project health and progress across different periods.
- View summaries for revenues, invoices, actual costs, budgets, allocations, forecasts, and commitments.
- Build dashboards and analyses to review project performance using the Projects - Performance Reporting Real Time subject area.
When to Run the Update Project Performance Data Process

You can run the Update Project Performance Data process for different situations. For example, run it when:

- The summarized data is out of date and you want to update it. For example, you don’t see the latest summarized data in the Project Management infolets, in the Project Performance Dashboard regions, or in the My Projects page.
- The summarized data is inaccurate and you want to delete the existing data and re-summarize.
- Large volume of data is not summarized yet, and you want to summarize the entire bulk of data in one run.

**Note:** If you have large volumes of data, run the Update Project Performance Data Without Producing Report process when the workload on systems is low. For example, you can run the process on a nightly basis.

You don’t need to run the following processes if you run the Update Project Performance Data process as it summarizes all the data:

- Distribute Project Resource and Task Effort by Day
- Update Project Contract Performance Data or Update Project Contract Performance Data Without Producing Report

**Note:** The Update Project Performance Data process summarizes only those contracts that are associated with the project. To summarize the contracts that are not associated with any project, run the Update Project Contract Performance Data process explicitly for those contracts.

- Generate KPI Values or Generate KPI Values Without Producing Report
- Update Award Project Performance Data Without Producing Report
- Update Project Plan Data or Update Project Plan Data Without Producing Report

**Note:** If the Enable automatic pushing actual to project plan after every online cost summarization profile option is enabled, the Update Project Plan Data process runs as part of the Update Project Performance Data process. Else, navigate to the Manage Financial Project Plan page, click **Update Amounts > Update Actual Amounts** from the **Actions** menu, and submit the Update Project Plan Data process.

Setting That Affect Performance Data Summarization

Before you run the Update Project Performance Data process from the Scheduled Processes page, select one of the following summarization methods:

<table>
<thead>
<tr>
<th>Summarization Method</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental</td>
<td>Summarizes new transactions that are yet to be summarized.</td>
</tr>
<tr>
<td>Delete and resummarize</td>
<td>Corrects summary data when the source system data changes outside the regular transaction flow.</td>
</tr>
</tbody>
</table>

This option is disabled by default. But, if you want to delete and resummarize performance data, ask your application administrator to set the Enable Maintain Project Performance Data job profile option to Yes. The profile option is in the Setup and Maintenance work area.
### Summary Method

<table>
<thead>
<tr>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource breakdown structure</td>
</tr>
<tr>
<td>If you select this option, you must also specify the resource breakdown structure header.</td>
</tr>
</tbody>
</table>

You must also specify the summarization parameters each time you run the summarization process manually and whether to summarize the following transactions:

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Data Summarized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget and forecast</td>
<td>Approved current and previous forecasts, and current and original budgets that have a baseline version. This includes approved budgets and primary forecasts.</td>
</tr>
<tr>
<td>Commitment</td>
<td>Commitments such as supplier invoices, purchase orders, and requisitions from other Oracle Cloud applications.</td>
</tr>
<tr>
<td>Actual Costs</td>
<td>The actual costs incurred for your projects.</td>
</tr>
</tbody>
</table>

### Run the Update Project Performance Data Process

Project application administrators can schedule the Update Project Performance Data process to run periodically by clicking **Schedule New Process** on the Scheduled Processes page.

Project managers can submit these processes from the Project Financial Management work area, the Project Performance Dashboard, or the Project Management work area.

Once you run the Update Project Performance Data process, you can track its progress on the Scheduled Processes page.

**Related Topics**
- How KPI Values Are Generated
- How can I view projects on the Project Performance Dashboard

### FAQs for Project Unit Options

**How can I associate a business unit with a project unit?**

You can associate a business unit with a project unit during the Related Business Units step of the Manage Project Units setup task if the business unit is already configured using the Configure Project Accounting Business Function setup task.

If the business unit is not configured, then you can associate a project unit with the business unit on the Project Units tab of the Configure Project Accounting Business Function page.

**What happens if I change the organization hierarchy type that's available for Project Financial Management applications?**

Changing the organization hierarchy type can impact existing transactions that use the hierarchy. All organizations in the previous hierarchy must exist in the new hierarchy. If you adjusted transactions, the rates and multipliers derived for an organization can be different in the new hierarchy.
If you use an organization hierarchy in Project Financial Management applications, you must use the same organization hierarchy type that you set up in Oracle Fusion Global Human Resources.

**What happens if I remove organization classifications from the list of selected classifications that are available for project applications?**

The organization classifications no longer appear in the list of organization values that are available for selection in the application.

Selected organization classifications on the Manage Organization Hierarchies and Classifications page are available for selection in areas of the application where a specific organization classification is not required, such as setting up capitalized interest rate schedules, burden schedules, and transfer price schedules.

**What happens to project and task owning organizations and project expenditure organizations if human resource organizations are reorganized?**

If you don’t use organization hierarchies, the organizations of existing projects and transactions remain available as long as they are active and are classified as project and task owning organizations or as project expenditure organizations.

If you use new organization hierarchies or hierarchy versions, you must include all organizations referenced on existing projects and transactions in the new organization hierarchies or hierarchy versions.

You can use the Change Project and Task Organizations process to change the project and task owning organizations on existing projects.

Run the Maintain Project Organization process after you:

- Classify organizations as project and task owning or project expenditure owning organizations.
- Add or classify new organizations.
- Change the organization hierarchy type.

**What’s a project expenditure organization?**

A project expenditure organization can incur expenditures for projects and be used as a planning and budgeting resource. Before you use an organization for expenditures, you must assign it to the Project Expenditure Organization classification. If you use organization hierarchies, assign the expenditure organization to the hierarchy specified in the implementation options for the business unit.

**What’s a project and task owning organization?**

Every project is owned by an organization that’s used for reporting, security, and accounting. An organization can own specific types of projects, such as indirect projects, capital projects, billable projects, and capital contract projects. For an organization to be eligible to be a project or task owning organization, you must assign the organization the Project Task Owning Organization classification. Also, the organization must be assigned to the hierarchy that you specify in the project implementation options for the business unit.

**What’s the difference between organizations and organization hierarchies?**

Organizations are departments, sections, divisions, companies, or other organizational units in your enterprise. You can gather collections of organizations into organization hierarchies.

Organization hierarchies help you manage expenditure and reporting data, and coordinate the project-owning organizations in your enterprise.

During implementation, you select the organization hierarchy type for use in Project Financial Management applications. You can optionally choose not to use organization hierarchies. If you select to use a hierarchy, you select either the department...
hierarchy tree structure or the generic organization hierarchy tree structure. Then you assign hierarchies to the project implementation options for each business unit used in Project Financial Management applications.

**Note:** If you use either the department or the organization hierarchy tree structure hierarchy type, you must assign the same organization hierarchy type that you set up in Oracle Fusion Global Human Resources.

What happens if I select Automatic as the project numbering method?

If you select Automatic, the application assigns numbers to projects. You enter the first project number, and the application uses subsequent numbers during project creation. The same number sequence is applied to all the projects across project units with Automatic method selected.

Suppose that you want the application to assign project numbers starting from 7 for the project units PU1 and PU2. Do the following:

- Set the project numbering method for PU1 and PU2 to Automatic.
- Enter 7 in the Next Number field.
- Create two projects A and B under PU1 and PU2 respectively.

The project number for A is 7 and the project number for B is 8.

What’s the difference between the project unit organization code and name?

Typically the project unit name is logical, descriptive, and easily recognizable.

The code is a unique short name that is used internally.

Both the project unit organization code and name are used to identify the project unit.

What budgets and forecasts are included in the summarization?

Certain financial plan types are included in summarization by default, while you must manually select others. Approved forecast and baseline budget versions of the following financial plan types are automatically included in summarization of project performance data:

- Approved Revenue Budget
- Approved Cost Budget
- Primary Revenue Forecast
- Primary Cost Forecast

Apart from the default financial plan types, you can include up to four others in summarization of project performance data.

What happens when I select a planning amount allocation basis for the project unit?

The **Period Start Date** and **Period End Date** options allocate amounts based on the period start and end dates. The **Daily Proration** option spreads plan amounts evenly across the plan.

## Project Unit Set Assignments
Example of Set Association with Financial Plan Types

You associate sets with financial or project plan types so that project managers can use them to create financial plans (budget or forecast versions) or project plans for projects or project templates. Financial or project plan types are available for selection only when projects or project templates are created for project units linked to selected sets.

The following example illustrates the relationship between financial plan types, sets, and project units. Project plan types share an identical relationship with sets and project units.

**Scenario**

An organization has two designated project units for project creation: Project Unit 1 and Project Unit 2. Project Unit 1 is associated with Set 1 and Project Unit 2 is associated with Set 2.

During implementation, two financial plan types were created: Financial Plan Type A and Financial Plan Type B. Financial Plan Type A is associated with Set 1. However, Financial Plan Type B is associated with both Set 1 and Set 2.

In such a case, project managers working on projects for Project Unit 1 can use only Financial Plan Type A to create financial plan versions. Project managers working on projects for Project Unit 2 can use both Financial Plan Type A and Financial Plan Type B.
The following graphic further illustrates the relationship between financial plan types, sets, and projects. Project plan types share the same relationship with sets.

**Set Assignments and Project Data**

Reference data set assignments determine how you share enterprise information, including project data, across organizational units. You can decide which data is global, which data can be shared by certain organizations, and which data must remain organization-specific. Reference data sharing enables enterprises to balance autonomy and control for organizations.

Project Portfolio Management applications employ two set determinants: business unit and project unit.
Business Unit as Set Determinant

Business units enable you to control and report on financial transactions, usually for specific geographical entities within the enterprise. For project management purposes, assign the Project Accounting business function to the business unit.

Business unit is a set determinant for the project-related reference data objects described in the following table.

<table>
<thead>
<tr>
<th>Reference Data Object</th>
<th>Entities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Accounting Definition</td>
<td>Project types</td>
</tr>
<tr>
<td>Project Rates</td>
<td>Project rate schedules</td>
</tr>
</tbody>
</table>

You assign a default set to each business unit. The **Project Accounting Definition** and **Project Rates** reference data objects are automatically assigned the default set, but you can override the assignment and select a different set for each.

You can only select project types and rate schedules that are assigned to the same set as the business unit. If you assign a common set to a rate schedule, then that rate schedule is available for use across business units.

Project Unit as Set Determinant

Use project units to enforce consistent project management practices across your enterprise. Project unit is a set determinant for the reference data objects described in the following table.

<table>
<thead>
<tr>
<th>Reference Data Object</th>
<th>Entities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Definition</td>
<td>Class codes, financial plan types, and project plan types</td>
</tr>
<tr>
<td>Project Transaction Types</td>
<td>Expenditure types and work types</td>
</tr>
</tbody>
</table>

You assign a default set to each project unit. The **Project Definition** and **Project Transaction Types** reference data objects are automatically assigned the default set, but you can override the assignment and select a different set for each.

You can only select class codes, plan types, roles, expenditure types and work types that are assigned to the same set as the project unit. To enable expenditure types and work types for use on projects owned by a project unit, assign the set associated with the Project Transaction Types reference data object to those entities.

Related Topics

- Project Units
- Reference Data Sharing

Examples of Partitioning Project Data Using Set Determinants

Use business units and project units to independently manage access to financial and project management data based on the unique requirements of your enterprise.
This topic illustrates the following scenarios.

1. Maintaining separate project management methodologies and data across units within an enterprise while centralizing financial management of data
2. Enforcing a single project management methodology across units within an enterprise while partitioning financial data

> Note: These examples are only illustrative. Any combination of business units and project units can exist.

**Using Multiple Project Units with One Business Unit**

Assume that Vision Corporation is a services company with facilities across the United States. Its business is based on research and development activities and consulting practice. Each of the following lines of business use projects:

- Consulting uses projects to manage consulting engagements and provide billing details to contracts.
- Research and Development uses projects to manage design project schedules.
- Real Estate uses projects to manage facilities, including new construction and repairs.

Vision Corporation implemented project units and business units as follows:

- Project Units
  - Consulting
  - Real Estate
  - Research and Development
- Business Unit: Vision Corporation

The default sets assigned to each project unit are described in the following table.

<table>
<thead>
<tr>
<th>Project Unit</th>
<th>Default Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consulting</td>
<td>Consulting Set</td>
</tr>
<tr>
<td>Real Estate</td>
<td>Real Estate Set</td>
</tr>
<tr>
<td>Research and Development</td>
<td>Research and Development Set</td>
</tr>
</tbody>
</table>

> Note: The Project Definition and the Project Transaction Types reference data objects use the default set.

Vision Corporation can maintain independent setup data for each project unit, while sharing a single approach to financial management across all project units. For example, Vision Corporation uses different expenditure types for each project unit, as described in the table below.

<table>
<thead>
<tr>
<th>Expenditure Type</th>
<th>Sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>Consulting Set</td>
</tr>
<tr>
<td></td>
<td>Real Estate Set</td>
</tr>
<tr>
<td></td>
<td>Research and Development Set</td>
</tr>
</tbody>
</table>
The Labor expenditure type can be used for projects belonging to any project unit. However, expenditure types for airfare and hotel accommodation are used only on consulting projects.

Using Multiple Business Units with One Project Unit

Assume that Vision Corporation is a services and product development company with research and development facilities across the globe, including in the United States and Canada. Due to its international operations, you create multiple business units to segregate financial data. However, you can create a single project unit because research and development projects are similar across the enterprise. Therefore, you create a single project unit.

The enterprise structure and set assignments are described below.

- **Project Unit:** Research and Development
- **Business Units**
  - Vision United States
  - Vision Canada

The default sets assigned to each business unit are described in the following table.

<table>
<thead>
<tr>
<th>Business Unit</th>
<th>Default Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision United States</td>
<td>US Set</td>
</tr>
<tr>
<td>Vision Canada</td>
<td>Canada Set</td>
</tr>
</tbody>
</table>

Vision Corporation maintains independent financial data for each business unit, while employing a unified approach to project management that includes common financial types, and project plan types. The enterprise must use different resource rates in each country. The following table describes the rate schedule setup for each country.

<table>
<thead>
<tr>
<th>Rate Schedule Name</th>
<th>Project Rates Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise Project Rates: United States</td>
<td>US Set</td>
</tr>
<tr>
<td>Enterprise Project Rates: Canada</td>
<td>Canada Set</td>
</tr>
<tr>
<td>Common Enterprise Project Rates</td>
<td>Common Set</td>
</tr>
</tbody>
</table>
These set assignments govern how planned and actual amounts are calculated for projects. For example, when Vision Corporation defines organization costing rules for the Vision United States business unit, they can select only the Enterprise Project Rates: United States or the Common Enterprise Project Rates rate schedules.

## Project Business Unit Options

### How Business Units Work with Projects

Business units are subsets of an enterprise that perform one or more business functions and can be consolidated in both a managerial and legal hierarchy. Project accounting is an example of a business function that’s set up by business unit. Other examples are billing and revenue management, customer contract management, and payables invoicing.

Business units are defined centrally. During implementation, you must enable the Project Accounting business unit for use with Project Financial Management applications.

You can partition financial data using business units while sharing a single approach to project management across all business units. The following graphic shows two business units, one from the United Kingdom (UK) and one from the United States (US). These business units have the same research and development processes, so a single project unit is used by both business units to facilitate common project management practices.

### Project Setup

Following are project setup options for each business unit that you enable for use with Oracle Fusion Project Portfolio Management.

- Project and task owning organization name, tree name, and tree version name.

  **Note:** To own projects or tasks, an organization must be classified as project and task owning organization, belong to the hierarchy associated with the business unit, and be active on the system date. The project type class must be permitted to use the organization to create projects.

- Project and task owning organizations are associated with the business unit to restrict these organizations in project creation flow. The project initiator specifies the business unit for the project, then can select from only those project
and task owning organizations that are associated with the selected business unit. A project can be associated with only one business unit.

Project Expenditure
Following are business unit project expenditure implementation options.

- Day of the week when the expenditure cycle begins.
- Project expenditure organizations to associate with the business unit to restrict which organizations can incur costs on the project.

Project Costing
Following are business unit project costing implementation options.

- Project accounting calendar, either the default project accounting calendar from primary ledger calendar, or a different calendar to assign to the business unit. You can change this calendar until you copy the project accounting periods.
- Default asset book for assets in the business unit. The asset initiator can select a different asset book for the asset.
- Option to use either common accounting and project accounting periods, or unique project accounting periods.
- Overtime calculations option.
- Asset retirement processing option to capture and record the cost of removal and the proceeds of sale amounts for retiring an asset.
- Separation of duties option for entering and releasing expenditure batches to ensure accuracy and accountability of project costs.
- Conversion rate type to use when converting the amount on cost transactions in this business unit from the transaction currency to the ledger currency.

Project Units
Project units are associated with business units to restrict the business units that can handle project transactions. When a project unit isn’t associated with a business unit, any business unit in your enterprise can process project transactions.

Cross-Charge Transactions
Following are business unit cross-charge transaction implementation options.

- Transfer price currency conversion rate date type and rate type for the business unit.
- Borrowed and lent cross-charge transaction option for distributions to be created for cross-charge transactions between different organizations in the same business unit and legal entity.
- Borrowed and lent cross-charge transaction option for distributions to be created for cross-charge transactions between different business units in the same legal entity.
- Borrowed and lent cross-charge transaction option for distributions to be created for cross-charge transactions for a specific receiver business unit.

Customer Contract Management
You can configure customer contract management business function properties, such as currency conversion, cross-charge transaction, and billing options, for each contract business unit.
Reference Data Sharing
Assign sets to business units to determine how reference data is shared across applications. A business unit is a set determinant for the following objects:

- Project accounting definition, including set-enabled reference data such as project type.
- Project and contract billing, including set-enabled reference data such as invoice format.
- Project rates, including set-enabled reference data such as rate schedules.

Options to Maintain Accounting Periods and Project Accounting Periods
During business unit implementation you determine whether to maintain common accounting and project accounting periods, or define project accounting periods that have a different frequency than the accounting periods.

Accounting periods are used by Project Financial Management applications to assign accounting periods and dates to transactions. Accounting periods are maintained by ledger and use the same calendar as the general ledger periods. Project accounting periods are used by Project Financial Management applications for project planning, costing, billing, budgeting, forecasting, and performance reporting. Project accounting periods are maintained by business unit and typically do not use the same calendar as the accounting and general ledger periods.

Maintaining Common Accounting and Project Accounting Periods
If you want to report project information with the same frequency as the accounting periods, you can use the accounting period as both the accounting and project accounting period.

When you maintain common accounting and project accounting periods, period maintenance is simplified, calendar periods are not copied to Project Financial Management applications, and period information is maintained in one physical location. Use Oracle Fusion General Ledger to maintain accounting period statuses and run the processes to open and close accounting periods.
Defining Project Accounting Periods that are Different from Accounting Periods

If you want to account for project transactions and report project information more frequently than the accounting periods allow, you can define project accounting periods that are shorter than the accounting periods. The following graphic explains how you can define weekly project accounting periods and monthly accounting periods.

<table>
<thead>
<tr>
<th>Accounting Period</th>
<th>Period Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct-11</td>
<td>10</td>
</tr>
<tr>
<td>Sep-11</td>
<td>9</td>
</tr>
<tr>
<td>Aug-11</td>
<td>8</td>
</tr>
<tr>
<td>Jul-11</td>
<td>7</td>
</tr>
<tr>
<td>Jun-11</td>
<td>6</td>
</tr>
<tr>
<td>May-11</td>
<td>5</td>
</tr>
<tr>
<td>Apr-11</td>
<td>4</td>
</tr>
<tr>
<td>Mar-11</td>
<td>3</td>
</tr>
<tr>
<td>Feb-11</td>
<td>2</td>
</tr>
<tr>
<td>Jan-11</td>
<td>1</td>
</tr>
<tr>
<td>Dec-10</td>
<td>12</td>
</tr>
<tr>
<td>Nov-10</td>
<td>11</td>
</tr>
<tr>
<td>Oct-10</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Accounting Period</th>
<th>Period Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct-W4-11</td>
<td>42</td>
</tr>
<tr>
<td>Oct-W3-11</td>
<td>41</td>
</tr>
<tr>
<td>Oct-W2-11</td>
<td>40</td>
</tr>
<tr>
<td>Oct-W1-11</td>
<td>39</td>
</tr>
<tr>
<td>Sep-W4-11</td>
<td>38</td>
</tr>
<tr>
<td>Sep-W3-11</td>
<td>37</td>
</tr>
<tr>
<td>Sep-W2-11</td>
<td>36</td>
</tr>
<tr>
<td>Sep-W1-11</td>
<td>35</td>
</tr>
<tr>
<td>Aug-W4-11</td>
<td>34</td>
</tr>
<tr>
<td>Aug-W3-11</td>
<td>33</td>
</tr>
<tr>
<td>Aug-W2-11</td>
<td>32</td>
</tr>
<tr>
<td>Aug-W1-11</td>
<td>31</td>
</tr>
<tr>
<td>Jul-W4-11</td>
<td>30</td>
</tr>
</tbody>
</table>

To ensure that the information in the graphic is accessible the following tables are provided.

The following table provides an example of a monthly accounting period.

<table>
<thead>
<tr>
<th>Accounting Period</th>
<th>Period Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct-11</td>
<td>10</td>
</tr>
<tr>
<td>Sep-11</td>
<td>9</td>
</tr>
<tr>
<td>Aug-11</td>
<td>8</td>
</tr>
<tr>
<td>Jul-11</td>
<td>7</td>
</tr>
<tr>
<td>Jun-11</td>
<td>6</td>
</tr>
<tr>
<td>May-11</td>
<td>5</td>
</tr>
<tr>
<td>Apr-11</td>
<td>4</td>
</tr>
<tr>
<td>Mar-11</td>
<td>3</td>
</tr>
</tbody>
</table>
Oracle Project Portfolio Management Cloud
Implementing Project Financial Management and Grants Management

Chapter 3

Project Organizations

<table>
<thead>
<tr>
<th>Accounting Period</th>
<th>Period Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb-11</td>
<td>2</td>
</tr>
<tr>
<td>Jan-11</td>
<td>1</td>
</tr>
<tr>
<td>Dec-10</td>
<td>12</td>
</tr>
<tr>
<td>Nov-10</td>
<td>11</td>
</tr>
<tr>
<td>Oct-10</td>
<td>10</td>
</tr>
</tbody>
</table>

The following table provides an example of a weekly accounting period.

<table>
<thead>
<tr>
<th>Project Accounting Period</th>
<th>Period Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct-W4-11</td>
<td>42</td>
</tr>
<tr>
<td>Oct-W3-11</td>
<td>41</td>
</tr>
<tr>
<td>Oct-W2-11</td>
<td>40</td>
</tr>
<tr>
<td>Oct-W1-11</td>
<td>39</td>
</tr>
<tr>
<td>Sept-W4-11</td>
<td>38</td>
</tr>
<tr>
<td>Sept-W3-11</td>
<td>37</td>
</tr>
<tr>
<td>Sept-W2-11</td>
<td>36</td>
</tr>
<tr>
<td>Sept-W1-11</td>
<td>35</td>
</tr>
<tr>
<td>Aug-W4-11</td>
<td>34</td>
</tr>
<tr>
<td>Aug-W3-11</td>
<td>33</td>
</tr>
<tr>
<td>Augt-W2-11</td>
<td>32</td>
</tr>
<tr>
<td>Aug-W1-11</td>
<td>31</td>
</tr>
</tbody>
</table>

Use Oracle Fusion General Ledger to maintain accounting period statuses and run the processes to open and close accounting periods, and Project Financial Management applications to maintain project accounting period statuses and run the processes to open and close project accounting periods.
FAQs for Project Business Unit Options

How can I set up common accounting and project accounting periods?
Complete the following steps:

1. Set up the general ledger accounting calendar and accounting periods.
2. During project business unit implementation, select the accounting calendar as the project accounting calendar, then select the option to maintain common accounting and project accounting periods.

How can I set up project accounting periods that are different from accounting periods?
Complete these tasks to set up project accounting periods that are different from accounting periods.

- Set up the accounting calendar and manage the accounting period statuses in Oracle Fusion General Ledger.
- During project business unit implementation, specify the project accounting calendar for each business unit.
  - Verify that the option to maintain common accounting and project accounting periods is not selected.
- Copy the accounting calendar into the project accounting period table, which copies the period start and end dates.
- Manage the period statuses for project accounting periods.

What's the difference between a project accounting period, an accounting period, and a general ledger period?
Project accounting periods are used to track budgets and forecasts, summarize project amounts for reporting, and track the project status. Project accounting periods are maintained by the business unit. You can set up project accounting periods to track project periods on a more frequent basis than accounting periods. For example, you can define weekly project accounting periods and monthly accounting periods. If you use the same calendar as your accounting periods, the project accounting periods and accounting periods will be the same, although the statuses are maintained independently.

Accounting periods, which are used to derive accounting dates, are maintained by the ledger and use the same calendar as the general ledger periods. Period statuses for the accounting period and general ledger period are maintained independently.

You can select an option on the business unit definition to maintain common accounting and project accounting periods. This option allows the accounting period to be used as the project accounting period and you maintain only one period status.

What happens if I close an accounting or project accounting period permanently?
You can’t enter any transactions in the period you have closed and you can adjust transactions in subsequent periods.

How can I associate a business unit with a project unit?
You can associate a business unit with a project unit during the Related Business Units step of the Manage Project Units setup task if the business unit is already configured using the Configure Project Accounting Business Function setup task. If the business unit is not configured, then you can associate a project unit with the business unit on the Project Units tab of the Configure Project Accounting Business Function page.
4 Project Portfolio Management Common Reference Objects

Value Sets

Overview of Value Sets

A value set is a group of valid values that you assign to a flexfield segment to control the values that are stored for business object attributes.

A user enters a value for an attribute of a business object while using the application. The flexfield validates the value against the set of valid values that you configured as a value set and assigned to the segment.

For example, you can define a required format, such as a five-digit number, or a list of valid values, such as green, red, and blue.

Flexfield segments are usually validated, and typically each segment in a given flexfield uses a different value set. You can assign a single value set to more than one segment, and you can share value sets among different flexfields.

Note: Ensure that changes to a shared value set are compatible with all flexfields segments using the value set.

The following aspects are important in understanding value sets:

- Managing value sets
- Validation
- Security
- Precision and scale
- Usage and deployment
- Protected value set data

Managing Value Sets

To open the Manage Value Sets page, use the Manage Value Sets task. You can also use the Manage Descriptive Flexfields and Manage Extensible Flexfields tasks for configuring a segment, including its value set. To open the Manage Values page, select the value set from the Manage Value Sets page, and click Manage Values. Alternatively, click Manage Values from the Edit Value Set page.

Validation

The following types of validation are available for value sets:

- Format only, where users enter data instead of selecting values from a list
- Independent, a list of values consisting of valid values you specify
- Dependent, a list of values where a valid value derives from the independent value of another segment
- Subset, where the list of values is a subset of the values in an existing independent value set
• Table, where the values derive from a column in an application table and the list of values is limited by a WHERE clause

A segment that uses a format only value set doesn’t present a list of valid values to users. If required, you may add table validated value sets to the list of available value sets available for configuration.

**Note:** For the Accounting Key Flexfield value sets, you must use independent validation only. If you use other validations, you can’t use the full chart of accounts functionality, such as data security, reporting, and account hierarchy integration.

**Security**

Value set security only works in conjunction with usage within flexfield segments. You can specify that data security be applied to the values in flexfield segments that use a value set. Based on the roles provisioned to users, data security policies determine which values of the flexfield segment users can view or modify.

The application of value set security has the following conditions:

• At the value set level: The value set is the resource secured by data security policies. If a value set is secured, every usage of it in any flexfield is secured. Disabling security for individual usages of the same value set isn’t possible.

• Applies to independent, dependent, or table-validated value sets.

• Applies mainly when data is being created or updated, and to key flexfield combinations tables for query purposes. Value set security doesn’t determine which descriptive flexfield data is shown upon querying.

• Security conditions defined on value sets always use table aliases. When filters are used, table aliases are always used by default. When predicates are defined for data security conditions, make sure that the predicates also use table aliases.

For key flexfields, the attributes in the view object corresponding to the account combination ID, structure instance number (SIN), and data set number (DSN) can’t be transient. They must exist in the database table. For key flexfields, the SIN segment is the discriminator attribute, and the account combination segment is the common attribute.

**Precision and Scale**

If the data type of a value set is Number, you can specify the precision (maximum number of digits user can enter) or scale (maximum number of digits following the decimal point).

**Usage and Deployment**

The usage of a value set is the flexfields where that value set is used. The deployment status of flexfields in which the value set is used indicates the deployment status of the value set instance.
The following figure shows a value set used by a segment in a key flexfield and the context segment of a descriptive flexfield.

For most value sets, when you enter values into a flexfield segment, you can enter only values that already exist in the value set assigned to that segment.

Global and context-sensitive segment require a value set. You can assign a value set to a descriptive flexfield context segment. If you specify only context values, not value sets for contexts, the set of valid values is equal to the set of context values.

Protected Value Set Data

Application developers may mark some value sets as protected, indicating that you can’t edit them.

You can edit only value sets that are not marked as protected. You can’t edit or delete protected value sets. If the value set type supports values (such as independent, dependent or subset value sets), then you can’t add, edit, or delete values.
Note: References to protected value sets aren’t restricted. Value sets, protected or not, may be assigned to any flexfield segment. Likewise, other value sets may reference protected value sets; for example, an unprotected dependent value set may reference a protected independent value set.

Related Topics

- How Flexfields and Value Sets Work Together
- Chart of Accounts Components
- Why can’t I edit my flexfield or value set configuration
- What’s the difference between a lookup type and a value set
- Default Segment Values

Validation Type Options for Value Sets

Validation and usage of value sets determine where and how users access valid values for attributes represented by flexfield segments.

Tip: As a flexfield guideline, define value sets before configuring the flexfield, because you can assign value sets to each segment as you configure a flexfield. With descriptive and extensible flexfield segments, you can create value sets when adding or editing a segment on the runtime page where the flexfield appears.

The following aspects are important in defining value sets:

- Value sets for context segments
- Format-only validation
- Interdependent value sets
- Table validation
- Range
- Security
- Testing and maintenance

Value Sets for Context Segments

When assigning a value set to a context segment, you can only use table-validated or independent value sets.

You can use only table and independent value sets to validate context values. The data type must be character and the maximum length of the values being stored must not be larger than the context’s column length. If you use a table value set, the value set can’t reference flexfield segments in the value set’s WHERE clause, other than the flexfield segment to which the value set is assigned.

Format Only Validation

The format only validation type enables users to enter any value, as long as it meets your specified formatting rules. The value must not exceed the maximum length you define for your value set, and it must meet any format requirements for that value set.
For example, if the value set permits only numeric characters, users can enter the value 456 (for a value set with maximum length of three or more), but can’t enter the value ABC. A format only value set doesn’t otherwise restrict the range of different values that users can enter. For numeric values, you can also specify if a numeric value should be zero filled or how may digits should follow the radix separator.

### Interdependent Value Sets

Use an independent value set to validate data against a list that isn’t stored in an application table, and not dependent on a subset of another independent value set. You can’t specify a dependent value set for a given segment without having first defined an independent value set that you apply to another segment in the same flexfield. Use a dependent value set to limit the list of values for a given segment based on the value that the user has defined for a related independent segment. The available values in a dependent list and the meaning of a given value depend on which value was selected for the independently validated segment.

For example, you could define an independent value set of the states in the USA with values such as CA, NY, and so on. Then you define a dependent value set of cities in the USA with values such as San Francisco and Los Angeles that are valid for the independent value CA. Similarly, New York City and Albany are valid for the independent value NY. In the UI, only the valid cities can be selected for a given state.

Because you define a subset value set from an existing independent value set, you must define the independent value set first. Users don’t have to select a value for another segment first to have access to the subset value set.

Independent, dependent, and subset value sets require a user-defined list of valid values. Use the Manage Values page to create and manage a value set’s valid values and the order in which they appear.

💡 **Tip:** You can configure the Manage Value Sets page to capture additional attributes for each valid value by adding context-sensitive segments in a new context for FND_VS_VALUES_B descriptive field.

### Table Validation

Typically, you use a table-validated set when the values you want to use are already maintained in an application table, such as a table of supplier names. Specify the table column that contains the valid value. You can optionally specify the description and ID columns, a WHERE clause to limit the values to use for your set, and an ORDER BY clause.

If you specify an ID column, then the flexfield saves the ID value, instead of the value from the value column, in the associated flexfield segment. If the underlying table supports translations, you can enable the display of translated text by basing the value set’s value column on a translated attribute of the underlying table. You should also define an ID column that’s based on an attribute that isn't language-dependent so that the value’s invariant ID (an ID that doesn't change) is saved in the transaction table. The run time displays the corresponding translated text from the value column for the run time session’s locale.

Table validation lets you enable a segment to depend on multiple prior segments in the same context structure. You can’t reference other flexfield segments in the table-validated value set’s WHERE clause. Which means, the WHERE clause can't reference SEGMENT.segment_code or VALUESET.value_set_code.

Table-validated value sets have unique values across the table, irrespective of bind variables. The WHERE clause fragment of the value set is considered if it doesn’t have bind variables. If it has bind variables, the assumption is that the values are unique in the value set. If you use table validated value sets for key flexfields, then you can’t use all integration options supported for key flexfields, such as:

- Data security
- Oracle Transactional Business Intelligence (OTBI)
- Extended Spread Sheet Database (ESSbase)
- Tree or hierarchy integration
To use these integration options for key flexfields, you must use independent value sets only.

**Range**

In the case of format, independent, or dependent value sets, you can specify a range to limit which values are valid. You can specify a range of values that are valid within a value set. You can also specify a range validated pair of segments where one segment represents the low end of the range and another segment represents the high end of the range.

For example, you might specify a range for a format-only value set with format type Number where the user can enter only values between 0 and 100.

**Security**

In the case of independent and dependent values, you can specify that data security be applied to the values in segments that use a value set. Based on the roles provisioned to users, data security policies determine which values of the flexfield segment users can view or modify.

To enable security on a value set, specify a database resource, typically the code value for the value set. Using the Manage Database Security Policies task, specify conditions, such as filters or SQL predicates, and policies that associate roles with conditions. You can use a filter for simple conditions. For more complex conditions, use a SQL predicate.

Value set data security policies and conditions differ from data security conditions and policies for business objects in the following ways:

- You can grant only read access to users. You can’t specify any other action.
- When defining a condition that’s based on a SQL predicate, use VALUE, VALUE_NUMBER, VALUE_DATE, VALUE_TIMESTAMP, or VALUE_ID to reference the value from a dependent, independent, or subset value set. For table value sets, use a table alias to define the table, such as &TABLE_ALIAS category=70.

When you enable security on table-validated value sets, the security rule that’s defined is absolute and not contingent upon the bind variables (if any) that may be used by the WHERE clause of the value set. For example, suppose a table-validated value set has a bind variable to further filter the value list to x, y and z from a list of x, y, z, xx, yy, zz. The data security rule or filter written against the value set must not assume anything about the bind variables. Instead the whole list of values must be available and you write the rule, for example, to permit x, or to permit y and z. By default in data security, all values are denied and show only rows to which access has been provided.

**Testing and Maintenance**

You don’t have to define or maintain values for a table-validated value set, as the values are managed as part of the referenced table or independent value set, respectively.

You can’t manage value sets in a sandbox.

When you change an existing value set, the deployment status for all affected flexfields changes to Edited. You must redeploy all flexfields that use that value set to make the flexfields reflect the changes. In the UI pages for managing value sets, the value set’s usages show which flexfields are affected by the value set changes.

If your application has more than one language installed, or there is any possibility that you might install one or more additional languages for your application in the future, select **Translatable**. This doesn’t require you to provide translated values now, but you can’t change this option if you decide to provide them later.

**Considerations for Planning Value Sets**

The value sets you create and configure depend on the valid values on the business object attributes that will use the value set. When creating value sets, you first give the value set a name and description, and then define the valid values of the set.
The following aspects are important in planning value sets:

- List of values
- Plain text
- Value ranges
- Value format specification
- Security

### List of Values

You can use one of the following types of lists to specify the valid values for a segment:

- Table column
- User-defined list. Also include a sub list.
- Dependent user-defined list

If the valid values exist in a table column, use a table value set to specify the list of values. To limit the valid values to a subset of the values in the table, use a SQL WHERE clause. Table value sets also provide some advanced features, such as enabling validation depending on other segments in the same structure.

Use an independent value set to specify a user-defined set of valid values. For example, you can use an independent value set of Mon, Tue, Wed, and so forth to validate the day of the week. You can also specify a subset of an existing independent value set as the valid values for a segment. For example, if you have an independent value set for the days of the week, then a weekend subset can comprise entries for Saturday and Sunday.

Use a dependent value set when the available values in the list and the meaning of a given value depend on which independent value was selected for a previously selected segment value. For example, the valid holidays depend on which country you are in. A dependent value set is a collection of value subsets, with one subset for each value in a corresponding independent value set.

For lists of values type value sets, you can additionally limit the valid values that an end user can select or enter by specifying format, minimum value, and maximum value. For list of values type value sets, you can optionally implement value set data security. If the applications are running in different locales, you might need to provide different translations for the values and descriptions.

### Plain Text

Use a format-only value set when you want to allow users to enter any value, as long as that value conforms to formatting rules. For example, if you specify a maximum length of 3 and numeric-only, then end users can enter 456, but not 4567 or 45A. You can also specify the minimum and maximum values, whether to align the text to either side, and whether to zero-fill. With a format-only value set, no other types of validation are applied.

### Value Ranges

You can use either a format-only, independent, or dependent value set to specify a range of values. For example, you might create a format-only value set with Number as the format type where the end user can enter only the values between 0 and 100. Or, you might create a format-only value set with Date as the format type where the end user can enter only dates for a specific year, such as a range of 01-JAN-93 to 31-DEC-93. Because the minimum and maximum values enforce these limits, you need not define a value set that contains each of these individual numbers or dates.

### Value Format

Flexfield segments commonly require some kind of format specification, regardless of validation type. Before creating a value set, consider how you will specify the required format.
The following table shows options for validation type and value data type.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value data type</td>
<td>Character, Number, Date, Date Time.</td>
</tr>
<tr>
<td>Value subtype</td>
<td>Text, Translated text, Numeric digits only, Time (20:08), Time (20:08:08).</td>
</tr>
<tr>
<td></td>
<td>An additional data type specification for the Character data type for the</td>
</tr>
<tr>
<td></td>
<td>Dependent, Independent, and Format validation types.</td>
</tr>
<tr>
<td>Maximum length</td>
<td>Maximum number of characters or digits for Character data type.</td>
</tr>
<tr>
<td>Precision</td>
<td>Maximum number of digits the user can enter.</td>
</tr>
<tr>
<td>Scale</td>
<td>Maximum number of digits that can follow the decimal point.</td>
</tr>
<tr>
<td>Uppercase only</td>
<td>Lowercase characters automatically changed to uppercase.</td>
</tr>
<tr>
<td>Zero fill</td>
<td>Automatic text alignment and zero-filling of entered numbers (affects</td>
</tr>
<tr>
<td></td>
<td>values that include only the digits 0-9).</td>
</tr>
</tbody>
</table>

**Note:** You cannot change the text value data type to a translated text value subtype after creating a value set. If there is any chance you may need to translate displayed values into other languages, choose Translated text. Selecting the Translated text subtype doesn't require you to provide translated values.

**Value Sets for Context Segments**

You can use only table and independent value sets to validate context values. The data type must be character and the maximum length of the values being stored must not be larger than the context’s column length. If you use a table value set, the value set cannot reference flexfield segments in the value set’s WHERE clause other than the flexfield segment to which the value set is assigned.

**Security**

When enabling security on a value set, the data security resource name is an existing value set or one that you want to create. The name typically matches the code value for the value set. You cannot edit the data security resource name after you save your changes.

**Related Topics**

- How Flexfields and Value Sets Work Together
- Default Segment Values
- What's the difference between a lookup type and a value set
Considerations for Bind Variables in Table-Validated Value Sets

After you assign a value set to a flexfield, you can use bind variables in the WHERE clause.

The following bind variables refer to flexfield elements:

- \( :\{\text{SEGMENT.<segment_code}>\} \)
- \( :\{\text{CONTEXT.<context_code>}:\text{SEGMENT.<segment_code>}\} \)
- \( :\{\text{VALUESET.<value_set_code>}\} \)
- \( :\{\text{FLEXFIELD.<internal_code>}\} \)
- \( :\{\text{PARAMETER.<parameter_code>}\} \)

**Segment Code**

\( :\{\text{SEGMENT.<segment_code>}\} \)

This bind variable refers to the ID or value of a segment where \(<\text{segment_code}>\) identifies the segment. Where referring to the ID, the value set is ID-validated. Where referring to the value, the value set isn’t ID-validated. The data type of the bind value is the same as the data type of the segment’s column.

For both descriptive and extensible flexfields, the segment must be in the same context as the source segment. The source segment contains the WHERE clause. For descriptive flexfields, if the segment is global, then the source segment must be global.

The segment must have a sequence number that’s less than the sequence number of the target segment with this bind variable. A matching segment must exist in the current flexfield context.

This bind variable is useful when the set of valid values depends on the value in another segment. For example, the values to select from a CITIES table might depend upon the selected country. If SEGMENT1 contains the country value, then the WHERE clause for the CITIES table might be \(<\text{country_code}> = :\{\text{SEGMENT.SEGMENT1}\} \).

**Context Code**

\( :\{\text{CONTEXT.<context_code>}:\text{SEGMENT.<segment_code>}\} \)

This bind variable, which is valid only for extensible flexfields, refers to the ID (if the value set is ID-validated) or value (if not ID-validated) of a segment that’s in a different context than the target segment (the segment with the WHERE clause).

- The \(<\text{context_code}>\) identifies the context and must be in the same category or in an ancestor category. It can’t be a multiple-row context.
- The \(<\text{segment_code}>\) identifies the segment. The data type of the bind value is the same as the data type of the segment’s column.

**Note:** The target segment should appear in the UI after the source segment to ensure the source segment has a value. If the target segment’s context is a single-row context, the source and target segments must be on separate pages and the target page must follow the source page.

The framework of extensible flexfields doesn’t perform any additional validation related to mismatched values for segments defined with cross context bind parameters. Administrators must populate the correct pair of segment values.
This bind variable is useful when the set of valid values depends on the value of a segment in another context. For example, the values to select from a CERTIFICATION table for a segment in the Compliance and Certification context might depend on the value of the country segment in the Manufacturing context.

### Value Set Code

:`{VALUESET.<value_set_code>}`

This bind variable refers to the ID (if the value set is ID-validated) or value (if not ID-validated) of the segment that’s assigned to the value set that’s identified by the `value_set_code`. The data type of the bind value is the same as the data type of the segment’s column.

The segment must have a sequence number that’s less than the sequence number of the segment with this bind variable. If more than one segment is assigned to the value set, the closest prior matching segment will be used to resolve the bind expression. A matching segment must exist in the current flexfield context.

This bind variable is useful when the set of valid values depends on the value in another segment and that segment code can vary, such as when the value set is used for more than one context or flexfield. For example, the values to select from a CITIES table might depend upon the selected country. If the value set for the segment that contains the country value is COUNTRIES, then the WHERE clause for the CITIES table might be `<country_code> = :{VALUESET.COUNTRIES}`.

### Flexfield Internal Code

:`{FLEXFIELD.<internal_code>}`

This bind variable refers to an internal code of the flexfield in which the value set is used, or to a validation date. The internal_code must be one of the following:

- **APPLICATION_ID** - the application ID of the flexfield in which this value set is used. The data type of APPLICATION_ID and its resulting bind value is NUMBER.
- **DESCRIPTIVE_FLEXFIELD_CODE** - the identifying code of the flexfield in which this value set is used. The data type of DESCRIPTIVE_FLEXFIELD_CODE and its resulting bind value is VARCHAR2. Note that you use this string for both descriptive and extensible flexfields.
- **CONTEXT_CODE** - the context code of the flexfield context in which this value set is used. The data type of CONTEXT_CODE and its resulting bind value is VARCHAR2.
- **SEGMENT_CODE** - the identifying code of the flexfield segment in which this value set is used. The data type of SEGMENT_CODE and its resulting bind value is VARCHAR2.
- **VALIDATION_DATE** - the current database date. The data type of VALIDATION_DATE and its resulting bind value is DATE.

### Flexfield Parameters

:`{PARAMETER.<parameter_code>}`

This bind variable refers to the value of a flexfield parameter where parameter_code identifies the parameter. The data type of the resulting bind value is the same as the parameter’s data type.

> **Note:** You can’t assign a table value set to a context segment if the WHERE clause uses VALUESET.value_set_code or SEGMENT.segment_code bind variables.
Create Table-Validated Value Sets Based on Lookups

In an application user interface, you want to display a list of values that customers use to enter satisfaction scores. The value column name is 1, 2, 3, 4, 5 and the value column description is Extremely Satisfied, Satisfied, and so on. Users can select the appropriate value or description which stores the corresponding name so the name value can be used in a calculation expression.

In this case, you can use the FND_LOOKUPS table as the basis for a table-validated value set. The lookup meaning corresponds to the Value Column Name and the lookup description corresponds to the Description Column Name. The following table lists the properties of the value set.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FROM clause</td>
<td>FND_LOOKUPS</td>
</tr>
<tr>
<td>WHERE clause</td>
<td>lookup_type = 'CN_XX_CUSTOMER_SATISFACTION_SCORE'</td>
</tr>
<tr>
<td>ID column</td>
<td>lookup_code</td>
</tr>
<tr>
<td>Value column</td>
<td>meaning</td>
</tr>
<tr>
<td>Description column</td>
<td>description</td>
</tr>
<tr>
<td>Enable column</td>
<td>enabled_flag</td>
</tr>
<tr>
<td>Start Date column</td>
<td>start_date_active</td>
</tr>
<tr>
<td>End Date column</td>
<td>end_date_active</td>
</tr>
<tr>
<td>Order by</td>
<td>display_sequence</td>
</tr>
</tbody>
</table>

After completing this task, you should have created your customer satisfaction value set for the Incentive Compensation page of your implementation project.

Creating a Value Set Based on a Lookup

1. From the Setup and Maintenance work area, find the Manage Value Sets task and click the Go to Task icon button.
2. On the Manage Value Sets page, click the Create icon button.
3. On the Create Value Set page, enter the following values:
   a. In the Value Set Code field, enter CN_XX_CUSTOMER_SATISFACTION_SCORES
   b. In the Description field, enter Customer satisfaction score.
   c. In the Module field, select Search
   d. In the Search and Select: Module subwindow, enter Incent in the User Module Name field
   e. Select Incentive Compensation.
   f. Click OK.
4. On the Create Value Set page, enter the following values:
   a. In the Validation Type field, select Table.
   b. In the Value Data Type field, select Character.
   c. In the Definition section FROM Clause field, enter FND_LOOKUPS.
   d. In the Value Column Name field, enter DESCRIPTION.
   e. In the Description Column Name field, enter MEANING.
   f. In the ID Column Name field, enter LOOKUP_CODE.
   g. In the Enabled Column Name field, enter ‘Y’.
   h. In the Start Date Column Name field, enter START_DATE_ACTIVE.
   i. In the End Date Column Name field, enter END_DATE_ACTIVE.
   j. In the WHERE Clause field, enter LOOKUP_TYPE = ‘CN_XX_CUST_SATISFACT_SCORE’.

5. Click Save and Close.
6. In the Manage Value Sets page, click Done.

Add Attributes to the Manage Value Sets Page

You can add attributes to independent, dependent, and subset value sets. The attributes appear on the Manage Value Sets page where you can store additional information about each valid value. To display attributes on an application page, you must programmatically modify the application.

To add attributes and subsequently view them on the Manage Value Sets page, perform the following steps:

1. Using the Manage Descriptive Flexfields task, find the FND_VS_VALUES_B flexfield and open it for editing.
2. Click Manage Contexts.
3. Create a new context and use the value set code for the context code.
4. Add new attributes as context-sensitive segments and save the changes.
5. Deploy FND_VS_VALUES_B to run time.
6. Sign out and sign back in.
7. Open the Manage Value Sets page to view the new attributes.

Import Value Set Values

You can import a file containing values that you want to edit or add to a given independent or dependent value set.
For example, uploading a hundred values may be more efficient than creating them individually using the Manage Value Sets task. However, for just a few values, it may be quicker to perform the relevant tasks.

Importing Value Set Values

To import value set values:

1. Create a flat file containing the values in the value set that you want to add or update.
When creating the file, you must specify an existing value set code to which you want to add values or edit existing values. If the value set does not exist, add the value set using the appropriate Manage Value Sets setup task in the Setup and Maintenance work area.

The file that you create must adhere to the formatting and content requirements for creating flat files containing value set values.

2. Upload the flat file to the content repository using the File Import and Export page.
3. Import the file using the appropriate Manage Value Sets setup task in the Setup and Maintenance work area. To import the file:
   a. Click Actions > Import in the Manage Value Sets page.
   b. In the File Name field, enter the name of the flat file you uploaded using the File Import and Export page.
   c. In the Account field, select the user account containing the flat file.
   d. Click Upload.

Note: Alternatively, you can import the file using either of the following methods:
   o Run the Upload Value Set Values scheduled process.
   o Use the Applications Core Metadata Import web service. For more information on the Applications Core Metadata Import web service, see the SOAP Web Services guide for your cloud services.

**Related Topics**

- Overview of Files for Import and Export

## Requirements for Flat Files to Upload Value Set Values

You can import large volumes of value set value data from the content repository. To upload value set values to the content repository, create a flat file containing the values in the value set that you want to add or update. You upload these flat files to the content repository using the File Import and Export page.

### General Requirements

The first line of the flat file must contain the column names for the value set value data, including all mandatory columns, and separated by the '|' (pipe) character. Each subsequent line should contain a row of data specified in the same order as the column names, also separated by the '|' character.

The requirements for creating flat files vary with the type of value sets:

- Independent value sets
- Dependent value sets

### Independent Value Set

A flat file for uploading values for independent value sets must contain the mandatory columns. The following table lists the three mandatory columns and their data types.
Dependent Value Sets

A flat file for uploading values for dependent value sets must contain the mandatory columns. The following table lists the four mandatory columns and their data types.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value Set Code</td>
<td>VARCHAR2(60)</td>
</tr>
<tr>
<td>Independent Value</td>
<td>VARCHAR2(150)</td>
</tr>
<tr>
<td>Value</td>
<td>VARCHAR2(150)</td>
</tr>
<tr>
<td>Enabled Flag</td>
<td>VARCHAR2(1), Y or N</td>
</tr>
</tbody>
</table>

**Note:** You can also specify optional columns.

Example:

To upload values to a CITIES dependent value set (dependent on the STATES independent value set), you can use the following flat file:

```
ValueSetCode | IndependentValue | Value | EnabledFlag
CITIES | AK | Juneau | Y
CITIES | AK | Anchorage | Y
```
Additional Optional Columns

In addition to the mandatory columns, you can add optional columns. The following table lists the optional columns for both dependent and independent value sets.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translated Value</td>
<td>VARCHAR2(150), for use in value sets that are translatable</td>
</tr>
<tr>
<td>Description</td>
<td>VARCHAR2(240)</td>
</tr>
<tr>
<td>Start Date Active</td>
<td>DATE, formatted as YYYY-MM-DD</td>
</tr>
<tr>
<td>End Date Active</td>
<td>DATE, formatted as YYYY-MM-DD</td>
</tr>
<tr>
<td>Sort Order</td>
<td>NUMBER(18)</td>
</tr>
<tr>
<td>Summary Flag</td>
<td>VARCHAR2(30)</td>
</tr>
<tr>
<td>Flex Value Attribute1 ... Flex Value Attribute20</td>
<td>VARCHAR2(30)</td>
</tr>
<tr>
<td>User-defined Value Attribute1 ... User-defined Value Attribute10</td>
<td>VARCHAR2(30)</td>
</tr>
</tbody>
</table>

Related Topics

- Overview of Files for Import and Export

Upload Value Set Values Process

This process uploads a flat file containing value set values for flexfields. You can use the scheduled process to upload a file containing values you want to edit or add to an existing independent or dependent value set. This process is useful for adding or updating large volumes of value set value data in an automated or recurring fashion. For example, you can upload a hundred values on a recurring basis when scheduled as a recurring process. This method could be more efficient than using the Import action in the Manage Value Sets tasks in the Setup and Maintenance work area. However, for a task of uploading a hundred values, it may be quicker to use the Import action in the relevant tasks.

Run this process from the Scheduled Processes Overview page. You can run it on a recurring basis whenever the flat file in the content repository account is updated.

You must create the flat file containing the values data, and upload the flat file to the content repository using the File Import and Export page.
Parameters

Flat File Name
Enter the name of the flat file you uploaded using the File Import and Export page.

Account
Select the user account containing the flat file in the content repository to upload.

Related Topics
- Overview of Files for Import and Export
- Overview of Scheduled Processes

Translation of Flexfield and Value Set Configurations

When you first configure a flexfield or segment, the translatable text that you enter, such as prompts and descriptions, is stored as the text for all installed locales. You may then provide a translation for a particular locale. If you don’t provide a translation for a given locale, then the value that was first entered is used for that locale.

To translate the text for a particular locale, sign in with that locale, or in the global header, select Settings and Actions > Personalization > Set Preferences and specify the locale. Then, update the translatable text in the flexfield using the Manage Descriptive Flexfields task, Manage Key Flexfields task, or Manage Extensible Flexfields task. Your modifications change the translated values only for the current session’s locale.

After you complete the translations, deploy the flexfield.

You can define translations for a dependent value set or an independent value set, if the value set is of type Character with a subtype Translated text. You define the translations by setting the current session to the locale for which you want to define the translation. Then use the Manage Value Sets task to enter the translated values and descriptions for that locale.

You can define translated values for a table value set for which multiple languages are supported and that the value set’s value column is based on a translated attribute of the underlying table. For more information about using multilanguage support features, see the Oracle Fusion Applications Developer’s Guide.

FAQs for Value Sets

What happens if a value set is security enabled?

Value set security is a feature that enables you to secure access to value set values based on the role of the user in the application.

As an example, suppose you have a value set of US state names. When this value set is used to validate a flexfield segment, and users can select a value for the segment, you can use value set security to restrict them to selecting only a certain state or subset of states based on their assigned roles in the application.

For example, Western-region employees may choose only California, Nevada, Oregon, and so on as valid values. They cannot select non-Western-region states. Eastern-region employees may choose only New York, New Jersey, Virginia,
and so on as valid values, but cannot select non-Eastern-region states. Value set security is implemented using Oracle Applications Cloud data security.

**How can I set a default value for a flexfield segment?**

When you define or edit a flexfield segment, you pick a value from the assigned value set and set it as default.

You can set the default value for a descriptive flexfield segment to be a parameter. The mapped entity object attribute provides the initial default value for the segment.

You can set the default value to be a constant, if appropriate to the data type of the value set assigned to the segment.

In addition to an initial default value, you can set a derivation value for updating the attribute’s value every time the parameter value changes. The parameter you select identifies the entity object source attribute. Any changes in the value of the source attribute during run time are reflected in the value of the segment.

If the display type of the segment is a check box, you can set whether the default value of the segment is checked or unchecked.

**Related Topics**

- Default Segment Values

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**Descriptive Flexfields**

**Overview of Descriptive Flexfields**

Use descriptive flexfields to add attributes to business object entities, and define validation for them.

All the business object entities that you can use in the application are enabled for descriptive flexfields. However, configuring descriptive flexfields is an optional task.

**Context**

A descriptive flexfield can have only one context segment to provide context sensitivity. The same underlying database column can be used by different segments in different contexts.

For example, you can define a Dimensions context that uses the following attributes:

- ATTRIBUTE1 column for height
- ATTRIBUTE2 column for width
- ATTRIBUTE3 column for depth

You can also define a Measurements context that uses the same columns for other attributes:

- ATTRIBUTE1 column for weight
- ATTRIBUTE2 column for volume
- ATTRIBUTE3 column for density
Segments and Contexts
The following table lists the different types of descriptive flexfield segments.

<table>
<thead>
<tr>
<th>Segment Type</th>
<th>Run Time Appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global segment</td>
<td>Always available</td>
</tr>
<tr>
<td>Context segment</td>
<td>Determines which context-sensitive segments are displayed</td>
</tr>
<tr>
<td>Context-sensitive segment</td>
<td>Displayed depending on the value of the context segment</td>
</tr>
</tbody>
</table>

The following figure displays a descriptive flexfield having one context segment called Category for which there are three values: Resistor, Battery, and Capacitor. Additionally, the descriptive flexfield comprises two global segments that appear in each context, and three context-sensitive segments that only appear in the specific context.
Application development determines the number of segments available for configuring. During implementation, configure the flexfield by determining the following:

- Attributes to add using the available segments
- Context values
- The combination of attributes in each context

**Value Sets**

For each global and context-sensitive segment, you configure the values permitted for the segment. Based on it, the values that end users enter are validated, including interdependent validation among the segments.

**Protected Descriptive Flexfield Data**

Application developers may mark some data configurations in a descriptive flexfield as protected, indicating that you can’t edit them.

**Related Topics**

- Considerations for Managing Flexfields
- How can I access predefined flexfields

**Considerations for Planning Descriptive Flexfields**

Once you have identified a flexfield to configure, plan the configuration in advance. Compile a list of the UI pages and other artifacts in your deployment that are affected by the configuration. Verify that you are provisioned with the roles needed to view and configure the flexfield. View the flexfield using the Highlight Flexfields command in the Administration menu while viewing the run time page where the flexfield appears. Plan how you will deploy the flexfield for test and production users. Review the tools and tasks available for managing flexfields for adding and editing flexfield segments.

Planning a descriptive flexfield can involve the following tasks:

1. Identify existing parameters.
2. Identify existing context values and whether the context value is derived.
3. Identify user-defined attributes and plan the descriptive flexfield segments, segment properties, and structure.
5. Plan initial values.
6. Plan attribute mapping to Oracle Business Intelligence objects.

**Identify Existing Descriptive Flexfield Parameters**

Some descriptive flexfields provide parameters that can be used to specify the initial value of a descriptive flexfield segment. The parameter is external reference data, such as a column value or a session variable. For example, if a flexfield has a user email parameter, you can configure the initial value for a customer email attribute to be derived from that parameter.

Review the list of available parameters in the **Derivation Value** field in the Create Segment page for a descriptive flexfield. If you decide to use one of the parameters to set an initial value, select that parameter from the **Derivation Value** drop-down list when you add the descriptive flexfield segment.
Evaluate Whether the Context Value Is Derived

The context value for a descriptive flexfield might have been preconfigured to be derived from an external reference. For example, if the context is Marriage Status, then the value might be derived from an attribute in the employee business object. When the context value is derived, you might need to take the derived values and their source into consideration in your plan.

To determine whether the context value is derived, access the Edit Descriptive Flexfield task to view the list of configured context values for the flexfield. The Derivation Value field in the Context Segment region displays a list of available parameters. If context values have been preconfigured, see Oracle Applications Cloud Help for product-specific information about the use of those values.

Plan the Segments, Segment Properties, and Structure

Identify the user-defined attributes you need for a business object to determine the segments of the descriptive flexfield. Determine the segment properties such as the prompt, display type, or initial value.

The structure of the descriptive flexfield is determined by its global, context, and context-sensitive segments. Plan a global segment that captures an attribute for every instance of the business object. Plan a context for segments that depend on a condition of situation applying to a particular instance of the business object. Plan context-sensitive segments to capture attributes that are relevant in the context.

There is only one context segment available for descriptive flexfields. If you have more than one group of user-defined attributes where you could use the context segment, you will have to pick one group over the others, based on your company’s needs and priorities, and add the other user-defined attributes as global segments.

Plan Validation Rules

Define each segment’s validation rules and check if value sets exist for those rules or you must create new ones. If you must create a value set, you can create it either before configuring the flexfield or while creating or editing a segment.

When determining a segment’s validation rules, consider the following questions:

- What is the data type - character, date, date and time, or number?
- Does the segment require any validation beyond data type and maximum length?
- Should a character type value be restricted to digits, or are alphabetic characters allowed?
- Should alphabetic characters automatically be changed to uppercase?
- Should numeric values be zero-filled?
- How many digits can follow the radix separator of a numeric value? In base ten numeric systems, the radix separator is decimal point.
- Does the value need to fall within a range?
- Should the value be selected from a list of valid values? If so, consider the following questions:
  - Can you use an existing application table from which to obtain the list of valid values, or do you need to create a list?
  - If you are using an existing table, do you need to limit the list of values using a WHERE clause?
  - Does the list of valid values depend on the value in another flexfield segment?
  - Is the list of valid values a subset of another flexfield segment’s list of values?

Plan Initial Values

For every segment, list the constant value or SQL statement, if any, to use for the initial value of the user-defined attribute.
Plan How Segments Map to Oracle Business Intelligence Objects

You can extend descriptive flexfields into Oracle Transactional Business Intelligence (OTBI) for ad hoc reporting purposes. Determine the descriptive flexfield segments to be made available for reporting, and select the **BI Enabled** check box accordingly on the Manage Descriptive Flexfields page. You must run a process to extend the BI enabled segments into OTBI. For more information about extending the BI enabled segments into OTBI, see the Flexfields chapter in the Oracle Applications Cloud Creating and Administering Analytics and Reports guide.

Depending on the reporting needs, you may map similar context-sensitive attributes from different contexts to the same attribute in OTBI. For example, there may be a segment tracking the Product Color attribute in different contexts of a context sensitive descriptive flexfield. You can use segment labels to map these context-sensitive attributes together by defining a segment label and updating the BI Label list accordingly.

Related Topics

- Flexfield Segment Properties
- Default Segment Values
- Overview of Transactional Business Intelligence Configuration of Descriptive Flexfields

Considerations for Managing Descriptive Flexfields

Configuring descriptive flexfields involves managing the available flexfields registered with your Oracle Applications Cloud database and configuring their flexfield-level properties, defining and managing descriptive flexfield contexts, and configuring global and context-sensitive segments.

Every descriptive flexfield is registered to include a context segment, which you may choose to use or not.

In general, configuring descriptive flexfields involves:

1. Creating segment labels for business intelligence enabled flexfields.
2. Configuring global segments by providing identity information, the initial default value, and the display properties.
3. Configuring the context segment by specifying the prompt, whether the context segment should be displayed, and whether a value is required.
4. Configuring contexts by specifying a context code, description, and name for each context value, and adding its context-sensitive segments, each of which is configured to include identifying information, the column assignment, the initial default value, and the display properties.

The following aspects are important in understanding descriptive flexfield management:

- Segments
- Adding segments to highlighted descriptive flexfields
- Usages
- Parameters
- Delimiters
- Initial Values
- Business Intelligence
Segments
You can assign sequence order numbers to global segments and to context-sensitive segments in each context. Segment display is always in a fixed order. You can’t enter a number for a segment if that number is already in use for a different segment.

Value sets are optional for context segments and follow specific guidelines:

- The value set that you specify for a context segment consists of a set of context codes.
- Each context code corresponds to a context that’s appropriate for the descriptive flexfield.
- The value set must be independent or table-validated.
- If table-validated, the WHERE clause must not use the VALUESET.value_set_code or SEGMENT.segment_code bind variables.
- The value set must be of data type Character with the maximum length of values being stored no larger than the context’s column length.
- If you don’t specify a value set for a context segment, the valid values for that context segment are derived from the context codes. The definition of each context segment specifies the set of context-sensitive segments that can be presented when that context code is selected by the end user.
- For reasons of data integrity, you can’t delete an existing context. Instead, you can disable the associated context value in its own value set by setting its end date to a date in the past.
- You can configure the individual global segments and context-sensitive segments in a descriptive flexfield. These segment types are differentiated by their usage, but they’re configured on application pages that use most of the same properties.

Adding Segments to Highlighted Descriptive Flexfields
When you highlight flexfields on a run time page and use an Add Segment icon button to create a segment, the segment code, name, description, table column, and sequence number are set automatically. If you use an Add Segment icon button to configure descriptive flexfield segments, you can’t use an existing value set. Value sets are created automatically when you add the segments. You can enter the valid values, their descriptions, and the default value or specify the formatting constraints for the value set, such as minimum and maximum values.

Depending on display type, the value set you create using the Add Segment icon button is either an independent value set or a format-only value set. The following table shows which type of value set is created depending on the segment display component you select.

<table>
<thead>
<tr>
<th>Display Component</th>
<th>Value Set Created Using Add Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Box</td>
<td>Independent</td>
</tr>
<tr>
<td>Drop-down List</td>
<td>Independent</td>
</tr>
<tr>
<td>List of Values</td>
<td>Independent</td>
</tr>
<tr>
<td>Radio Button Group</td>
<td>Independent</td>
</tr>
<tr>
<td>Text Field With Search</td>
<td>Independent</td>
</tr>
<tr>
<td>Text box</td>
<td>Format Only</td>
</tr>
</tbody>
</table>
Oracle Project Portfolio Management Cloud
Implementing Project Financial Management and Grants Management

Chapter 4
Project Portfolio Management Common Reference Objects

<table>
<thead>
<tr>
<th>Display Component</th>
<th>Value Set Created Using Add Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text area</td>
<td>Format Only</td>
</tr>
<tr>
<td>Date/Time</td>
<td>Format Only</td>
</tr>
</tbody>
</table>

Tip: After you add a context value, refresh the page to see the new value.

Usages
Descriptive flexfield usages allow for the same definition to be applied to multiple entities or application tables, such as a USER table and a USER_HISTORY table. Descriptive flexfield tables define the placeholder entity where the flexfield segment values are stored once you have configured the descriptive flexfield. When you configure a flexfield, the configuration applies to all its usages.

Parameters
Some descriptive flexfields provide parameters, which are attributes of the same or related entity objects. Parameters are public arguments to a descriptive flexfield. Parameters provide outside values in descriptive flexfield validation. You use parameters to set the initial value or derivation value of an attribute from external reference data, such as a column value or a session variable, rather than from user input. Parameters can be referenced by the logic that derives the default segment value, and by table-validated value set WHERE clauses.

Delimiters
A segment delimiter or separator visually separates segment values when the flexfield is displayed as a string of concatenated segments.

Initial Values
The SQL statement defining an initial value must be a valid statement that returns only one row and a value of the correct type.

You can use two types of SQL statements:

- SQL statement with no binding. For example, select MIN(SALARY) from EMPLOYEES.
- SQL statement with bind variables. You can use the following bind variables in the WHERE clause of the SQL statement.
  - `{SEGMENT.<segment_code>`: Identifies a segment in the same context.
  - `{CONTEXT.<context_code>`;<SEGMENT.<segment_code>`}: Identifies a segment in a different context. The context must be in the same category or in an ancestor category, and it can't be a multiple-row context.
  - `{VALUESET.<value_set_code>`: Identifies the closest prior segment in the same context that’s assigned to the specified value set.
  - `{FLEXFIELD.<internal_code>`: Identifies a flexfield.

For more information about using bind variables, see the help for value sets.

Business Intelligence
Selecting a global, context, or context-sensitive segment’s BI Enabled check box specifies that the segment is available for use in Oracle Business Intelligence.
When the flexfield is imported into Oracle Business Intelligence, the label you selected from the BI Label drop-down list equalizes the segment with segments in other contexts, and maps the segment to the logical object represented by the label.

**Related Topics**
- Default Segment Values
- Flexfield Segment Properties
- Why can’t I edit my flexfield or value set configuration

### Considerations for Enabling Descriptive Flexfield Segments for Business Intelligence

A descriptive flexfield that is registered in the database as enabled for Oracle Business Intelligence (BI) includes a BI Enabled setting for each of its segments. When a global, context, or context-sensitive segment is BI-enabled, it is available for use in Oracle Business Intelligence.

The following aspects are important in understanding BI-enabled flexfield segments:
- Flattening business components to use BI-enabled segments in Oracle BI
- Equalizing segments to prevent duplication and complexity in the flattened component
- Mapping attributes of flattened business components to logical objects in Oracle BI
- Managing the labels that map segments to logical objects in Oracle BI

After you deploy a business intelligence-enabled flexfield, use the Import Oracle Fusion Data Extensions for Transactional Business Intelligence process to import the flexfield changes into the Oracle Business Intelligence repository. Users can make use of the newly-generated attributes in business intelligence applications. For example, a user can generate a report that includes attributes added by the descriptive flexfield. For additional information about logical objects and import, refer to the Oracle Transactional Business Intelligence Administrator’s Guide.

### Flattening

When you deploy a business intelligence-enabled descriptive flexfield, the deployment process generates an additional set of flattened Application Development Framework (ADF) business components in addition to the usual ADF business components and ADF faces run time artifacts that are generated during deployment. The flattened business components include attributes for business intelligence-enabled segments only. Flattening means each user-defined column in each context shows up as an attribute in an Oracle Business Intelligence folder.

Flattened components include one attribute for the BI-enabled context-segment, and one attribute for each business intelligence-enabled global segment. For BI-enabled context-sensitive segments, consider the following:
- If you assigned a label to the segment, the flattened components include an additional single attribute representing segments with that label.
- If you didn’t assign a label, the flattened components include a discrete attribute for each BI-enabled context-sensitive segment in each context.

### Mapping to Logical Objects in Business Intelligence

You can simplify reporting by representing similar segments as a single logical object in Business Intelligence.

If you assign a label to any set of context-sensitive segments that serve the same purpose in different contexts, you can consolidate or equalize the segments into a single attribute. This prevents duplication and the extra workload and complexity.
that result from the flattening process. For example, a United States context might have a Passport segment and a Canada context might have Visa segment. If you assign the NationalID segment label to both the Passport and Visa segments, they are equalized into the same NationalID attribute in the flattened business component.

Non-labeled context-sensitive segments aren’t equalized across context values, so the flattened components include a separate attribute for each context-sensitive segment for each context value. It may not be possible to equalize similarly labeled segments if they have incompatible data types or value set types.

Assign a label to a global segment, context segment, or context-sensitive segment to map the corresponding attribute in the flattened components to a logical object in Oracle Business Intelligence. Using labels to map segments to BI logical objects minimizes the steps for importing the flexfield into Oracle Business Intelligence.

**Note:** Assigning a label to a context-sensitive segment serves to equalize the attribute across contexts, as well as map the equalized attribute to business intelligence.

**Managing Labels**

You may assign a predefined label (if available) to segments or create new labels for assignment, as needed. Specify a code, name, and description to identify each label. In the BI Object Name field, enter the name of the logical object in Oracle Business Intelligence to which the segment label should map during import. Specifying the BI logical object minimizes the steps for importing the flexfield into Oracle Business Intelligence and helps to equalize context-sensitive segments across contexts.

If no labels are assigned to a BI-enabled segment, or the BI Object Name on the assigned label doesn’t exist in business intelligence, you must manually map the segment to the desired logical object when importing into Oracle Business Intelligence.

In addition, context-sensitive segments without labels cannot be equalized across context values. The flattened components include a separate attribute for each non-labeled context-sensitive segment in each context.

**Importing to Oracle Business Intelligence Repository**

After you deploy a business intelligence-enabled flexfield, import the flexfield changes into the Oracle Business Intelligence repository to make use of the newly flattened business components in business intelligence and then propagate the flexfield object changes. When you import the metadata into the Oracle Business Intelligence repository, you must do so as the FUSION_APPS_BI_APPID user.

To import flexfield changes into the Oracle Business Intelligence repository in Oracle Cloud implementations, run the Import Oracle Fusion Data Extensions for Transactional Business Intelligence process. For additional information about import, refer to the Oracle Transactional Business Intelligence Administrator’s Guide.

**Note:** When you import a flexfield into the Oracle Business Intelligence repository, you see both `<name>` and `<name>_c` attributes for each segment, along with some other optional attributes. The `<name>` attribute contains the value. The `<name>_c` attribute contains the code of the value set that the value comes from, and is used for linking to the value dimension. You must import both attributes.

**Related Topics**

- Considerations for Enabling Key Flexfield Segments for Business Intelligence
FAQs for Descriptive Flexfields

Can I display the context segment in the project Cost Collection flexfield?
No. The context segment is predetermined for each page. Displaying it and changing the value may result in capture of data that is not applicable for the current transaction.

Messages in Project Financial Management

Messages

Messages provide users with information about business or application errors or warnings. Typically, messages inform the users about the following:

- Missing or incorrect data
- Status of an application, page, or a business object
- Status of an ongoing process
- Result of a user action

Besides notifying users about the problem, messages provide guidance to users on taking corrective action. Messages also warn users about the consequences of a certain action.

Oracle provides a set of predefined messages that are stored in a message dictionary. You can create additional messages or modify the existing ones using the Manage Messages task in the Setup and Maintenance work area.

⚠️ **Note:** Don’t delete predefined messages unless you’re sure that they aren’t used anywhere.

Message Dictionary

The message dictionary stores messages that the application requires at run time. Messages are predefined for specific applications and modules, but a few are common messages that can be used in any application or module.

When you create messages, use the message text and the following components to cover additional details addressing users and help desk personnel:

- User Details: A detailed explanation of the message short text meant for users.
- Administrator Details: Details of the identified problem meant for the help desk personnel. The end users don’t see this text.
- Cause: An end-user version of the cause of error.
- User Action: Instructions to users for addressing the identified problem. Where there is no guidance for end users, they must approach the help desk.
- Administrator Action: Corrective action that help desk personnel must take to correct the problem. This information isn’t available to the end users.
Message Types

All messages must be associated with a message type. You can select the message type based on the message severity.

The available message types are:

- Error
- Warning
- Information
- UI String

Error Messages

Use the Error message to inform users about, for example, entering incorrect data or performing actions that trigger validation. Error messages also inform users how to correct the situation so that they can continue with their task.

For example: You cannot specify a task without specifying the project.

Error messages also tell users about any serious problem with the application or process, and when they must seek assistance from the help desk. Some error messages trigger incidents or logs and have a mechanism to notify the help desk automatically.

Warning Messages

Use the Warning message type to inform users about an application condition or a situation that might require their decision before they can continue.

Warning messages:

- Describe the reason for the warning and potential consequence of the selected or intended user action.
- Can be either a question or a statement.

For example: You delete the primary user. Do you want to continue?

The message is usually followed by Yes and No buttons.

Information Messages

The Information message type tells users about changes in the application, a page, or a business object. These messages aren’t triggered by users, and they don’t have to take any immediate action in response.

For example: No events have been started or processed for this employee.

Use the Information message type to communicate information that is neither an error nor a warning.

UI String Messages

Use the UI string message type to store shorter messages such as UI prompts, titles, or translated text, in the message dictionary.
Message Groups

You can group messages by severity to internally define logging and classifying incident policies. You can group by category based on the functionality or program.

Category and severity values don’t appear in logging entries, incidents, or on the UI.

⚠️ Note: The values in both options are predefined lookups but you can modify them. However, the maximum size of this field is 30 characters.

To group the messages, in the Setup and Maintenance work area, use the Manage Messages task.

Group by Category

Use this option to group messages that relate to one functionality, such as a scheduled process, together into one category. Select one of the predefined categories to enable automatic incident creation when the error message activates. By default, the following categories are available:

- **Product**: Issues related to product functionality, setup, and maintenance. Such messages are typically intended for functional administrators or product super users.
- **System**: Issues concerning the application, database, technology stack, and so on. Such messages are typically intended for technical users such as application administrators or database administrators.
- **Security**: Issues concerning permissions, access, compliance, passwords, and so on. Such messages are typically intended for security administrators.

Group by Severity

This grouping attribute is very specific and indicates the severity of the message. You must set the severity to High to enable automatic incident creation for the message. The following are predefined values, but you can add more if required.

- **High**: Used for serious messages that completely stop the progress of an important business process or affect a large user community, and require help desk’s attention. Use this option to enable implicit incident creation for the message.
- **Medium**: Used for less severe and more isolated messages.
- **Low**: Used when you can’t determine whether the message has a negative impact on end users or business processes.

Logging and Incidents

Select the Logging Enabled check box to include the UI message in the stored log file. To enable automatic incident creation when the error message appears on the UI, set the severity to High.

Incidents collect information about the application errors for which users may require assistance from help desk. An incident contains information about the state of the application at the time the problem occurred. Help desk can use the information in the incidents to resolve the problems.

Related Topics

- What’s an incident
- Run Diagnostic Tests
Create and Edit Messages

You can create messages or edit the predefined messages stored in the message dictionary.

Creating a Message

To create a message, perform the following steps:

1. In the Setup and Maintenance work area, go to the Manage Messages task.
2. On the Manage Messages page, click the New icon.
3. On the Create Message page, enter details in each section.
4. In the Message Properties section:
   a. Enter a unique message name that helps you find the messages you create and avoid name conflicts with predefined messages. Use underscore as a separator if the name contains multiple parts.
   b. Select the application and module to associate the message with.
   c. Enter a unique number that can be used as an identifier for the message. Users can quote this number when they contact the help desk for assistance.
   
      **Note:** You can use any number between 10,000,000 and 10,999,999. This number range is allocated for the messages you create. At runtime, this number appears along with the application code after the message text, for example FND-2774.
   
   d. In the Translation Notes field, enter a description of the message indicating its use.
   e. Select the relevant message type, category, and severity.
   f. Select the Logging Enabled check box to create incidents or logs when messages appear on the UI.
5. In the Message Text section:
   a. In the Short Text field, provide the actual message text that appears on the page at runtime.
      The short text can include tokens that are placeholders for displaying dynamic values at runtime. However, to support easy translation, keep the message length (including values of tokens) within 160 characters in American English.
   b. In the User Details field, enter information for the users to know why the message appeared. You can also include information for the users to resolve the issue themselves.
      If your Short Text component has tokens that expand the text beyond the 160-character limit, move that portion of text here.
   c. In the Administrator Details field, provide a detailed technical explanation of the message. This field is only visible to the help desk.
   d. In the Cause field, provide a concise explanation of why the message appears. This text is visible to the users.
      This information is optional and is only applicable to messages of type Error and Warning. However, if you mention the cause, you must mention in the User Action field the action that users must take.
   e. In the User Action field, enter the user action to guide the users with steps to respond to the message and complete the task.
6. In the Message Tokens section, define tokens that you want to use in this message.
7. Click **Save and Close**.

### Editing a Message

You can edit a predefined message or a message that you created.

To edit a message, search for a message on the Manage Messages page and perform the following steps:

1. Select the existing message and click the **Edit** icon.
2. On the Edit Message page, modify the existing details according to the instructions provided in the Creating a Message procedure.

**Note:** Don’t edit the message number for predefined messages.

3. Click **Save and Close**.

While creating and editing messages, you can translate the message details to the preferred languages without changing the language session of the application. To specify the translations in all the enabled language rows, use the Translation Editor option. Once the updates are made, users can view the translated text for the specific details.

**Related Topics**
- Enter or Edit Translated Text

### Use of Tokens in Messages

Certain messages must display variable information at run time to help users clearly relate to the actual data and perform the required action. You can use tokens to contain variable values at run time, instead of writing a unique message for every possible situation.

Tokens are programmatic parts of message text that are placed within curly brackets when creating the message. Tokens serve as placeholders for the actual data. At run time, tokens dynamically display the actual text or value in the message, making a message specific to the situation. For example, the message "Enter an effective date that is the same as or later than \{MATURITY_DATE\}" contains the token \{MATURITY_DATE\}. At run time, instead of the token, the represented value (the actual date) appears. Thus, users see the message "Enter an effective date that is the same as or later than 25-APR-2015".

Use the Manage Messages task in the Setup and Maintenance work area to create and manage tokens. You must edit a message to define tokens for it. You can create tokens for a message and also delete them. However, you can't edit or delete the predefined tokens.

**Token Definition**

To define a token, you must provide the following information:

- A unique name for the token.
- The type of data that the token replaces at run time. Available types are Date, Number, or Text.
- A description about what the token represents at run time.

**Guidelines**

Follow these general guidelines while defining tokens:

- Use curly brackets and all uppercase letters for the token names.
• Use underscore as a separator for a name containing two words or more.
• Don’t use a space between words.

The following table contains specific guidelines for each token data type.

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text</td>
<td>Use tokens for substituting any variable text element that qualifies as a noun.</td>
</tr>
<tr>
<td>Number</td>
<td>Plan carefully while using tokens for numbers especially, where a token could refer to either a singular or a plural number. You can use tokens for numbers representing an order, customer, or any other business object bearing a numeric value.</td>
</tr>
<tr>
<td>Date</td>
<td>Clearly define the context of the date, such as the start date, or end date, or a date range.</td>
</tr>
</tbody>
</table>

Common Messages

Message names that begin with FND_CMN are common messages. Each common message can appear in multiple places in any product family across Oracle Applications Cloud. For example, the FND_CMN_NEW_SRCH message can be used for any search to indicate that no results were found. Common messages of type error or warning are part of the message dictionary.

Creating and Editing Common Messages

You can create common messages for use in multiple places. However, ensure that you follow the predefined naming convention and numbering series associated with the application or module.

⚠️ Note: Don’t use FND_CMN as the prefix for the messages you create because all the predefined common messages begin with it.

Common messages can be used in any application. Therefore, consider the ramifications if you edit any aspect of the message, including incident and logging settings. Changes would be reflected in all instances where the message is used. For example, if you change the message text, ensure that the text is generic and applies to the entire site of Oracle Applications Cloud implementation.

FAQs for Messages in Project Financial Management

How can I make message components visible only to specific users?

Use the Manage Administrator Profile Values task to determine the visibility of the message components. For the Message Mode profile option, set the profile value to either User or Administrator. Based on the set value, the administrator or user actions and details appear for the intended audience.

However, the message components are visible to the audience based on their predefined access rights. Anyone having a user level access can’t view the Administrator message components. If you set the profile value to the administrators of a specific product, the message components are visible only to that specific audience.
Note: If you don’t set any value to the profile option, the visibility of the message component is determined by the default profile option settings.

Related Topics

- Set Profile Option Values

Attachment Categories

Attachments

You can use attachments to provide supplementary information to specific business objects. Attachments can be URLs, desktop files, text, or repository folders. For a business object you may view, create, delete, or edit attachments, depending on your role and granted privileges. For more information on attachments, see the Oracle Fusion Applications Developer’s Guide.

Repository

Attachments are stored in a content management repository provided by Oracle WebCenter Content Server. Users managing attachments can’t interact with the repository unless the repository mode is enabled. When enabled, users can share attachments among objects, update attachments, and perform other tasks. Access to the attachment files is controlled by a digital signing mechanism.

Security

Data security applicable to a specific business object also applies to its attachments. For example, if a user has no access to a specific expense report, then that user can’t access its attachments. You can also use attachment categories to control access and actions on attachments, based on roles associated with that category. For more information on securing attachments, see the Oracle Fusion Applications Developer’s Guide.

Attachment Entities

An attachment entity is usually a database entity, for example a table or view, that represents a business object with which attachments can be associated. Each attachment UI must be defined with a corresponding attachment entity. Attachment entities are used only in the context of attachments and exist separately from the database entities that they’re based on.

In the Setup and Maintenance work area, use the Manage Attachment Entities task to edit and create attachment entities. You can either use the predefined attachment entities with attachment UIs or create entities, for example when developing your own UIs.

The entity name should match the name of the table or view that represents the business object used for attachment. The name is also used in the repository folder that is automatically created to store attachments for the entity.

The data security policies associated with the database resource defined for the attachment entity apply to attachments for that entity. However, the security setting must be enabled for that entity. The database resource value must match the value in the OBJ_NAME column in the FND_OBJECTS table for the business object that the entity represents.
How Attachment Entities and Attachment Categories Work Together

The association between attachment entities and categories determines the use of categories for an entity. For example, categories associated with the expense report attachment entity are available in the attachment UIs for expense reports. You can configure the associations when managing either entities or categories. Between the Manage Attachment Entities and Manage Attachment Categories pages, any change in association on one page automatically reflects on the other page. You can open either page by starting in the Setup and Maintenance work area and searching for the attachment tasks.

Managing Entities

On the Manage Attachment Entities page, you determine which attachment categories are relevant to a particular entity. Each entity must have at least one category. For a particular expense report page with attachments functionality, you can specify which category to use for the attachment. Accordingly, the data security defined for each category is applied to the attachments on that page if security is enabled.

Managing Categories

If you create an attachment category and must assign it to multiple attachment entities, use the Manage Attachment Categories page. The association is the same as that on the Manage Attachment Entities page.

Attachments Troubleshooting

Attachments UIs are very user-friendly and easy to work with. You may encounter issues in certain cases such as you modify the attachments, for example create additional attachment categories, or implement data security on them.

Issue: Can't View, Add, Update, or Delete Attachments

You may encounter the following issues when trying to view attachments or perform actions such as adding attachments.

- You can no longer see specific attachments that were earlier visible.
- You can no longer update or delete attachments.
- You get an error stating that you don't have permission to add attachments.

Resolution

Use the Manage Attachment Entities page to ensure that attachment categories are associated to the relevant attachment entity. You might need to check with your system administrator or help desk to determine the exact entity used on the page with the expenses attachments or what categories to assign.

If data security is implemented on the categories for the attachment entity, verify that the Enable Security check box is selected in the Manage Attachment Entities page for that entity. Also, make sure that users have a role that has the necessary privileges. The following table lists the privileges required to view, add, update, or delete attachments with a specific attachment category.
<table>
<thead>
<tr>
<th>Action</th>
<th>Privilege</th>
</tr>
</thead>
<tbody>
<tr>
<td>View</td>
<td>Read Application Attachment (FND_READ_APPLICATION_ATTACHMENT_DATA)</td>
</tr>
<tr>
<td>Add or Update</td>
<td>Update Application Attachment (FND_UPDATE_APPLICATION_ATTACHMENT_DATA)</td>
</tr>
<tr>
<td>Delete</td>
<td>Delete Application Attachment (FND_DELETE_APPLICATION_ATTACHMENT_DATA)</td>
</tr>
</tbody>
</table>

For example, if users have the Read Application Attachment privilege for all categories associated with the expense report attachment entity, except the Receipts attachment category, then they can view all expense report attachments except those created with the Receipts category. Likewise, if users don’t have the Update Application Attachment privilege for any attachment categories tied to the expense report attachment entity, then they can’t create any attachments for the expense reports.

For more information on attachment category data security, see the Oracle Fusion Applications Developer’s Guide.

Certain attachments UI have predefined restrictions for users on categories. Your developers can also introduce additional filters to determine which document categories are available for a specific page. Check with your developers or help desk.

**Issue: Missing Attachment Category**

You can view existing attachments but the attachments no longer have an attachment category associated with them.

**Resolution**

When the attachment was added, at least one category existed for the corresponding attachment entity. Since then, the entity was edited so that it no longer has any assigned categories, so the user can’t see the category associated with that attachment.

Use the Manage Attachment Entities page to reassign attachment categories to the relevant attachment entity. For example, if users can no longer see the Receipts attachment category for an attachment to an expense report, then search for the expense report attachment entity and assign to it the Receipts category. You may need to check with your system administrator or help desk to determine the exact entity used on the page with the expenses attachments or any additional categories to assign.

Certain attachments UI have predefined restrictions for users on categories. Your developers can also introduce additional filters to determine which document categories are available for a specific page. Check with your developers or help desk.

**FAQs for Attachment Categories**

**What’s an attachment category?**

You must use an attachment category to classify and secure an attachment. While adding attachments, you can view the available attachment categories and add the attachment to one of them. For example, attachments for an expense report can be categorized as receipts, scanned invoice images, and so on.

In the Setup and Maintenance work area, use the **Manage Attachment Categories** task. You can associate roles with categories to restrict user access and actions for an attachment entity. You can also create and manage categories for your own purpose, involving specific attachments with specific security requirements. For more information on attachment category data security, see the Oracle Fusion Applications Developer’s Guide.
Related Topics

- Modules in Application Taxonomy
Chapter 5

Project Foundation Configuration: Overview

Overview of Define Project Foundation Configuration

In the Define Project Foundation Configuration activity, you configure foundation components for creating and maintaining projects in Project Financial Management.

Setup tasks in the Define Project Foundation Configuration activity are grouped into the following task lists and tasks:

<table>
<thead>
<tr>
<th>Task List</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define Project Foundation Common Reference Objects</td>
<td>Review and manage common objects, for example value sets and messages, that are used by Project Financial Management.</td>
</tr>
<tr>
<td>Define Project Calendars and Periods</td>
<td>Manage calendars, accounting period statuses, and project accounting period statuses used for costing, budgeting, forecasting, billing, and project performance reporting.</td>
</tr>
<tr>
<td>Define Types and Categorizations</td>
<td>Manage various classifications used to describe and group projects, tasks, and transactions.</td>
</tr>
<tr>
<td>Manage Oracle Social Network Objects for Project Foundation</td>
<td>Enable the display of information in Oracle Social Network about changes to Project Financial Management business objects, and select which attributes to include for each object.</td>
</tr>
<tr>
<td>Enable Automated Project Spaces</td>
<td>Specify whether to create or maintain project spaces automatically.</td>
</tr>
<tr>
<td>Define Project Roles</td>
<td>Define project roles and the business rules that control how the roles are assigned.</td>
</tr>
<tr>
<td>Define Project Resources</td>
<td>Define job mapping, attributes, and rate schedules for project resources.</td>
</tr>
<tr>
<td>Define Rate Schedules and Costing Rules</td>
<td>Define rate schedules and costing rules used for costing, billing, work planning, and financial planning purposes.</td>
</tr>
<tr>
<td>Define Project Resource Breakdown Structures</td>
<td>Define resource breakdown structures used for project planning, billing, and reporting.</td>
</tr>
<tr>
<td>Define Burdening</td>
<td>Configure options used to calculate, group, and apply indirect costs to project expenditure items to report and account the total cost of a project.</td>
</tr>
<tr>
<td>Manage Project Types</td>
<td>Create classifications for projects and configure basic options that are inherited by each project associated with that project type.</td>
</tr>
<tr>
<td>Define Action Controls</td>
<td>Define source products and configure action controls to determine which actions cannot be performed in Project Financial Management on data imported from a particular third-party source.</td>
</tr>
<tr>
<td>Distribute and Install Desktop Integrator Client</td>
<td>Distribute and install the software needed to integrate Excel with costing, budgeting, and forecasting.</td>
</tr>
</tbody>
</table>
Options to Maintain Accounting Periods and Project Accounting Periods

During business unit implementation you determine whether to maintain common accounting and project accounting periods, or define project accounting periods that have a different frequency than the accounting periods.

Accounting periods are used by Project Financial Management applications to assign accounting periods and dates to transactions. Accounting periods are maintained by ledger and use the same calendar as the general ledger periods. Project accounting periods are used by Project Financial Management applications for project planning, costing, billing, budgeting, forecasting, and performance reporting. Project accounting periods are maintained by business unit and typically do not use the same calendar as the accounting and general ledger periods.

Maintaining Common Accounting and Project Accounting Periods

If you want to report project information with the same frequency as the accounting periods, you can use the accounting period as both the accounting and project accounting period.

When you maintain common accounting and project accounting periods, period maintenance is simplified, calendar periods are not copied to Project Financial Management applications, and period information is maintained in one physical location. Use Oracle Fusion General Ledger to maintain accounting period statuses and run the processes to open and close accounting periods.
Defining Project Accounting Periods that are Different from Accounting Periods

If you want to account for project transactions and report project information more frequently than the accounting periods allow, you can define project accounting periods that are shorter than the accounting periods. The following graphic explains how you can define weekly project accounting periods and monthly accounting periods.

To ensure that the information in the graphic is accessible the following tables are provided.

The following table provides an example of a monthly accounting period.

<table>
<thead>
<tr>
<th>Accounting Period</th>
<th>Period Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct-11</td>
<td>10</td>
</tr>
<tr>
<td>Sep-11</td>
<td>9</td>
</tr>
<tr>
<td>Aug-11</td>
<td>8</td>
</tr>
<tr>
<td>Jul-11</td>
<td>7</td>
</tr>
<tr>
<td>Jun-11</td>
<td>6</td>
</tr>
<tr>
<td>May-11</td>
<td>5</td>
</tr>
<tr>
<td>Apr-11</td>
<td>4</td>
</tr>
<tr>
<td>Mar-11</td>
<td>3</td>
</tr>
<tr>
<td>Feb-11</td>
<td>2</td>
</tr>
<tr>
<td>Jan-11</td>
<td>1</td>
</tr>
<tr>
<td>Dec-10</td>
<td>12</td>
</tr>
<tr>
<td>Nov-10</td>
<td>11</td>
</tr>
<tr>
<td>Oct-10</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Accounting Period</th>
<th>Period Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct-W4-11</td>
<td>42</td>
</tr>
<tr>
<td>Oct-W3-11</td>
<td>41</td>
</tr>
<tr>
<td>Oct-W2-11</td>
<td>40</td>
</tr>
<tr>
<td>Oct-W1-11</td>
<td>39</td>
</tr>
<tr>
<td>Sep-W4-11</td>
<td>38</td>
</tr>
<tr>
<td>Sep-W3-11</td>
<td>37</td>
</tr>
<tr>
<td>Sep-W2-11</td>
<td>36</td>
</tr>
<tr>
<td>Sep-W1-11</td>
<td>35</td>
</tr>
<tr>
<td>Aug-W4-11</td>
<td>34</td>
</tr>
<tr>
<td>Aug-W3-11</td>
<td>33</td>
</tr>
<tr>
<td>Aug-W2-11</td>
<td>32</td>
</tr>
<tr>
<td>Aug-W1-11</td>
<td>31</td>
</tr>
<tr>
<td>Jul-W4-11</td>
<td>30</td>
</tr>
</tbody>
</table>
### Project Foundation Configuration: Project Calendars and Periods

**Accounting Period** | **Period Number**
--- | ---
Mar-11 | 3
Feb-11 | 2
Jan-11 | 1
Dec-10 | 12
Nov-10 | 11
Oct-10 | 10

The following table provides an example of a weekly accounting period.

<table>
<thead>
<tr>
<th>Project Accounting Period</th>
<th>Period Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct-W4-11</td>
<td>42</td>
</tr>
<tr>
<td>Oct-W3-11</td>
<td>41</td>
</tr>
<tr>
<td>Oct-W2-11</td>
<td>40</td>
</tr>
<tr>
<td>Oct-W1-11</td>
<td>39</td>
</tr>
<tr>
<td>Sept-W4-11</td>
<td>38</td>
</tr>
<tr>
<td>Sept-W3-11</td>
<td>37</td>
</tr>
<tr>
<td>Sept-W2-11</td>
<td>36</td>
</tr>
<tr>
<td>Sept-W1-11</td>
<td>35</td>
</tr>
<tr>
<td>Aug-W4-11</td>
<td>34</td>
</tr>
<tr>
<td>Aug-W3-11</td>
<td>33</td>
</tr>
<tr>
<td>Aug-W2-11</td>
<td>32</td>
</tr>
<tr>
<td>Aug-W1-11</td>
<td>31</td>
</tr>
</tbody>
</table>

Use Oracle Fusion General Ledger to maintain accounting period statuses and run the processes to open and close accounting periods, and Project Financial Management applications to maintain project accounting period statuses and run the processes to open and close project accounting periods.
Related Topics

- How can I set up project accounting periods that are different from accounting periods
- How can I set up common accounting and project accounting periods

FAQs for Project Calendars and Periods

What's the difference between a project accounting period, an accounting period, and a general ledger period?

Project accounting periods are used to track budgets and forecasts, summarize project amounts for reporting, and track the project status. Project accounting periods are maintained by the business unit. You can set up project accounting periods to track project periods on a more frequent basis than accounting periods. For example, you can define weekly project accounting periods and monthly accounting periods. If you use the same calendar as your accounting periods, the project accounting periods and accounting periods will be the same, although the statuses are maintained independently.

Accounting periods, which are used to derive accounting dates, are maintained by the ledger and use the same calendar as the general ledger periods. Period statuses for the accounting period and general ledger period are maintained independently.

You can select an option on the business unit definition to maintain common accounting and project accounting periods. This option allows the accounting period to be used as the project accounting period and you maintain only one period status.

How can I set up project accounting periods that are different from accounting periods?

Complete these tasks to set up project accounting periods that are different from accounting periods.

- Set up the accounting calendar and manage the accounting period statuses in Oracle Fusion General Ledger.
- During project business unit implementation, specify the project accounting calendar for each business unit.
  - Verify that the option to maintain common accounting and project accounting periods is not selected.
- Copy the accounting calendar into the project accounting period table, which copies the period start and end dates.
- Manage the period statuses for project accounting periods.

How can I set up common accounting and project accounting periods?

Complete the following steps:

1. Set up the general ledger accounting calendar and accounting periods.
2. During project business unit implementation, select the accounting calendar as the project accounting calendar, then select the option to maintain common accounting and project accounting periods.
Can I change a project accounting period date range?

No. You can’t change a project accounting period date range if the following conditions exist:

- The period exists in the project accounting period table.
- The period exists as an accounting period that is associated with a project accounting period.
- The period exists in project summarization tables.

What happens if I close an accounting or project accounting period permanently?

You can’t enter any transactions in the period you have closed and you can adjust transactions in subsequent periods.
Revenue Categories

Example of Revenue Categories

Your implementation team creates revenue categories to group expenditure types and event types for revenue recognition. A revenue category describes a source of your organization’s revenue.

Revenue Categories for Labor and Other Transactions

The following table illustrates possible revenue categories your implementation team can define for labor and other types of revenue.

<table>
<thead>
<tr>
<th>Revenue Category Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee</td>
<td>Fee Earned</td>
</tr>
<tr>
<td>Labor</td>
<td>Labor Revenue</td>
</tr>
<tr>
<td>Other</td>
<td>Nonlabor Revenue</td>
</tr>
<tr>
<td>Payment</td>
<td>Payment</td>
</tr>
</tbody>
</table>

FAQs for Revenue Categories

What’s a revenue category?

Source of revenue for an organization. Revenue categories group expenditure types and event types for revenue and invoices. Also used to define accounting rules.

Expenditure Categories and Types

Example of Expenditure Classifications

Expenditures are divided into expenditure categories and revenue categories. Within these groups, expenditures are further classified by expenditure type classes, expenditure types, and nonlabor resources.
Expenditure Classifications

This following graphic shows examples of expenditure classifications. Each expenditure type consists of an expenditure category, a unit of measure and one or more expenditure type classes.

Following are the expenditure categories, units of measure, and expenditure type classes for each expenditure type shown in the diagram.

- Administrative
  - Expenditure Category: Labor
  - Unit of Measure: Hours
  - Expenditure Type Class: Straight Time

- Clerical
  - Expenditure Category: Labor
  - Unit of Measure: Hours

- Consulting
  - Expenditure Category: Labor
  - Unit of Measure: Hours
  - Expenditure Type Classes: Supplier Invoices, Expense Reports, Usages

- Outside Services
  - Expenditure Category: Labor
  - Unit of Measure: Hours
  - Expenditure Type Classes: Supplier Invoices, Expense Reports

- Product Development
  - Expenditure Category: Labor
  - Unit of Measure: Hours
  - Expenditure Type Classes: Supplier Invoices, Expense Reports
Expenditure Type Classes

An expenditure type class tells Oracle Fusion Projects how to process an expenditure item. Oracle Fusion Projects predefines all expenditure type classes, which include the following:

- Straight Time
- Overtime
- Burden Transaction
- Expense Reports
- Inventory
- Miscellaneous Transaction
- Supplier Invoices
- Usages
- Work-in-Process

Expenditure Type Classes for Labor Costs

Oracle Fusion Projects uses the following expenditure type classes to process labor costs.

- Straight Time: Labor costs calculated using a base cost rate multiplied by hours.
- Overtime: Labor costs calculated using a premium cost rate multiplied by hours.

Expenditure Type Classes for Nonlabor Projects

Oracle Fusion Projects uses the following expenditure type classes to process nonlabor projects.

- Burden Transaction: Burden transactions track burden costs that are calculated in an external system or calculated by Oracle Fusion Projects as separate, summarized transactions. These costs are created as a separate expenditure item that has a burdened cost amount, and a quantity and raw cost value of zero. You can adjust burden transactions that are not system-generated.
- Expense Reports: Expense reports imported from Oracle Fusion Payables or an external system. Expense reports that you import into Oracle Fusion Projects must be fully accounted prior to import.
- Inventory: Inventory transactions imported from Oracle Fusion Inventory or an external system.
- Miscellaneous Transaction: Used to track miscellaneous project costs. Following are examples of miscellaneous transactions:
  - Fixed assets depreciation
  - Allocations
  - Interest charges
- Supplier Invoices: Supplier invoices, discounts, and payments from Oracle Fusion Payables or an external system, and receipt accruals from Oracle Fusion Cost Management.
- Usages: You must specify the nonlabor resource for every usage item that you charge to a project. For each expenditure type classified by a Usages expenditure type class, you also define nonlabor resources and organizations that own each nonlabor resource.
- Work-in-Process: Used when you import work-in-process transactions from third-party applications or Oracle Fusion Project Costing using Microsoft Excel or web services, or enter work-in-process transactions directly into Oracle Fusion Projects.

Considerations for Expenditure Type Class of Allocation Transactions

When defining an allocation rule, you must specify the expenditure type class for the allocation transaction attributes. Choosing the expenditure type class determines how the allocated amount is created as costs on the expenditure item.

Miscellaneous Transactions

The miscellaneous transaction expenditure type class is used to allocate the source amount as raw cost on the expenditure item.

Burden Transactions

The burden transactions expenditure type class is used to allocate the source amount as the burden cost for the expenditure item, while expenditure item quantity and raw cost remain zero.

Related Topics

- Allocation Methods: Critical Choices
- Allocation Basis Methods: Critical Choices
- Project Cost Allocations: How They’re Processed

Expenditure Types

An expenditure type is a classification of cost that you assign to each expenditure item that you enter in Oracle Projects. Create expenditure types for processing requirements, such as calculating raw costs, to classify costs, and to plan, budget, forecast, and report on projects.

Following are examples of other ways that you can use expenditure types:

- Assign an expenditure type to each burden cost code when capturing burden costs on separate, summarized expenditure items. The assigned expenditure type becomes the expenditure type for that type of burden cost.
• Specify default expenditure types for each resource class for different project units. The application uses the default expenditure type for planning purposes. For example, when determining the raw and burdened cost rates for a planning resource, if the resource format doesn’t contain an expenditure type or nonlabor resource, then the application uses the default expenditure type for the resource class of the resource to determine the rates.

• Labor cost multipliers are used to calculate costs for overtime expenditure items. Associate a labor cost multiplier to an expenditure type with the Overtime expenditure type class. The costing process multiplies the standard labor cost rate by the multiplier and the hours to calculate the cost for overtime expenditure items.

• Assign an expenditure type with the Usages expenditure type class to each nonlabor resource to define nonlabor resources that are used to record usage transactions.

Expenditure types contain the following attributes.

• Expenditure and revenue categories
• Unit of measure
• Rate required
• Proceeds of sale
• Expenditure type classes
• Assigned sets
• Tax classification codes

If you create and save an expenditure type, you can’t subsequently update the following attributes for the expenditure type.

• Expenditure and revenue categories
• Unit of measure
• Rate required option

Instead, you must enter an end date for the expenditure type and create a new one. The end date for an expenditure type has no effect on existing transactions. Oracle Fusion Projects uses the old expenditure type to report on and process existing transactions.

Expenditure and Revenue Category
Expenditure categories group expenditure types for costing. Revenue categories group expenditure types for revenue and billing.

Unit of Measure
The expenditure type unit of measure is used as the default value on costing or planning transactions.

For inventory transactions, the primary unit of measure is from the inventory item, and not from the expenditure type on the transaction.

You must use Hours as the unit of measure for labor expenditure types.
Rate Required Option
Enable the Rate Required option for an expenditure type that requires a cost rate.

Note: For supplier invoice expenditure types, if you specify that a rate is required, Oracle Fusion Projects requires you to enter a quantity in Oracle Fusion Payables for invoice distributions using that expenditure type. When you interface the invoice distribution to Oracle Fusion Projects, the application copies the quantity and amount to the expenditure item and calculates the rate. If you define a supplier invoice expenditure type with the Rate Required option disabled, then the quantity of the expenditure item is set to the amount you enter in Oracle Fusion Payables.

Proceeds of Sale Option
Enable the Proceeds of Sale option for expenditure types that are used to track the proceeds of sale for a capital project.

Expenditure Type Classes
Expenditure type classes specify how an expenditure item is processed. For example, if you assign the Straight Time expenditure type class to an expenditure type, Oracle Fusion Projects uses labor cost schedules to calculate the cost of an expenditure item with that expenditure type and expenditure type class.

You can assign multiple expenditure type classes to an expenditure type. For example, an expenditure with the expenditure type Materials can have the expenditure type class Supplier Invoice if it originated in Oracle Fusion Payables, and the expenditure type class Inventory if it originated in Oracle Fusion Inventory. This lets you use a single expenditure type to classify as many costs as you need. You can use the same expenditure type for expenditures with different origins, and therefore different accounting, that should otherwise be grouped together for costing, budgeting, or summarization purposes.

Assigned Sets
You must assign at least one project transaction type set to each expenditure type. You can add and delete set assignments for an expenditure type at any time, except that you can't delete the last set assignment for an expenditure type.

Tax Classification Codes
You can optionally select a default tax classification code to use for customer invoice lines for an expenditure type and business unit.

FAQs for Expenditure Categories and Types

Can I update or delete an expenditure category?
You can update expenditure category names and descriptions at any time. You cannot delete an expenditure category if it is used in transaction controls, expenditure types, resource transaction attributes, or cost distribution organization overrides. You can, however, stop usage of an expenditure category by setting an end date for it.

Can I assign multiple expenditure type classes to an expenditure type?
Yes. For example, an expenditure with the expenditure type Materials can have the expenditure type class Supplier Invoice if it originated in Oracle Fusion Payables, and the expenditure type class Inventory if it originated in Oracle Fusion Inventory. This allows you to use a single expenditure type to classify as many costs as you need. You can use the same expenditure type for expenditures with different origins, and therefore different accounting, that should otherwise be grouped together for costing, budgeting, or summarization purposes.
Can I designate cost of removal and proceeds of sale amounts when processing retirement costs?
Yes. When capturing retirement costs in a capital project, enter proceeds of sale amounts using expenditure types specifically created for that purpose. Oracle Fusion Project Costing automatically classifies amounts for all other expenditure types associated with the retirement cost task as cost of removal.

Can I update or delete an expenditure type?
You can update expenditure type names, descriptions, and dates at any time. However, you can’t update the following attributes for the expenditure type: expenditure category, revenue category, unit of measure, rate required, and expenditure type class.
To update these attributes, you must set an end date for the expenditure type and create another expenditure type with a unique name.
You can’t delete an expenditure type and the associated expenditure type class. However, you can stop the usage of an expenditure type by setting an end date for it.

What’s an expenditure category?
Describes and groups organization costs. For example, an expenditure category named Labor refers to the cost of labor. An expenditure category named Supplier refers to the cost incurred on supplier invoices. You use expenditure categories for budgeting, transaction controls, when you define organization overrides, and in accounting rules and reporting.

Project Class Categories

Considerations for Setting Up Class Categories
You define project classifications to group projects. Project classifications include a class category and a class code. The category is a broad subject within which you can classify projects, such as Industry Sector. The code is a specific value of the category, such as Construction, Banking, or Health Care.

You specify the following options when setting up project classifications.

- Assign to all projects
- Assign to all project types
- Available as accounting source
- One class code per project
- Enter class codes percent
- Class codes
- Project types

Assign to All Projects
Enable this option if all projects must have a code assigned to this class category. Do not enable if this class category is optional.
Assign to All Project Types
Enable this option if you want this class category to be required for projects of all project types.

Available as Accounting Source
This option indicates if the class category is available as an accounting source so that Oracle Fusion Subledger Accounting can use the category to create mapping sets, account rules, journal line rules, and description rules.

Only one class category at a time is available as an accounting source in Oracle Fusion Subledger Accounting. To change the class category that Oracle Fusion Subledger Accounting uses, deactivate the old class category and create a new one with a different date range.

One Class Code Per Project
Specify whether you want to allow entry of only one class code with this class category for a project.

Note: Defining multiple class codes for one category for a project may affect reporting by class category. For example, defining multiple class codes may cause a code to be reported more than once.

Enter Class Codes Percent and Total Percent Must Equal 100
Enable this option if you want to associate percentages with the class codes associated with this category. When you have multiple classification codes associated with a single class category, you can report the relative values of your projects in terms of sales or a similar metric. When you enable this option, the application requires class code percentages for the category regardless of the project type.

Enable the Total Percent Must Equal 100 option if you want the application to require that the sum of all class code percentages to be 100% for the selected class category. You can clear this option at any time. After the class category is added to a project, you can't change the Enter Class Codes Percent option and you can't check the Total Percent Must Equal 100 check box.

Class Codes
You can define class codes for the category to create more specific groups of projects for reporting. Assign each class code to a reference data set so that only codes that are relevant to the project unit are available for the project.

Project Types
Associate project classifications with project types for the classification to be available for selection on projects with that project type. You can add classifications to a project type definition, and add project types to a class category definition.

Select the Assign to all projects option for a project type if you require all projects of the project type to be associated with the class category.

Related Topics
- Why do I specify a percentage for a class category and class code combination

Examples for Using Class Categories
Class categories and class codes enable you to classify projects. The following example illustrates how you can use project classifications.
Scenario

InFusion Corporation designs and implements heavy engineering projects for government and private customers. Because InFusion Corporation maintains a diverse portfolio of contracts, the ability to track sector and funding is very important to corporate management.

Therefore, the organization classifies projects by market sector and funding source. The following table describes the two class categories used.

<table>
<thead>
<tr>
<th>Class Category</th>
<th>Assign to All Projects</th>
<th>One Class Code per Project</th>
<th>Enter Percentage for Class Codes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Sector</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Market sector in which project work takes place. A single class code must be provided on the project for the class category.</td>
</tr>
<tr>
<td>Funding Source</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Source of funding for project. At least one class code must be provided on the project for the class category. Percentages must be provided to indicate contribution for each source.</td>
</tr>
</tbody>
</table>

The following table describes the class codes available for the categories specified in the previous table.

<table>
<thead>
<tr>
<th>Class Category</th>
<th>Class Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Source</td>
<td>Private</td>
<td>Project funded by private organizations</td>
</tr>
<tr>
<td>Funding Source</td>
<td>Federal</td>
<td>Project funded by the federal government</td>
</tr>
<tr>
<td>Funding Source</td>
<td>State or Local</td>
<td>Project funded by a state or local government</td>
</tr>
<tr>
<td>Funding Source</td>
<td>Foreign</td>
<td>Project funded by a foreign government</td>
</tr>
<tr>
<td>Market Sector</td>
<td>Utilities</td>
<td>Project involves utility or power plant construction</td>
</tr>
<tr>
<td>Market Sector</td>
<td>Waste</td>
<td>Project involves waste disposal or recycling facility constructions</td>
</tr>
<tr>
<td>Market Sector</td>
<td>Mechanical</td>
<td>Project involves mechanical design and engineering work</td>
</tr>
</tbody>
</table>
InFusion management can easily assess projects based on the class categories and codes listed in the previous table.

For example, you specify a class category Funding Source on your project. With this category, you select two class codes: Private and Federal. If you assign 30 percent to Private and 70 percent to Federal, then you indicate the proportion of funding received for your project from the two sources.

On the other hand, because you must select a single market sector, you indicate whether project work involves utilities, waste, mechanical, or structural activities.

### Work Types

#### Work Types for Billing

A work type represents a classification of work. You use work types to classify both actual and scheduled work. The billable status of a work type assigned to a scheduled assignment determines the default billable status of scheduled work.

In billing, you can use work types to classify work for the following purposes:

- To determine the default billable status of expenditure items.
- To classify cross-charge amounts into cost and revenue for cross-charge transactions.

#### Billable Project Work

The default billable status of scheduled work is determined by the billable status of the work type assigned to the scheduled assignments. You can also control the billable status of actual work by the work type assigned to actual transactions. If you choose to do this, then you must change the work type on an actual transaction to change the billable status of the transaction. It is recommended that you do this in order to maintain consistency between processing of actual transactions for customer billing and reporting for billable utilization.

**Tip:** To use work types to determine whether an expenditure item is billable you must set the profile option Work Type Derived for Expenditure Item to Yes.

#### Cross-Charge Work

Cross-charge work is project work performed by resources from one organization on a project belonging to another organization.

Typically the project-owning organization provides some compensation to the resource organization for this cross-charge work. The compensation can be in the form of sharing revenue with the resource organization or taking on the cost from the resource organization. This allows each organization to be measured on its performance independent of one another. You can classify the transfer price amount type of cross-charge work into cost or revenue based on the work type assigned to project work: scheduled or actual.
FAQs for Work Types

What’s a work type?
A classification of actual work. For example, a professional services enterprise may define work types such as Analysis, Design, and External Training. Use work types to determine whether expenditure items are billable and to classify cross-charge amounts into cost and revenue.

When you create or import expenditure items, the default work type is inherited from the associated task. Tasks, in turn, inherit work type values from parent tasks and ultimately from the project. Project types determine the default work type value for projects and project templates.

Project Statuses

How Project Status Components Work Together

Use project statuses to track the project as it flows through the project lifecycle. The project application administrator can define additional statuses to meet business needs using the Manage Project Statuses task. Define additional features for a project status like workflow approvals, next allowable statuses, status controls, and progress statuses through the Manage Project Statuses task. The following project statuses are available for the execution and financial management of the project:

- Draft
- Submitted
- Active
- Rejected
- Pending Close
- Closed

The default project statuses while creating the project are:

- For financial projects, the status entered in the project template if using template for project creation.
- For nonfinancial projects, the status entered in the setup implementation options.

Note: When you enable a nonfinancial project for financial management, the application doesn’t change the status of the project.

The progress status type specifies overall progress of a project, task, or resource. Progress statuses are used for reporting and don’t control what you can do with a project. The following are the predefined progress statuses:

- On track
- At risk
- In trouble
**Status Attributes**

Each status is associated with a status type and a system status. Optionally you can specify status attributes for initial project status and workflow.

- **Status Type**: Types are Project or Progress.
- **System Status**: Predefined system statuses that the application uses for internal processing. Every status must map to a predefined system status.
- **Initial Project Status**: Controls whether you can select the status as an initial status on a project template. Initial project status doesn’t apply to progress statuses.
- **Workflow Attributes**: An approval workflow enables you to separate project creation from project approval. Workflow attributes don’t apply to progress statuses.

Project status approval workflow includes these attributes:

- **Status After Change Accepted**: The status assigned after approving a project status change.
- **Status After Change Rejected**: The status assigned after rejecting a project status change.

The project status after rejecting the workflow can be the same as the current status.

**Status Controls**

Status Controls determine the actions allowed for a project in a given project status. By default, a project in an Active application status allows all actions. Status controls don’t apply to progress statuses.

Status Controls control the following actions:

- Adjust transactions
- Capitalize assets
- Capitalized interest
- Create burden transactions
- Create new transactions
- Summarize project data
- Updating task progress by Project Team Members

**Next Allowable Statuses**

Next allowable statuses specify which statuses you can use as the new status when you manually change a system status. All is the default next allowable status, which you can change. Next allowable statuses don’t apply to progress statuses.

Defining the next allowable statuses determines the project process flow. For example, you can specify that a project with a Requested status can have the status changed to either Active or Rejected. This example shows two possible process flows for the project: Requested to Active status, or Requested to Rejected status.

The following four options are available when you specify the next allowable statuses:

- **All**: The current status can change to any status. All is the default value.
- **None**: The current status can’t change.
- **System Status**: System statuses control the next allowable statuses. Specify which system statuses are next allowable statuses.
• **Status Name**: Project statuses control the next allowable statuses. Specify which project statuses are next allowable statuses.

### Project Status Change Workflow

Project application administrators can enable workflow for a project status. When the approval workflow begins, on change of the project status, the application sends notifications to all the participants configured to receive notifications. The default workflow process sends a request for approval of the project status change to the primary project manager. For nonfinancial projects, if you define the EPS owner then, the workflow notification is sent to the EPS owner. You can also update the project status using REST and SOAP services and the application initiates the status change workflow. Workflow attributes don’t apply to progress statuses.

Use the Manage Project Roles task in the Setup and Maintenance work area to configure the project roles and individual participants that receive project status creation and withdrawal notifications. Such notifications can include various descriptive flexfields.

When the project administrator or project manager:

- Creates or changes a project status and submits them for approval, the application sends notifications to all the participants that are configured to receive notifications.

- Withdraws the notifications or the workflow results in errors, the application reverts the status of the project to the previous status.

If you previously used workflow for the status changes for financially-enabled projects and you want to extend the workflow to nonfinancial projects, then first review and update the workflow configuration as needed.
The following graphic shows the process of changing a project status.

**Project Status Change Workflow Settings**

During implementation, you specify the project statuses that require approval before a project changes to that status.

For each project status with workflow enabled, you can also specify the following parameters:

- The status the application assigns to the project after accepting a project status change.
- The status the application assigns to the project after rejecting a project status change.

For example, assume that during implementation, you enable workflow for the Submitted status, and configure the following workflow attributes:

- In the **Status After Change Accepted** field for the Submitted project status, you specify the Active status as the status that the application assigns to the project when the status change is accepted.
- In the **Status After Change Rejected** field for the Submitted project status, you specify the Rejected status as the status that the application assigns to the project when the status change is rejected.

In this example, when a requester changes the project status to Submitted, the workflow process routes the status change request to the project manager’s worklist. If the project manager accepts the status change, the workflow process assigns the Active status to the project. If the project manager rejects the status change, the workflow process assigns the Rejected status to the project.

The following graphic shows an example project status flow when using the Project Status Change workflow for status changes during the lifecycle of a project. In this example, a requester changes the project status to Submitted. The workflow process...
sends a notification to the project manager, who accepts the status change. The workflow changes the project status to Active after you accept a request to change the status to Submitted. After project completion, the requester changes the project status to Pending Close. The workflow sends a notification to the project manager, who accepts the status change. The workflow changes the project status to Close after you accept a request to change the status to Pending Close.

<table>
<thead>
<tr>
<th>System Status</th>
<th>Manual Changes</th>
<th>Workflow Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unapproved</td>
<td>Requester Changes Status to Submitted</td>
<td>Workflow Changes Status to Approved</td>
</tr>
<tr>
<td>Submitted</td>
<td>Requester Changes Status to Pending Close</td>
<td>Workflow Changes Status to Closed</td>
</tr>
<tr>
<td>Approved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pending Close</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Related Topics**

- Use Your Worklist to Manage Workflow Tasks
Project Foundation Configuration: Types and Categorizations
8 Project Foundation Configuration: Project Roles

Project Roles in Budgeting and Forecasting

Default project roles, including project application administrator, project manager, and project administrator can perform specific budgeting and forecasting tasks.

Default Access for Roles

The following table describes the default access for each role.

<table>
<thead>
<tr>
<th>Privilege Area</th>
<th>Project Application Administrator</th>
<th>Project Manager</th>
<th>Project Administrator</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit budget and forecast</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Project application administrators set planning options for financial plan types.</td>
</tr>
<tr>
<td>planning options</td>
<td></td>
<td></td>
<td></td>
<td>Project managers and accountants can view planning options at the version level.</td>
</tr>
<tr>
<td>Create versions</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>None</td>
</tr>
<tr>
<td>Generate versions</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Applies to budgets generated when setting a baseline for the project plan.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Project administrators can't generate forecasts from progress (they don't have access to publish progress.)</td>
</tr>
<tr>
<td>Edit versions in Excel</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>None</td>
</tr>
<tr>
<td>Submit versions</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>None</td>
</tr>
<tr>
<td>Approve versions</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>A team member with project manager security role access must be manually designated as the project manager for the project.</td>
</tr>
</tbody>
</table>
FAQs for Project Roles

What's a project role?

Project roles represent either a requirement or an assignment on a project, such as a project manager or project team member.

You associate an job or abstract role with each project role. When you assign a project role to a project team member, the associated job or abstract role determines the type of access the team member has to project information. For example, project managers can manage project progress or create budgets and forecasts. Project team members may only have access to view progress or financial plans.

When you create a project role, you assign it to one or more reference data sets so that only project roles that are relevant to the project unit are available to assign to project team members.

Persons who are directly assigned job or abstract roles such as Project Manager or Project Application Administrator may have access to certain project information even if they aren’t project team members or don’t have a specific project role assignment.

What's the difference between a job title and a project role?

A job title represents the function of a person within an organization and the position within a reporting hierarchy. For example, your organization may have designations or job titles such as software developer, sales representative, or accounts manager.

Project roles represent either a requirement or an assignment on a particular project, for example, project manager. Project roles may differ from project to project.
9 Project Foundation Configuration: Project Resources

Resource Classes

How to Use Resource Formats and Resource Classes to Create Planning Resources

The resources you can create for planning and billing resource breakdown structures are determined by a combination of predefined resource classes and the resource format hierarchies you select for use.

Resource Formats and Resource Format Hierarchies

Before creating planning or billing resources, you must select the resource formats and resource format hierarchies you want to use on your resource breakdown structure. For example, if you want to plan for project-related expenses such as air fare, then you must select resource format hierarchies created using the resource type Expenditure Type.

Also, as resource format hierarchies support up to three levels, selecting from the available hierarchies enables you to determine the granularity with which resources are created.

For example, for planning resource breakdown structures used for high-level or preliminary planning, you may decide to enable only the Resource Class resource format. You can then create and use planning resources representing the four resource classes: Labor, Equipment, Material Items, and Financial Resources.

To plan in greater detail, you may decide to use a two-level resource format hierarchy, such as Resource Class: Job or a three-level hierarchy such as Resource Class: Job: Named Person. You can then create a resource such as Labor: Electrical Engineer or Labor: Electrical Engineer: Chris Black.

Selecting more granular resource formats automatically selects resource formats higher up within the same hierarchy.

Related Topics

Resource Classes

Resource classes influence the creation of planning and billing resources in the following ways:

- Resource class as a resource format: As mentioned earlier, Resource Class is a resource type that is available for use within resource format hierarchies on planning and billing resource breakdown structures.

- Predefined association with resource formats: For each resource format, you can create planning or billing resources based on certain resource classes. For example, if the resource format contains Job, then the only available resource class is Labor. However, if the resource format is Expenditure Category, then you can select any of the resource classes (Labor, Material, Equipment, and Financial Resources) when you create a resource.

Related Topics

- Resource Formats
Resource Classes

Resource classes are predefined classification of resources. For each resource class, you can define specific attributes that associated planning resources inherit.

Following is a description of the available resource classes and their attributes.

Available Resource Classes

The following table lists the resource classes available in Oracle Fusion Applications.

<table>
<thead>
<tr>
<th>Resource Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>Named persons or any grouping of named persons whose time capacity is consumed to complete project work. Named persons may be grouped by attributes such as job, organization, or role.</td>
</tr>
<tr>
<td>Equipment</td>
<td>Nonperson resource such as machinery, equipment, or facilities with time capacity that is consumed to complete project work. Examples include telecommunication charges (charged by call), or shared facilities or laboratory (charged for hours used).</td>
</tr>
<tr>
<td>Material items</td>
<td>Resources that are physically tracked as inventory, subassembly, work in progress (WIP), purchasable items, or finished goods.</td>
</tr>
<tr>
<td>Financial resources</td>
<td>Resources that have a financial value for the project. These resources use Currency as the unit of measure.</td>
</tr>
</tbody>
</table>

Resource Class Attributes

The following table lists the attributes that you can define for each resource class.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spread curve</td>
<td>Determines how planned amounts for a planning resource are spread across the duration of the project or financial plan. You can change the spread curve that you select for a resource class at the planning resource level and for any corresponding task assignments, or budget or forecast lines.</td>
</tr>
<tr>
<td>Item master and category set</td>
<td>Determine the material item and item category lists used in planned transactions and planning, billing, and reporting resource breakdown structures.</td>
</tr>
<tr>
<td>Expenditure types</td>
<td>Determine default raw and burdened rates for a planning resource. For example, if the resource format does not contain an expenditure type or nonlabor resource, then the application uses the default expenditure type for the resource class of the resource to determine the rates. You must individually specify expenditure types for project units.</td>
</tr>
</tbody>
</table>
Resource Class Rate Schedules

Create rate schedules for resource classes that you can use for project and financial planning. When creating resource class rate schedules, you can specify both rates and markup percentages for each combination of resource class and organization.

⚠️ Note: Markup percentage takes precedence for amount-based transactions where the unit of measure is Currency.

You specify a resource class rate schedule in the planning options for a financial or project plan type, project plan, or financial plan version as the source for rates or markup percentages, unless they are available elsewhere. For example, assume you are using actual rates on your financial plan version. If one of the planning resources is an expenditure category, then resource class rate schedules are used to derive rates for that resource because actual rates are not maintained for expenditure categories.

Job Mappings

Job Mapping

Job mapping enables you to associate granular human resource jobs to less-detailed project jobs that you can use for project management.

Job titles usually reflect human resource characteristics and can vary across countries or units, even within the same enterprise. For example, you may have a project manager in the United States and a chef de project in France. However, when managing projects, especially global ones, you may want to use the same job definitions for all resources rather than unique jobs that are defined by each resource-owning organization. These common, or global, jobs ease the maintenance of costing rates and processes.

Following is a description of job mapping and a brief example.

Mapping Jobs

You map jobs from two job sets through an intermediate job set. Map jobs in your human resource jobs sets to jobs from an intermediate set of jobs. You then map the jobs in the intermediate job set to jobs in your project job sets.

For each combination of From Job Set, Intermediate Job Set, and To Job Set, you manually associate the intermediate job to the to job only once. For subsequent mappings, the to job is displayed automatically when you select the intermediate job and cannot be modified.

⚠️ Note: If you remove a from job from the mapping, you must save before it can be used again for further mapping.

For example, and as illustrated in the following graphic, assume you want to map jobs from Human Resources Job Set to Projects Job Set through an intermediate job set called Master Job Set. Within the Human Resources Job Set, you want to map jobs Construction Worker and Forklift Operator to a single job called Laborer in the Projects Job set.
You first select Construction Worker as the from job, Master Laborer as the intermediate job, and Laborer as the to job. The intermediate job Master Laborer and the to job Laborer are now linked. Next, when you select Forklift Operator as the from job and Master Laborer as the intermediate job, Laborer is displayed automatically as the to job.

After you map the jobs, you can use the single job Laborer for project management purposes.

Create Job Mapping

You can use job mapping to associate granular human resource jobs to less-detailed project jobs that you can use for project management. The following example illustrates how you map jobs from two job sets using an intermediate job set.

Scenario

Vision Corporation is a global enterprise with business units in the United States and France. The following table lists sample job titles in those two countries.

<table>
<thead>
<tr>
<th>Job Set</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States Job Set</td>
<td>Manager, Staff Consultant, Senior Consultant, Design Engineer, Electrical Engineer, Construction Worker</td>
</tr>
</tbody>
</table>
For project work, Vision Corporation uses the following generic job roles, created for the Global job set:

- Project Manager
- Consultant
- Architect
- Laborer

To map the global jobs to country-specific jobs, Vision Corporation created an intermediate job set, called the Master job set, with the following jobs:

- Master Project Manager
- Master Consultant
- Master Architect
- Master Laborer

Jobs are mapped as follows for the United States job set:

<table>
<thead>
<tr>
<th>Job in From Job Set</th>
<th>Job in Intermediate Job Set</th>
<th>Job in To Job Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager</td>
<td>Master Project Manager</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Staff Consultant</td>
<td>Master Consultant</td>
<td>Consultant</td>
</tr>
<tr>
<td>Senior Consultant</td>
<td>Master Consultant</td>
<td>Consultant</td>
</tr>
<tr>
<td>Design Engineer</td>
<td>Master Architect</td>
<td>Architect</td>
</tr>
<tr>
<td>Electrical Engineer</td>
<td>Master Architect</td>
<td>Architect</td>
</tr>
<tr>
<td>Construction Worker</td>
<td>Master Laborer</td>
<td>Laborer</td>
</tr>
</tbody>
</table>

Jobs are mapped as follows for the France job set:

<table>
<thead>
<tr>
<th>Job in From Job Set</th>
<th>Job in Intermediate Job Set</th>
<th>Job in To Job Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chef de Projet</td>
<td>Master Project Manager</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Ingenieur Formateur</td>
<td>Master Consultant</td>
<td>Consultant</td>
</tr>
</tbody>
</table>
Vision Corporation associates the Global job set to its planning resource breakdown structures. Therefore, jobs such as Project Manager and Laborer are available for creating planning resources. In addition, the Global job set is used to define rates that can be then used for costing, invoicing, and financial planning.

### FAQs for Job Mappings

**How can I map a human resource job to a project job?**

You map jobs from two job sets through an intermediate job set. Map jobs in your human resource jobs sets to jobs from an intermediate set of jobs. You then map the jobs in the intermediate job set to jobs in your project job sets.

For example, you can map the human resources jobs Construction Worker and Forklift Operator to a single projects job called Laborer through the intermediate job Master Laborer. After you have mapped your jobs, you can use the single job Laborer for your project management purposes.

**What's a job set?**

An organizational partition of jobs. Use job sets to define how you create jobs and use them in your business. Define a single set of jobs or separate job sets for each country or line of business.

For example, assume that the set of jobs your business uses for project management is less granular than the set of jobs for human resource. You can define generic jobs for your project job set and map it to the human resource job sets. Associating the project job set with planning, reporting, and billing resource breakdown structures ensures appropriate project reporting, costing, invoicing, and revenue generation.

### Nonlabor Resources

**How to Determine Nonlabor Cost Rates**

Project Financial Management applications use cost rates to calculate the raw cost for transactions. For example, for cost transactions, the application determines a cost rate for each transaction and calculates the raw cost during transaction costing, unless you import the raw cost for transactions.

**How Nonlabor Cost Rates Are Determined**

The application uses organization costing rules to determine the nonlabor cost rate schedule. Costing rules can be associated with an organization or with a combination of organization and business unit. If hierarchies are used, costing rules can be associated with organizations at any level of the expenditure organization hierarchy.

The application searches for a costing rule in the following order and stops when it finds a valid costing rule that includes the transaction date.

1. Project expenditure organization and business unit
2. Project expenditure organization
3. Parent organization and business unit
4. Parent organization

The application continues up the hierarchy looking at each parent organization and business unit. If an organization isn’t found after traversing the hierarchy, the costing rule associated with the business unit is used.

**Related Topics**
- Rate Schedule Types

### Turn Equipment into Nonlabor Resources

This example illustrates setting up assets as nonlabor resources.

**Scenario**

You are asked to set up nonlabor resources and assign them to the appropriate organizations for the Vision Corporation.

**Defining Nonlabor Resources**

Vision Corporation wants to capture costs for computer equipment, vehicles, survey equipment, and other assets.

In this example, assume that expenditure types and organizations are already set up, which are prerequisites of defining nonlabor resources.

The Other Assets expenditure type is assigned to all divisions. This nonlabor resource captures miscellaneous items.

**Analysis**

To define a nonlabor resource, you specify a name and description of each asset, such as a piece of equipment or pool of assets, and a date range during which the resource can be used.

For each nonlabor resource, you must choose an expenditure type with the **Usage** expenditure type class. Every usage item that you charge to a project must specify the nonlabor resource utilized and the nonlabor resource organization that owns the resource. You can select organizations that are classified as project and task owning organizations or project expenditure organizations.

A nonlabor resource may be a piece of equipment with capacity that is consumed, such as a training room, or equipment with physical output that is consumed, such as a copier. Enable the Equipment resource class to plan and report nonlabor resources as equipment with capacity that is consumed.

**Nonlabor Resource Details**

The following table shows the nonlabor resources for Vision Corporation.

<table>
<thead>
<tr>
<th>Resource Name</th>
<th>Description</th>
<th>Expenditure Type</th>
<th>Equipment Resource Class</th>
<th>From Date</th>
<th>Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop</td>
<td>Laptop on the Headquarters Network</td>
<td>Computer Services</td>
<td>Not enabled</td>
<td>January 1, 2011</td>
<td>Data Systems, Finance, Information Services, Risk Analysis</td>
</tr>
<tr>
<td>Resource Name</td>
<td>Description</td>
<td>Expenditure Type</td>
<td>Equipment Resource Class</td>
<td>From Date</td>
<td>Organizations</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------------------------------</td>
<td>------------------</td>
<td>---------------------------</td>
<td>------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>HQ SPARC T3-1 Server</td>
<td>Oracle SPARC Server</td>
<td>Computer Services</td>
<td>Not enabled</td>
<td>January 1, 2011</td>
<td>Information Services</td>
</tr>
<tr>
<td>Oracle Exadata Storage Server</td>
<td>Data Systems Oracle Storage Server</td>
<td>Computer Services</td>
<td>Not enabled</td>
<td>January 1, 2011</td>
<td>Data Systems</td>
</tr>
<tr>
<td>Oracle Developer Studio</td>
<td>Engineering and Services Oracle Development Platform</td>
<td>Computer Services</td>
<td>Not enabled</td>
<td>January 1, 2011</td>
<td>Vision Engineering, Vision Services</td>
</tr>
<tr>
<td>Survey</td>
<td>Standard Surveying Equipment</td>
<td>Field Equipment</td>
<td>Enabled</td>
<td>May 1, 2011</td>
<td>Vision Engineering</td>
</tr>
<tr>
<td>Van</td>
<td>Heavy Duty Van</td>
<td>Vehicle</td>
<td>Not enabled</td>
<td>January 1, 2011</td>
<td>Vision Construction, West, Midwest, East, South, International</td>
</tr>
<tr>
<td>Minivan</td>
<td>Site Visit Minivan</td>
<td>Vehicle</td>
<td>Not enabled</td>
<td>August 1, 2011</td>
<td>Vision Construction, West, Midwest, East, South, International</td>
</tr>
<tr>
<td>Pickup Truck</td>
<td>Heavy Duty Pickup Truck</td>
<td>Vehicle</td>
<td>Not enabled</td>
<td>January 1, 2011</td>
<td>West, Midwest, East</td>
</tr>
<tr>
<td>Other Asset</td>
<td>Other Asset</td>
<td>Other Assets</td>
<td>Not enabled</td>
<td>January 1, 2011</td>
<td>Administration, Vision Construction, Vision Engineering, Vision Services</td>
</tr>
</tbody>
</table>
FAQs for Nonlabor Resources

What's a nonlabor resource?
An asset or a pool of assets. For example, a nonlabor resource can be a piece of equipment with capacity that is consumed, such as training room, copier.

When you create a nonlabor resource, ensure that organizations and expenditure types exist. You can associate nonlabor resources with Usages expenditure type class only.

Note: To plan and report on equipment, enable the Equipment resource class and specify Hours as unit of measure for the expenditure type.

What's a nonlabor resource organization?
The organization to which a nonlabor resource is assigned. For example, Survey is a nonlabor resource, represents the survey equipment, is assigned to the Engineering organization or another nonlabor resource, PC, represents a pool of personal computers, and is assigned to multiple organizations such as Information Services, Finance, and Engineering.

You can assign nonlabor resources to any organization in the organization hierarchy, regardless of the Project Expenditure Organization classification and organization date range.

Every usage item that you charge to a project must specify the nonlabor resource utilized and the nonlabor resource organization to which the resource is assigned.
10 Project Foundation Configuration: Rate Schedules and Costing Rules

Rate Schedules

Rate Schedule Types

Schedule types determine usage for rates within rate schedules. You specify a schedule type for rate schedules created for costing, billing, or planning purposes in Project Financial Management applications.

The schedule types are:

- Job
- Person
- Nonlabor
- Resource class

Job

Job rate schedules contain rates used to calculate amounts for the following types of labor transactions:

- Costing
- Billing (invoice and revenue)
- Planning
- Budgeting
- Forecasting
- Transfer price

If you are using planning rates for financial or project planning, you can select a specific job rate schedule when configuring rate settings at the plan type or project level. Job rate schedules are used if rates cannot be derived from the person labor rate schedule.

When creating a job schedule type, you must select a job set from Oracle Fusion Human Capital Management. The job set is the source of jobs in your rate schedule. Assign rates or markup percentages to jobs in the rate schedule.

Person

Person schedules contain raw cost rates and billing rates or markup percentages for labor transactions and transfer price amounts. The rate that calculates the cost or billing amount for a project transaction is based on the standard hourly rate or markup percentage assigned to a person, or the job or organization assigned to the person in the schedule. The job or organization is based on the person’s assignment in Oracle Fusion Human Capital Management.

You have the option of assigning rates to the following:

- Person
- Person and job
- Person, job and organization
If you assign a rate to a person and job combination, that rate has precedence over the person rate. If you assign a rate to a person, job and organization combination, that rate has precedence over the person rate or person and job combination.

If you are using planning rates for financial or project planning, you can select a specific person rate schedule when configuring rate settings at the plan type or project level. Person rate schedules are used if rates can't be derived from the labor rate schedule.

**Nonlabor**

Nonlabor rate schedules contain rates or markup percentages that calculate cost, bill, revenue, plan, budget, forecast, or transfer price amounts for nonlabor resources.

Enter a rate or markup percentage for expenditure types with the Rate Required option enabled. Otherwise, assign it only a markup percentage. Assign rates to nonlabor resources and optionally define rates for nonlabor resource organizations.

If you are using planning rates for financial or project planning, you can select a specific nonlabor rate schedule when configuring rate settings at the plan type or project level.

**Resource Class**

Resource class schedules contain the planning rates or markup percentages for a resource class or a combination of resource class and organization. You optionally assign a resource class schedule to a project plan or financial plan (budgets and forecasts) at the plan type level or version level. The resource class rate schedule determines rates for the associated resources if the rates cannot be derived elsewhere.

Enter a rate or markup percentage for each resource class in the rate schedule. Optionally, assign the rate or markup percentage to a specific organization for a resource class.

**Related Topics**

- Considerations for Selecting Rate Schedules for Project and Financial Planning
- How Invoice and Revenue Rates Are Determined
- Job Mapping

**How Labor Cost Rates Are Calculated**

Cost rates determine the raw cost for expenditure items, unless you import the raw cost for your expenditures.

**Where Do Labor Cost Rates Come From**

If cost rate overrides exist for a person, job, or expenditure type at the project or task level, then the override rate applies for cost rate processing for each transaction.

Otherwise, the labor cost rule and rate schedules in the following order determine costing rules for transactions.

1. If a labor costing override exists for the employee on the expenditure item, then the override determines the cost rate. The effective dates for the labor costing overrides determines whether an override is active on the expenditure item. A labor costing override can have either an overriding cost rate or an overriding rate schedule.

   Labor expenditure items always have a unit of measure of Hours.

   For labor transactions, the application searches for a labor costing override in the following order.
   a. Person, job, and organization combination
b. Person and job combination  
c. Person  

2. If no override exists, the application uses organization costing rules to determine the nonlabor cost rate schedule. Costing rules can be associated with an organization or with a combination of organization and business unit. If you use hierarchies, you can associate costing rules with organizations at any level of the expenditure organization hierarchy.

The application searches for a costing rule in the following order and stops when it finds a valid costing rule that includes the transaction date.

a. Project expenditure organization and business unit  
b. Project expenditure organization  
c. Parent organization and business unit  
d. Parent organization

The application continues up the hierarchy looking at each parent organization and business unit. If an organization isn’t found after traversing the hierarchy, the costing rule associated with the business unit is used.

Project Financial Management applications apply the costing rule to determine the cost rate for the expenditure item. You can associate a cost rate schedule with an organization labor costing rule to determine the cost rate.

FAQs for Rate Schedules

Why can't I find persons in the list of resources when I enter team members, planning resources, or person rate schedules?

You can’t find persons in the list of resources when you enter team members, planning resources, or person rate schedules in the following situations:

- The administrator didn’t assign a department while creating users. Persons must have an active assignment and be assigned to a department in Oracle Fusion Human Capital Management before they can be added as team members or entered as resources on the planning resource breakdown structure or person rate schedule.
- The resource isn’t active in Oracle Fusion Human Capital Management because the current date is before the effective date of the resource. If you want to include persons who will start in the future, select the Include people with future-dated effective start dates option when you search for the person.
- Persons assigned as project managers aren’t active as of the project start date.
- The assignment of the person is terminated and an appropriate value isn’t set for the number of days to display people with terminated assignments. You can set the profile value appropriately at the site profile level using the Specify Number of Days to Display People with Terminated Assignments task in the Setup and Maintenance work area.

What’s the order of precedence for cost rate determination?

If cost rate overrides exist for a person, job, or expenditure type at the project or task level, then that rate applies for cost rate processing for each transaction.

Otherwise, the application uses the rates from labor costing rules or rate schedules.
Labor Costing Multipliers

Example of Creating Labor Costing Multipliers

Set up the labor costing multipliers using the Manage Labor Costing Multipliers task. The application uses the labor costing multiplier to calculate the overtime labor cost rate for an employee using the formula:

\[ \text{Labor Cost Rate} \times \text{Labor Costing Multiplier} = \text{Overtime Premium Labor Cost Rate} \]

The application then multiplies the overtime premium labor cost rate by the number of overtime hours that an employee works to calculate the overtime premium for the employee. This is represented by the following formula:

\[ \text{Overtime Premium Labor Cost Rate} \times \text{Overtime Hours} = \text{Overtime Premium} \]

Labor Costing Multipliers

You define a labor costing multiplier for each kind of overtime your business uses, such as double time or time and a half. For example, if you pay an employee double time for all overtime hours, you define a labor cost multiplier of 2.0. You multiply the employee's labor cost rate by 2.0 to calculate the employee's overtime premium labor cost rate. If you pay an employee time and a half for all overtime hours, you define a labor cost multiplier of 1.5 to calculate the employee's overtime premium labor cost rate. An employee’s total labor cost is the overtime premium plus the straight time cost. This is represented by the following formula:

\[ \text{Overtime Premium} + (\text{Straight Time Hours} \times \text{Labor Cost Rate}) = \text{Total Labor Cost} \]

The following table shows examples of labor cost multipliers for double time, time and a half, and uncompensated overtime.

<table>
<thead>
<tr>
<th>Labor Costing Multiplier Name</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Time</td>
<td>2.0</td>
</tr>
<tr>
<td>Time and a Half</td>
<td>1.5</td>
</tr>
<tr>
<td>Uncompensated Overtime</td>
<td>0</td>
</tr>
</tbody>
</table>

Labor Costing Rules
Labor Costing Rules

A labor costing rule determines how an employee is paid. Use the Manage Labor Costing Rules setup task to define labor costing rules. For example, you can define a labor costing rule for pay types such as exempt, nonexempt, uncompensated, compensated, and hourly.

When an employee charges time to a project, the application processes the labor hours according to the employee's labor costing rule. For example, if an employee's labor costing rule is Hourly, the employee is eligible for overtime pay. If the employee's labor costing rule is Exempt, the employee isn't eligible for overtime pay.

Following are the key components of a labor costing rule:

- Costing method
- Overtime labor costing multipliers

Costing Method

For labor costing rules with the Rates costing method, labor costs are calculated for entered hours using hourly cost rates.

Overtime Labor Costing Multipliers

If your employees enter overtime hours manually, you can assign cost multipliers to overtime expenditure types. When you use the Rates costing method, and a transaction is charged to an expenditure type that has an assigned multiplier, the application applies the multiplier as labor costs are calculated.

To calculate rates for overtime expenditure items, before you define labor costing rules, you must define an expenditure type with the Overtime expenditure type class.

Example of Defining Labor Costing Rules

This example illustrates setting up labor costing rules to calculate overtime labor costs.

Scenario

You're asked to set up labor costing rules to calculate overtime labor costs for nonexempt and hourly employees for the InFusion Corporation.

Overtime Costs

All overtime premium costs for nonexempt employees are charged to an indirect project. Hourly employees are required to enter overtime hours manually. All labor costs, including overtime premiums, are charged to the project and task indicated on the time card.

Analysis

For nonexempt employees, the expenditure types for overtime transactions are derived from the overtime labor cost multipliers that are assigned to the labor costing rule. For hourly employees, when time is charged to an overtime expenditure type, the application applies the costing multiplier assigned to the labor costing rule when labor costs are calculated.

Labor Costing Rule Details

The following table shows the labor costing rules for InFusion Corporation:
Implementing Project Financial Management and Grants Management

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Project Foundation Configuration: Rate Schedules and Costing Rules

<table>
<thead>
<tr>
<th>Labor Costing Rule</th>
<th>Costing Method</th>
<th>Project</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonexempt</td>
<td>Rates</td>
<td>Overtime</td>
<td>Time and a Half</td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

Hourly Rates

The following table shows the overtime labor cost multipliers that are associated with the labor costing rules:

<table>
<thead>
<tr>
<th>Labor Costing Rule</th>
<th>Expenditure Type</th>
<th>Labor Cost Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonexempt</td>
<td>Overtime</td>
<td>Time and a Half</td>
</tr>
<tr>
<td>Hourly</td>
<td>Overtime</td>
<td>Time and a Half</td>
</tr>
<tr>
<td>Hourly</td>
<td>Premium Overtime</td>
<td>Double Time</td>
</tr>
</tbody>
</table>

Labor Costing Overrides

Options for Setting Up Labor Costing Overrides

You can override the labor costing definition for individual employees and contingent workers for a business unit. The application uses a labor costing override to determine the labor rate for cost transactions, and to plan, budget, and forecast transactions when you use an actual plan type.

Following are the key implementation concepts for setting up labor costing overrides:

- Override for a Person, Job, and Organization
- People with Future-Dated and Terminated Assignments

Override for a Person, Job, and Organization

You specify the labor costing override for a person, or for a more granular override, specify a combination of person and job, or person, job, and organization.

The job and organization represent the human resources job and organization of the person. The jobs that you can select to associate with a labor costing override are based on the person value. The organizations that you can select are based on the job value. When you select a job, an organization is automatically selected by default. The default organization value is based on the selected job assignment. You can accept the default organization for the labor costing override, select a different organization that is associated with the job and person, or remove the organization so the labor costing override is for person and job combination.

In the example shown in the following table, a person is assigned the Nurse job in two different organizations. When you select Nurse to create a labor costing override, the application automatically selects the default organization General Hospital. You can accept the General Hospital default organization, or change the selection to the University Hospital organization, to create an override for the person, job, and organization combination. Alternatively, you can remove the organization value to create an override for the person, job, and any organization.
People with Future-Dated and Terminated Assignments

You can set up labor costing overrides for people with a start date in the future if you enable the People with Future Effective Start Dates as Project Members Allowed profile option. You can set up labor costing overrides for people with terminated assignments if you enable the Number of Days to Display People with Terminated Assignments profile option.

Labor Costing Business Unit Options

Overtime Calculation Components: How They Work Together

If you charge overtime costs to a project, you can record the cost premium that you pay for overtime. Your business can then recover overtime costs with higher bill rates or overhead rates. You can manually enter time card transactions to calculate overtime hours and charge them to a project.

Other components of overtime cost calculations are:

- Rates Costing Method
- Overtime Expenditure Types
- Labor Costing Multipliers
- Labor Costing Rules
- Overtime Projects and Tasks

Rates Costing Method

If you enter overtime hours manually, you can assign labor cost multipliers to overtime expenditure types. The rates costing method applies labor cost multipliers to transactions charged to an expenditure type assigned with labor cost multipliers. To calculate rates for overtime expenditure items, you must define first an expenditure type with the Overtime expenditure type class, then define labor costing rules.

When you charge overtime to the project on which overtime was worked, you can track all overtime costs on one expenditure item. The application uses the following formula to calculate the overtime premium cost:

\[
\text{overtime premium cost} = \text{overtime hours} \times \text{hourly cost rate} \times \text{labor cost multiplier}
\]

Overtime Expenditure Types

You must set up at least one overtime expenditure type that is classified by the Overtime expenditure type class. The following table lists examples of overtime premium expenditure types and the corresponding expenditure type class:
Labor Costing Multipliers

Labor costing multipliers are values by which labor cost rates are multiplied to calculate overtime premiums. You define a labor cost multiplier for each type of overtime your business uses, such as double time or time and a half.

For example, if you pay a person double time for all overtime hours, then define a labor cost multiplier of 2.0. The person’s labor cost rate is multiplied by 2.0 to calculate the person’s overtime premium labor cost rate. If you pay a person time and a half for all overtime hours, then define a labor cost multiplier of 1.5 to calculate the person’s overtime premium labor cost rate.

The following formulas calculate the overtime premium cost rate:

- The overtime premium labor cost rate equals the product of the labor cost rate and labor cost multiplier.
  \[ \text{Overtime premium labor cost rate} = \text{labor cost rate} \times \text{labor cost multiplier} \]

- The overtime premium cost equals the product of the overtime premium labor cost rate and overtime hours.
  \[ \text{Overtime premium cost} = \text{Overtime premium labor cost rate} \times \text{overtime hours} \]

- The total labor cost equals the sum of the overtime premium cost and the product of the straight time hours and labor cost rate.
  \[ \text{Total labor cost} = \text{Overtime premium cost} + (\text{straight time hours} \times \text{labor cost rate}) \]

The total labor cost of a person is calculated as shown below:

- The total labor cost equals the sum of the overtime premium cost and the product of the straight time hours and labor cost rate.
  \[ \text{Total labor cost} = \text{Overtime premium cost} + (\text{straight time hours} \times \text{labor cost rate}) \]

For example, assume that a person worked for the usual 8 hours and then 10 hours of overtime at a rate of time and a half. The labor cost multiplier is 1.5 and the person’s labor cost rate is $40.00 per hour. The total labor cost of the person is calculated as shown below:

\[ \$40.00 \times 1.5 = $60.00 \text{ per hour} = \text{Overtime premium labor cost rate} \]
\[ $60.00 \times 10 \text{ hours} = $600.00 = \text{Overtime premium cost} \]
\[ $600.00 + (8 \times $40) = $920 = \text{Total labor cost} \]

Labor Costing Rules

Labor costing rules associate overtime expenditure types with labor costing multipliers and determine how straight time and overtime costs are calculated. When a person charges time to a project, the application calculates the labor hours according to the person’s labor costing rule. You specify the default overtime project and overtime task in the labor costing rule to be used for the overtime expenditure items.
Overtime Projects and Tasks

You can define one project to hold all overtime costs, or you can define a separate project for each group or office in your company. For example, create an overtime project for each office. You then charge each employee’s overtime hours to the overtime project for the office.

For each overtime project, you must define a task for each type of overtime your business uses. Examples of task names are Time and Half, Double Time, and Uncompensated Overtime.

You must include the logic to charge the appropriate overtime project or task, when you are:

- Using more than one project to hold overtime costs
- Charging overtime hours to an overtime task

Organization Costing Rules

Organization Costing Rule Components

Use organization costing rules to assign labor costing rules, labor cost rate schedules, and nonlabor cost rate schedules, to business units or specific expenditure organizations. The schedule type on the organization costing rule determines if the application assigns a labor cost rate schedule or nonlabor cost rate schedule.

The following components work together to determine organization costing rules.

- Business unit and expenditure organization
- Schedule type
- Labor costing rule and cost rate schedule
- Default overtime transaction attributes

Business Unit and Expenditure Organization

If you use organization hierarchies, you can select a business unit for an organization costing rule. You can only select expenditure organizations that belong to the project expenditure organization hierarchy for the selected business unit. If you don’t select a business unit for an organization costing rule, you can select any expenditure organization that belongs to any project expenditure organization hierarchy.

You can assign an organization labor costing rule to an organization that isn’t classified as a project expenditure organization. In this case, the labor costing rule applies to all organizations that are below the specified organization in the project expenditure organization hierarchy. An exception to this rule is a labor costing rule that you assign directly to an organization at a lower level in the hierarchy.

For example, assume a hierarchy has three organizations: Organization 1, Organization 2, and Organization 3. Organization 1 is the parent of Organization 2. Organization 2 is the parent of Organization 3. Organization 3 is the only organization that is classified as a project expenditure organization. If you assign organization labor costing rules only to Organization 1 and Organization 2, the rule that you assign to Organization 2 takes precedence for Organization 3.

Schedule Type

Use the Labor schedule type to use labor cost rate schedules to calculate costs for labor transactions such as time cards. If you select a schedule type of Labor, you must enter a labor costing rule.
Use the Nonlabor schedule type to use nonlabor cost rate schedules to calculate costs for nonlabor transactions such as miscellaneous or usage transactions. If you select a schedule type of Nonlabor, you must enter a nonlabor cost rate schedule.

If you configured the plan type to use actual rates, the pricing engine also uses these rates for planning, budgeting, and forecasting transactions.

The application uses the organization if it’s part of the resource definition; otherwise, it uses the project owning organization. The project owning business unit is always the business unit in the planning flow.

**Labor Costing Rule and Cost Rate Schedule**

To calculate labor costs, you must assign a labor costing rule to each organization costing rule. You assign a labor costing rule to the organization costing rule. If the labor costing rule has a costing method of Rates, you must also assign a cost rate schedule that defines the hourly cost rates for employees in the selected organization.

The labor costing rules and cost rate schedules that you assign to an organization apply to all employees in the organization.
Planning and Billing Resource Breakdown Structures

How You Set Up Planning Resource Breakdown Structures

A planning resource breakdown structure is a list of resources available for planning, budgeting, and forecasting. Resources are a combination of up to three resource types, such as person and expenditure type. The resource types are organized into a hierarchy called a resource format.

Before you can set up resource breakdown structures, you must set up the following:

- Attributes, such as a spread curve, for each resource class:
  - Labor
  - Equipment
  - Material items
  - Financial resources
- Inventory items, including item categories and item cost, if applicable.
- Resource elements:
  - Event types
  - Expenditure categories,
  - Expenditure types
  - Jobs
  - Organizations
  - People
  - Revenue categories
  - Roles
  - Suppliers
Setting up planning resource breakdown structures is a three-step guided process. The following graphic illustrates the flow of planning resource breakdown structures as they’re created.

As shown in the graphic, the steps to set up planning resource breakdown structures include the following:

- Define planning resource breakdown structure details
- Select resource formats
- Add planning resources

The last two steps are shown in following graphic, which includes adding resource breakdown structures to a project or template and selecting the primary resource breakdown structure during project or template definition.
Resource Breakdown Structure Details
Planning resource breakdown structure details include the following attributes:

- Date range during which this planning resource breakdown structure is available to assign to projects
- Project unit
- Indicator that specifies whether resource changes are allowed at the project level

If you don't allow changes at the project level, then all projects share the same set of resources. You maintain resources centrally, and you can't selectively add new resources to individual projects. New resources must be added to the resource breakdown structure. When you add resources to the resource breakdown structure, they're immediately available to all projects.

If you allow resource changes at the project level, then the application copies resources to a project-specific version of the resource breakdown structure. You can then add resources to each project independently. However, when you add new resources to the central resource breakdown structure after the project-specific version is created, the new resources aren't automatically available to existing projects. You must add the resources separately to each project. The resource formats are shared across projects and can't be modified for an individual project.

Resource Formats
You select resource formats to add to the planning resource breakdown structure.

Planning resource breakdown structures can have resource formats with up to three hierarchical levels of resource types, as shown in the following example:

- Organization
  - Expenditure category
    - Named person

If you select a child resource format, the application automatically selects the parent. For example, if you select the resource format of organization-expenditure category-named person, the application automatically selects the organization-expenditure category format and expenditure category format.

The resource breakdown structure consists of one or more hierarchies of resource elements. An element is a resource type, such as an organization or job, or a combination of resource type and specified resource, such as the job of consultant or a person named Amy Marlin.
The following graphic shows examples of hierarchical levels of resource elements:

![Resource Breakdown Structure Diagram]

### Planning Resources

You can add planning resources to any level of the resource format. You’re not required to add resources to every level.

For example, assume that your resource breakdown structure has a resource format with three hierarchical levels. The top level is organization, the second level is expenditure category, and the third level is named person. You can add an organization resource to the first level, an organization and expenditure category resource to the second level, and an organization, expenditure category, and named person resource to the third level. Similarly, if you add a named person at the third level, the organization and expenditure category entered at the third level are automatically created as resources at the first and second level.

After you add planning resources to the resource breakdown structure, you can preview actual transaction associations to find out where actual transaction amounts would be mapped in the project plan, budget, or forecast.

You update the resource mappings for plans, budgets, and forecasts that use the planning resource breakdown structure. When you update the mappings, the process synchronizes the project performance reporting data with the planning resource breakdown structure.
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Project Foundation Configuration: Project Resource Breakdown Structures

Note: This update process is only required if the planning resource breakdown structure is changed after the project has been initiated and budget, forecast, or actual data has already been entered.

Primary Resource Breakdown Structure
You designate one planning resource breakdown structure as the primary structure on a project. The application uses the primary planning resource breakdown structure for project planning.

Related Topics
- Resource Classes
- How to Use Resource Formats and Resource Classes to Create Planning Resources

Billing Resource Breakdown Structures
Use a billing resource breakdown structure to manage billing controls.

You need only a single level billing resource breakdown structures to create billing controls.

Predefined Billing Resource Breakdown Structures
Oracle Fusion Projects provides the following two predefined billing resource breakdown structures:
- Control Billing: Provides a list of resources you can reference when creating billing controls on regular contracts.
- Control Intercompany Billing: Provides a list of resources you can reference when creating billing controls on intercompany and interproject contracts.

You can't create or delete these billing resource breakdown structures. You can edit the resource formats and specify the associated billing resources to meet the needs of your enterprise.

How to Use Resource Formats and Resource Classes to Create Planning Resources
The resources you can create for planning and billing resource breakdown structures are determined by a combination of predefined resource classes and the resource format hierarchies you select for use.

Resource Formats and Resource Format Hierarchies
Before creating planning or billing resources, you must select the resource formats and resource format hierarchies you want to use on your resource breakdown structure. For example, if you want to plan for project-related expenses such as air fare, then you must select resource format hierarchies created using the resource type Expenditure Type.

Also, as resource format hierarchies support up to three levels, selecting from the available hierarchies enables you to determine the granularity with which resources are created.

For example, for planning resource breakdown structures used for high-level or preliminary planning, you may decide to enable only the Resource Class resource format. You can then create and use planning resources representing the four resource classes: Labor, Equipment, Material Items, and Financial Resources.
To plan in greater detail, you may decide to use a two-level resource format hierarchy, such as Resource Class: Job or a three-level hierarchy such as Resource Class: Job: Named Person. You can then create a resource such as Labor: Electrical Engineer or Labor: Electrical Engineer: Chris Black.

Selecting more granular resource formats automatically selects resource formats higher up within the same hierarchy. For example, if you select the resource format Expenditure Type: Named Person: Job, then the resource formats Expenditure Type: Named Person and Expenditure Type are automatically selected for use.

**Resource Classes**

Resource classes influence the creation of planning and billing resources in the following ways:

- Resource class as a resource format: As mentioned earlier, Resource Class is a resource type that is available for use within resource format hierarchies on planning and billing resource breakdown structures.
- Predefined association with resource formats: For each resource format, you can create planning or billing resources based on certain resource classes. For example, if the resource format contains Job, then the only available resource class is Labor. However, if the resource format is Expenditure Category, then you can select any of the resource classes (Labor, Material, Equipment, and Financial Resources) when you create a resource.

**Related Topics**

- Resource Classes

**Resource Formats**

Resource formats are predefined resource types or hierarchies of resource types. You create resources for planning or billing resource breakdown structures based on resource formats.

Following is a description of resource types and resource format hierarchies.

**Resource Types**

Resource formats are created based on the following predefined resource types.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Named Person</td>
<td>Employee or a contingent worker who performs services for the deploying enterprise.</td>
</tr>
<tr>
<td>Event Type</td>
<td>Implementation-defined classification of events that determines the revenue and invoice effect of an event.</td>
</tr>
<tr>
<td>Expenditure Category</td>
<td>Implementation-defined grouping of expenditure types by type of cost.</td>
</tr>
<tr>
<td>Expenditure Type</td>
<td>Classification of cost assigned to each expenditure item. Expenditure types are grouped into cost groups (expenditure categories) and revenue groups (revenue categories).</td>
</tr>
<tr>
<td>Item Category</td>
<td>Categorization of inventory items that is used to track the aggregate consumption of material.</td>
</tr>
<tr>
<td>Inventory Item</td>
<td>An item that can be purchased or produced, and for which you can budget and track the costs associated with the consumption of the item.</td>
</tr>
</tbody>
</table>
**Resource Format Hierarchies**

Resource formats consist of one resource type or a hierarchy of up to three resource types. Before you add planning resources to a planning or billing resource breakdown structure, you must select the resource formats you want to use. For example, you can add the resource formats **Job**, **Job: Organization**, and **Job: Organization: Named Person** to your resource breakdown structure.

The resource formats and resource format hierarchy determine how planning amounts roll up and are displayed when you view financial and project plans by resource structure. Thus, each resource format hierarchy represents a separate structure. For example, the resource format hierarchies **Job: Expenditure Type: Organization** and **Organization: Expenditure Type: Job** are distinct.

**Related Topics**

- How to Use Resource Formats and Resource Classes to Create Planning Resources

**How Resource Mapping is Calculated**

The Update Mapping process matches actual costs and revenue to the latest, saved planning resources for project planning and forecasting. Summarized actual costs and revenue are recalculated for project performance reporting.

**Resource Mapping Considerations**

Consider these points when using the Update Mapping process:

- You can update resource mappings after you change resource formats or add resources, and save the resource breakdown structure.
- Baseline project plan values are not affected by the Update Mapping process.
- The Update Mapping process applies only if you do not allow resource changes at the project level.
Tip: If you allow resource changes at the project level, use the Update Actual Amounts action on the project plan to update the actual amounts for all tasks on the project plan. Use the process monitor to start the process to summarize project performance data for reporting.

- After running the Update Mapping process, regenerate forecast versions to reflect the new actual costs.

**How Resource Mapping Is Calculated**

You can track the cost impact of every resource that has been assigned to a project task and use the resource breakdown structure to view the breakdown of these costs. Oracle Fusion Projects associates the costs of the resources used for tasks with branches and levels in the resource breakdown structure. The process for determining the correct association is managed by rules of precedence.

Oracle Fusion Projects uses the following rules to associate cost amounts with resources:

- Select the lowest level in the resource breakdown structure to which a transaction can map.
  - If there is only one level to which the transaction maps, the cost amounts are mapped to that level.
  - If the transaction maps to more than one level, Oracle Fusion Projects sums the precedence numbers for all resource types in the branch, and gives precedence to the resource element in the branch with the lowest sum.
  - If more than one branch has the lowest precedence number at the lower level, the application uses the precedence number of the next level up.

- If the sum of precedence numbers is the same for more than one branch, precedence is given to the branch with the lowest number at the lowest level.
  - If one branch contains a user-defined resource type, precedence is given to the branch that does not contain a user-defined resource type.

Oracle Fusion Projects gives more precedence to a lower precedence number. For example, a resource element with a precedence number of 1 is given precedence over a resource element with a precedence number of 10.

Rules of precedence are listed in the following table.

<table>
<thead>
<tr>
<th>Resource Type</th>
<th>Precedence in Labor Resource Class</th>
<th>Precedence in Equipment Resource Class</th>
<th>Precedence in Material Items Resource Class</th>
<th>Precedence in Financial Resources Resource Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Named Person</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Project Nonlabor Resource</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Inventory Item</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Job</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Item Category</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Expenditure Type</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>
### Example of Resource Mapping Using Rules of Precedence

This example illustrates that precedence is given to the branch with the lowest number at the lowest level if the sum of precedence numbers is the same for more than one branch.

#### Table: Precedence in Resource Classes

<table>
<thead>
<tr>
<th>Resource Type</th>
<th>Precedence in Labor Resource Class</th>
<th>Precedence in Equipment Resource Class</th>
<th>Precedence in Material Items Resource Class</th>
<th>Precedence in Financial Resources Resource Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Type</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Expenditure Category</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Revenue Category</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Organization</td>
<td>13</td>
<td>13</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>System Person Type</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Supplier</td>
<td>15</td>
<td>15</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Resource Class</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

In this example, a time card transaction for a principle consultant who incurs travel expenses maps to two branches.

- The first branch consists of two levels (1-Person Type: Employee and 1.1-Job: Principle Consultant). The highest level has a precedence number of 14, and the lowest level has a precedence number of 6, for a sum of 20 for the branch.
The second branch also consists of two levels (2-Expenditure Category: Expenses and 2.1-Expenditure Type: Travel). The highest level has a precedence number of 11, and the lowest level has a precedence number of 9, for a sum of 20 for the branch.

The transaction cost amount is mapped to the Job: Principle Consultant resource element because it has the lowest number (6) at the lowest level.

**Reporting Resource Breakdown Structures**

**Reporting Resource Breakdown Structure Versions**

Use reporting resource breakdown structures to view the rolled-up data in Oracle Fusion Project Performance Reporting. The structure provides a method for viewing planned and actual cost and revenue for a project by resource, resource type, and other resource groupings.

**Versions**

Reporting resource breakdown structure versions provide a history of resource breakdown structures used for resource reporting.

When a resource breakdown structure is created, a working version is automatically created. You can have only one working version at a time. You can make changes to the working version until you are ready to freeze it.

Only a frozen version can be associated with a project. When you freeze one version, a new working version is created on which you can make further changes.

When you freeze a resource breakdown structure version, that version becomes the current reporting version the next time project performance data is summarized. Although you can have multiple frozen versions, only one is used for current reporting at any given time.

**Resource Types and Resources**

All planning resource breakdown structures can be used for reporting.

In addition, you can build reporting resource breakdown structures based on the resource types and resources already defined in the application. Select the resource type and specify the associated resource for each level of the hierarchy. You can create up to ten hierarchical levels in a reporting resource breakdown structure. This is different than planning resource breakdown structures, which may contain up to three hierarchical levels.

The User Defined resource type enables you to define your own groups of resources. Select the User Defined resource type, enter a free-form definition of the group, and then create hierarchical levels that link the actual resource types and resources.

**Cost Allocations**

Enable the **Use For Allocations** option if you want to allocate costs with this reporting resource breakdown structure.

If you enable this option, you can select this reporting resource breakdown structure when defining source and target details for an allocation rule. In this situation, the reporting resource breakdown structure must be assigned to all source or target projects.
FAQs for Project Resource Breakdown Structures

Can I add new resource formats?
No. Oracle Fusion Project Portfolio Management provides a set of predefined resource formats. You select resource formats as the basis for adding resources to planning and billing resource breakdown structures.

Can I add new billing resource breakdown structures?
No. You can't create billing resource breakdown structures. You can only add billing resources to the two predefined billing resource breakdown structures, Control Billing and Control Intercompany Billing.

What's a default planning resource breakdown structure?
A planning resource breakdown structure consisting of one resource format (resource class) with four associated planning resources: Labor, Equipment, Material Items, and Financial Resources.
A default planning resource breakdown structure is created automatically for each project unit. When you create a project template, the default planning resource breakdown structure is selected as primary, but you can designate any other one. Once you designate, you cannot remove the planning resource breakdown structure from the project template or project.

What's a primary resource breakdown structure?
A planning resource breakdown structure that is selected as the primary at the project template or project level. The primary planning resource breakdown structure is used for project planning.
When you create a project template, the default planning resource breakdown structure for the project unit is automatically added and set as primary. You can add additional planning resource breakdown structures to the template and set any one of them as primary. Projects inherit planning resource breakdown structures from the associated template. As with templates, you can add or remove planning resource breakdown structures and change the primary designation as required.

What's the difference between a planning, billing, and reporting resource breakdown structure?
Planning resource breakdown structures provide a list of resource formats and associated planning resources that you can use for project and financial planning, and optionally, project reporting.
Billing resource breakdown structures are similar in organization to planning resource breakdown structures. However, only two predefined billing resource breakdown structures exist and they provide a restricted set of implementation-defined resource formats and billing resources that are used for invoicing and recognizing revenue for contracts.
Reporting resource breakdown structures provide a resource hierarchy consisting of resources, resource types, and other resource groupings, which is used for reporting on planning and actual amounts on a project. Also, unlike planning and billing
resource breakdown structures, you can use reporting resource breakdown structures in allocation rules to determine the allocation source and basis amounts.

What happens if I change a name used in a resource combination on a resource breakdown structure?

You must run the **Refresh Resource Breakdown Structure Element Names** process to refresh the value that appears in the combination.

For example, you have a resource that includes the Telephone Charges expenditure type in the resource combination and you change the name from Telephone Charges to Communication Charges in the Manage Expenditure Types page. The change will not appear in the resource combination until you run the process.

Why can't I change the name of a planning resource?

You cannot change the name of a planning resource after the planning resource breakdown structure is used to create a control budget.

What's the difference between a planning, billing, and reporting resource breakdown structure?

Planning resource breakdown structures provide a list of resource formats and associated planning resources that you can use for project and financial planning, and optionally, project reporting.

Billing resource breakdown structures are similar in organization to planning resource breakdown structures. However, only two predefined billing resource breakdown structures exist and they provide a restricted set of implementation-defined resource formats and billing resources that are used for invoicing and recognizing revenue for contracts.

Reporting resource breakdown structures provide a resource hierarchy consisting of resources, resource types, and other resource groupings, which is used for reporting on planning and actual amounts on a project. Also, unlike planning and billing resource breakdown structures, you can use reporting resource breakdown structures in allocation rules to determine the allocation source and basis amounts.

Why can't I find persons in the list of resources when I enter team members, planning resources, or person rate schedules?

You can't find persons in the list of resources when you enter team members, planning resources, or person rate schedules in the following situations:

- The administrator didn’t assign a department while creating users. Persons must have an active assignment and be assigned to a department in Oracle Fusion Human Capital Management before they can be added as team members or entered as resources on the planning resource breakdown structure or person rate schedule.

- The resource isn’t active in Oracle Fusion Human Capital Management because the current date is before the effective date of the resource. If you want to include persons who will start in the future, select the **Include people with future-dated effective start dates** option when you search for the person.
• Persons assigned as project managers aren't active as of the project start date.

• The assignment of the person is terminated and an appropriate value isn't set for the number of days to display people with terminated assignments. You can set the profile value appropriately at the site profile level using the Specify Number of Days to Display People with Terminated Assignments task in the Setup and Maintenance work area.
Burden Cost Base Types, Bases, and Codes

How Burden Costs Are Calculated

Burdening provides the aggregate of raw and burden costs to represent the total cost of doing business accurately. You can calculate burdened costs as a markup of costs by using a precedence of multipliers. Oracle Fusion Project Costing performs a summation of burden costs with raw costs to provide a true representation of costs. Using burdening, you can perform internal costing, revenue accrual, billing, asset capitalization, and budgetary control including the type of burden costs that your company applies to raw costs.

Settings That Affect Burden Cost Calculation Processing

You define the projects that need to be burdened by enabling project types for burdening. When you specify that a project type is burdened, you must then specify the burden schedule to be used. The burden schedule stores the burden multipliers and indicates the transactions to be burdened, based on cost bases defined in the burden structure. You specify the expenditure types that are included in each cost base. With burdening, you can use an unlimited number of burden cost codes, easily revise burden schedules, and retroactively adjust multipliers. You can define different burden schedules for costing, revenue, and billing purposes.

If you enable the option to create separate expenditure items for burden costs at the project type level and the transaction is eligible for budgetary control, then you must associate an expenditure type to the burden cost code in the cost bases of the burden structure.
How Burden Costs Are Calculated
The following graphic shows the decision points and process for calculating burdened costs.

1. The application selects the expenditure items with raw cost amounts for processing.
2. The process determines if the related project type of the expenditure item is enabled for burdening.
3. If the project type is enabled for burdening, then the process determines the burden schedule to be used.
4. If the project type is not enabled for burdening, then the expenditure item is not burdened. The process assumes the burden multiplier is zero; therefore, burden cost is zero and thus burdened cost equals raw cost.
5. To determine which burden multiplier to use, the process determines if there is a burden schedule override for the expenditure.
6. If a burden schedule override exists, then the process uses the task burden schedule override on the associated task. For sponsored projects, the process ignores the task burden schedule overrides.
7. If no task burden schedule override exists on the associated task, then the process uses the project burden schedule override on the associated project. For sponsored projects, the process ignores the project burden schedule overrides.

8. If there are no burden schedule overrides, the process uses the burden schedule assigned at the task level for burden cost calculations.

For sponsored projects, the process determines the burden schedule to use for burden cost calculations in the following order:

a. Burden schedule assigned at the summary task level of the award project
b. Burden schedule assigned at the award project level
c. Burden schedule assigned at the award level

9. If the burden schedule type is a firm schedule, then the process checks if a fixed date is specified for burdening. If yes, it uses the fixed date to determine the schedule version. If a fixed date isn’t specified, then the process uses the expenditure item to determine the burden schedule version.

10. After a schedule version is determined, the process verifies that the expenditure type of the expenditure item is found in any of the cost bases of the selected burden schedule version.

11. If an expenditure type is excluded from all cost bases in the burden structure, then the expenditure items that use that expenditure type aren’t burdened (burden cost equals zero, thus burdened cost equals raw cost).

12. The process then checks if burden multipliers exist for the organization to which the cost transaction belongs. If burden multipliers aren’t defined for the organization, then the process checks if multipliers are defined for any of the parent organizations in the hierarchy. If burden multipliers don’t exist for the organization or any of the parent organizations, then the expenditure isn’t burdened.

13. The application calculates burden cost and burdened cost amounts according to the following calculation formulas:

- For additive burden structures, burden cost equals raw cost multiplied by a burden multiplier.
  \[
  \text{burden cost} = \text{raw cost} \times \text{burden multiplier}
  \]
- For precedence burden structures, burden cost equals the sum of raw cost and preceding burden costs multiplied by a burden multiplier.
  \[
  \text{burden cost} = (\text{raw cost} + \text{preceding burden cost}) \times \text{burden multiplier}
  \]
- Burdened cost equals the sum of raw cost and burden costs.
  \[
  \text{burdened cost} = \text{raw cost} + \text{burden cost}
  \]

### Burdened Cost Calculation

The burden structure assigned to the burden schedule version determines whether calculations are additive or based on the precedence assigned to each cost code. A burden structure can be additive or precedence based.

If you have multiple burden cost codes, an additive burden structure applies each burden cost code to the raw costs in the appropriate cost base. The examples in the following tables illustrate how burdened cost is calculated as a combination of raw and burden costs and how different burden structures using the same cost codes can result in different total burdened costs.

The following table lists the cost codes and multipliers for calculating burdened cost using the additive burden structure.

<table>
<thead>
<tr>
<th>Cost Code</th>
<th>Precedence</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead</td>
<td>1</td>
<td>0.10</td>
</tr>
<tr>
<td>Material Handling</td>
<td>1</td>
<td>0.10</td>
</tr>
</tbody>
</table>
The following table describes an example of calculating the burdened cost using the additive burden structure for an expenditure item that is not rate based.

<table>
<thead>
<tr>
<th>Cost Type</th>
<th>Calculation</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Cost</td>
<td>Not Applicable</td>
<td>1000.00</td>
</tr>
<tr>
<td>Overhead</td>
<td>1000.00 * 0.10</td>
<td>100.00</td>
</tr>
<tr>
<td>Material Handling</td>
<td>1000.00 * 0.10</td>
<td>100.00</td>
</tr>
<tr>
<td>General Administrative Costs</td>
<td>1000.00 * 0.10</td>
<td>100.00</td>
</tr>
<tr>
<td>Burdened Cost</td>
<td>1000.00 + 100.00 + 100.00 + 100.00</td>
<td>1300.00</td>
</tr>
</tbody>
</table>

A precedence burden structure is cumulative and applies each cost code to the running total of the raw costs, burdened with all previous cost codes. The calculation applies the multiplier for the cost code with the lowest precedence number to the raw cost amount.

The calculation applies the cost code with the next lowest precedence to the subtotal of the raw cost plus the burden cost for the first multiplier. The calculation logic continues in the same way through the remaining cost codes. If two cost codes have the same precedence number, then both are applied to the same subtotal amount.

The following table lists the cost codes and multipliers for calculating burdened cost using the precedence burden structure.

<table>
<thead>
<tr>
<th>Cost Code</th>
<th>Precedence</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead</td>
<td>10</td>
<td>0.10</td>
</tr>
<tr>
<td>Material Handling</td>
<td>20</td>
<td>0.10</td>
</tr>
<tr>
<td>General Administrative Costs</td>
<td>30</td>
<td>0.10</td>
</tr>
</tbody>
</table>

The following table describes an example of calculating the burdened cost using the precedence burden structure for an expenditure item that is not rate based.

<table>
<thead>
<tr>
<th>Cost Type</th>
<th>Calculation</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Cost</td>
<td>Not Applicable</td>
<td>1000.00</td>
</tr>
<tr>
<td>Overhead</td>
<td>1000.00 * 0.10</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Cost Type | Calculation                        | Amount  
--- | --- | ---
Material Handling | $(1000.00 + 100.00) \times 0.10$ | 110.00
General Administrative Costs | $(1000.00 + 100.00 + 110.00) \times 0.10$ | 121.00
Burdened Cost | $1000.00 + 100.00 + 110.00 + 121.00$ | 1331.00

The order of the burden cost codes has no effect on the total burdened cost with either additive or precedence burden structures.

Example of Creating Burden Cost Bases

You use burden cost bases in burden structures to group the burden cost codes with expenditure types. You create burden cost bases to support unique groupings of burden cost codes and expenditure types.

The following scenario illustrates burden cost bases that are used to group raw costs for the purpose of calculating burdened costs.

Burden Cost Bases

Burden cost bases with the type Burden Cost, shown in the following table, group raw costs to calculate burdened costs. Reports sort cost bases first by the Report Order value and then by the Cost Base name.

<table>
<thead>
<tr>
<th>Cost Base</th>
<th>Report Order</th>
<th>Cost Base Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>10</td>
<td>Burden Cost</td>
</tr>
<tr>
<td>Material</td>
<td>20</td>
<td>Burden Cost</td>
</tr>
<tr>
<td>Expense</td>
<td>30</td>
<td>Burden Cost</td>
</tr>
</tbody>
</table>

Note: The Burden Cost and Other cost base types are predefined.

Example of Creating Burden Cost Codes

The following scenario illustrates burden cost codes that represent distinct types of burden to apply to raw costs.

Burden Cost Codes

Burden cost codes are created for each type of burden that will be applied to raw costs, and are defined on the Manage Burden Cost Codes page. In this example, assume that labor raw costs are burdened with fringe benefits, overhead, and administrative costs. Material raw costs are burdened with material handling fees and administrative costs. Expenses are burdened only with administrative costs.
You can optionally assign an expenditure type to any burden cost code to capture burden costs on separate, summarized expenditure items. Only expenditure types with a Burden Transactions expenditure type class are available for assignment to a burden cost code. The assigned expenditure type becomes the expenditure type for that type of burden cost.

Ensure that the expenditure types that you assign to burden cost codes are:

- Classified as a Burden Transactions expenditure type
- Assigned to the reference data sets for each project unit that will own projects receiving summarized burden transactions

The following table shows burden cost codes that represent distinct types of burden to apply to raw costs.

<table>
<thead>
<tr>
<th>Burden Cost Code</th>
<th>Description</th>
<th>Expenditure Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative</td>
<td>Corporate expenses such as corporate staff and marketing</td>
<td>General and Administrative</td>
</tr>
<tr>
<td>Fringe - Faculty</td>
<td>Employer paid payroll costs, insurance, and pension for faculty</td>
<td>Fringe Benefits</td>
</tr>
<tr>
<td>Fringe - Staff</td>
<td>Employer paid payroll costs and insurance for staff</td>
<td>Fringe Benefits</td>
</tr>
<tr>
<td>Material Handling</td>
<td>Material handling fees</td>
<td>Material</td>
</tr>
<tr>
<td>Overhead</td>
<td>Support staff, equipment rental, supplies, building rent, and facilities</td>
<td>Overhead</td>
</tr>
</tbody>
</table>

**FAQs for Burden Cost Base Types, Bases, and Codes**

**What's a cost base type?**
Identifies if the burden cost base is used for burden cost calculations or grouping expenditure items. The application provides two predefined cost base types:

- Burden Cost: Used for burden calculations.

**When do I assign an expenditure type to a burden cost code?**
Burden cost codes are assigned to cost bases. When you assign an expenditure type to a burden cost code, burden cost is processed as a separate, summarized burden transaction.

The expenditure type assigned to a burden cost code must be classified as a burden transaction and belong to the reference data set for the project unit.

*Note:* To process burden cost on the same line expenditure item, you don’t need to assign an expenditure type to a burden cost code.
How can I track the burden cost as direct cost in the Federal Financial Report?
Specify the burden cost code to report the cost as direct cost in the Manage Burden Cost Codes page. This burden cost is reported as direct cost in the Federal Financial Report in Oracle Fusion Grants Management. However, this is stored as burden cost in all other pages of the application.

Burden Structures

Example of Defining Burden Structures

The following scenario illustrates the relationship between expenditure types and burden cost codes in a burden structure. This relationship determines what burden costs Oracle Fusion Project Costing applies to specific raw costs.

Note: Before you can define burden structures, you must define expenditure types, burden cost bases, and burden cost codes. Use the Define Burdening task list to manage burden cost bases, burden cost codes, and burden structures.
Burden Structure

The following graphic shows an example of the expenditure types and burden cost codes that are assigned to the Labor, Material, and Expense burden cost bases.

![Expenditure Types and Burden Cost Codes Diagram]

The following table is an alternative to the graphic to explain expenditure types and burden cost codes that are assigned to the Labor, Material, and Expense burden cost bases.

<table>
<thead>
<tr>
<th>Cost Base</th>
<th>Expenditure Type</th>
<th>Burden Cost Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>Professional, Clerical, Sales</td>
<td>Administrative, Fringe, Overhead</td>
</tr>
<tr>
<td>Material</td>
<td>Supplies, Construction Material</td>
<td>Administrative, Material Handling</td>
</tr>
<tr>
<td>Expense</td>
<td>Travel, Meals</td>
<td>Administrative</td>
</tr>
</tbody>
</table>
The following table shows an example of the multipliers that are used to calculate burden costs for raw costs in the Labor, Material, and Expense cost bases. This is an additive burden structure that applies each burden cost code to the raw costs in the appropriate cost base. Multipliers are defined on the burden schedule.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>labor</td>
<td>1,000</td>
<td>0.20</td>
<td>0.20</td>
<td>0.40</td>
<td>0</td>
</tr>
<tr>
<td>material</td>
<td>500</td>
<td>0.20</td>
<td>0</td>
<td>0</td>
<td>0.25</td>
</tr>
<tr>
<td>expense</td>
<td>400</td>
<td>0.20</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The following graphic shows an example of the resulting burdened costs for labor, material, and expenses.
The following example shows the resulting burdened costs for labor.

Labor Burdened Cost = Labor Overhead Cost + Labor Fringe Benefit Cost + Administrative Cost + Labor Raw Cost

- Labor Overhead Cost = $1000 x 0.40 = $400
- Labor Fringe Benefit Cost = $1000 x 0.20 = $200
- Administrative Cost = $1000 x 0.20 = $200
- Labor Raw Cost = $1000

Labor Burdened Cost = $400 + $200 + $200 + $1000 = $1800

The following example shows the resulting burdened costs for materials.

Expense Burdened Cost = Material Handling Fee + Administrative Cost + Material Raw Cost

- Material Handling Fee = $500 x 0.25 = $125
- Administrative Cost = $500 x 0.20 = $100
- Material Raw Cost = $500

Expense Burdened Cost = $125 + $100 + $500 = $725

Material Burdened Cost = Material Handling Fee + Administrative Cost + Material Raw Cost

- Material Handling Fee = $500 x 0.25 = $125
- Administrative Cost = $500 x 0.20 = $100
- Material Raw Cost = $500

Material Burdened Cost = $125 + $100 + $500 = $725
materials burdened cost = material handling fee + administrative cost + material raw cost

material handling fee = $500 * 0.25 = $125
administrative cost = $500 * 0.20 = $100
material raw cost = $500

materials burdened cost = $125 + $100 + $500

The following example shows the resulting burdened costs for expense.

expense burden cost = administrative cost + expense raw cost

administrative cost = $400 * 0.20 = $80
expense raw cost = $400

expense burden cost = $400 + $80

Examples for Additive and Precedence Burden Structures

A burden structure can be additive or precedence based. If you have multiple burden cost codes, an additive burden structure applies each burden cost code to the raw cost in the appropriate cost base. A precedence burden structure is cumulative and applies each cost code to the running total of the raw cost, burdened with all previous cost codes. You assign the multiplier on the burden schedule that Oracle Fusion Project Costing uses to perform the cost buildup for each detailed transaction.

Additive Burden Structure

Create an additive burden structure to apply each burden cost code assigned to a cost base using the same precedence when calculating burden costs. The following table describes an example of calculating burdened cost using an additive burden structure.

<table>
<thead>
<tr>
<th>Cost Code</th>
<th>Precedence</th>
<th>Multiplier</th>
<th>Formula</th>
<th>Amount (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Cost</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100.00</td>
</tr>
<tr>
<td>Overhead</td>
<td>1</td>
<td>0.50</td>
<td>0.50 * 100.00</td>
<td>50.00</td>
</tr>
<tr>
<td>Fringe Benefits</td>
<td>1</td>
<td>0.30</td>
<td>0.30 * 100.00</td>
<td>30.00</td>
</tr>
<tr>
<td>General and Administrative</td>
<td>1</td>
<td>0.20</td>
<td>0.20 * 100.00</td>
<td>20.00</td>
</tr>
<tr>
<td>Burdened Cost</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>200.00</td>
</tr>
</tbody>
</table>
**Precedence Burden Structure**

The following table lists an example which explains how each burden cost code assigned to a cost base is applied to raw costs.

<table>
<thead>
<tr>
<th>Cost Code</th>
<th>Precedence</th>
<th>Multiplier</th>
<th>Formula</th>
<th>Amount (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Cost</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100.00</td>
</tr>
<tr>
<td>Overhead</td>
<td>10</td>
<td>0.50</td>
<td>0.50 * 100.00</td>
<td>50.00</td>
</tr>
<tr>
<td>Fringe Benefits</td>
<td>20</td>
<td>0.30</td>
<td>0.30 * 150.00</td>
<td>45.00</td>
</tr>
<tr>
<td>General and Administrative</td>
<td>30</td>
<td>0.20</td>
<td>0.20 * 195.00</td>
<td>39.00</td>
</tr>
<tr>
<td>Burdened Cost</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>234.00</td>
</tr>
</tbody>
</table>

**How Burden Structure Components Work Together**

You define the project cost buildup using a burden structure. A burden structure determines how you group expenditure types into burden cost bases and establishes the method of applying burden costs to raw costs. Before creating burden
structures you must define expenditure types, cost bases, and burden cost codes, which are the main components of a burden structure.

The diagram illustrates a burden structure with the following cost bases:

- **Labor**
  - Includes the expenditure types Professional, Clerical, and Sales.
  - Is assigned the burden cost codes Administrative, Fringe Benefits, Overhead.

- **Material**
  - Includes the expenditure types Supplies and Construction Material.
  - Is assigned the burden cost codes Administrative and Material Handling.
• Expense
  ◦ Includes the expenditure types Travel and Meals.
  ◦ Is assigned the burden cost code Administrative.

Cost Bases
Cost bases are the groups of raw costs used for applying burden costs. You assign cost bases to burden structures, and then specify the types of raw costs, represented by expenditure types, that are included in the cost base, and the types of burden costs that are applied to the cost base.

Burden Cost Codes
Burden cost codes represent the distinct type of burden to apply to raw costs. For example, if labor costs receive both fringe benefits and overhead burden, then define a cost code for each type of burden. Assign an expenditure type to each burden cost code that Oracle Fusion Project Costing processes as separate, summarized expenditure items. The assigned expenditure type becomes the expenditure type for that type of burden cost.

Cost Base Types
Cost base types refer to the use of cost bases. Oracle Fusion Project Costing provides the following cost base types.

• Burden Cost: Assign to cost bases that are used to calculate burden costs.
• Other: Assign to cost bases that are used for other purposes than to calculate burden costs.

You can define additional cost base types to use for non-burden transactions.

Expenditure Types
Expenditure types classify raw costs and burden cost codes classify burden costs. The relationship between expenditure types and burden cost codes within each cost base determines what burden costs are applied to specific raw costs, and the order in which processing applies the burden costs.

In a burden structure, each expenditure type can belong to only one cost base with a cost base type of Burden Cost. This restriction ensures that Oracle Fusion Project Costing doesn’t burden an expenditure type more than once. If you don’t assign an expenditure type to a cost base, then burden costs aren’t applied to the raw costs with those expenditure types. In other words, the burdened cost for these transactions is the same as the raw cost of the transaction.

FAQs for Burden Structures

Why is burden cost missing on a transaction?
Burden costs aren’t applied to a transaction if either of these situations exist:

• The expenditure type associated with the transaction isn’t assigned to a cost base.
• The project type for the project isn’t enabled for burden calculation. In this situation, raw cost is equal to burdened cost.

Burden Schedules
How Burden Schedule Components Work Together

Burden schedules establish the multipliers used to calculate the burdened cost, revenue, or bill amount of each expenditure item charged to a project. The burden schedule determines which transactions the application burdens, based on burden cost bases defined in the burden structure. The project type determines which projects are burdened and contains the default burden schedule. A burden schedule type can be firm or provisional. You can override rates by using a schedule of multipliers negotiated for a specific project or task.

Burden Schedule Types

Use a firm burden schedule if you don’t expect the multipliers to change. Firm burden schedules can have multiple versions, but never more than one version for a date range.

Use a provisional burden schedule if you based the multipliers on estimates, such as a yearly forecast budget. Provisional schedules can have provisional and actual versions active for the same date range. When the actual multipliers are available, replace the provisional version with the actual version. When you build the actual burden schedule, the application automatically reprocesses the impacted expenditure items to adjust the burden cost amounts.

Multipliers

The multiplier specifies the rate by which to multiply the raw cost amount to obtain the burden cost amount. If you don’t use organization hierarchies, you can assign a multiplier to a combination of burden cost code and either a unique organization or all organizations. If you use organization hierarchies, you can assign a multiplier to a combination of burden cost code and either a unique organization or a parent organization.

You can use the organization hierarchy to cascade rates down to lower-level organizations without explicitly defined multipliers. If the Project Financial Management applications find a level in the hierarchy without a multiplier, they use the multipliers of the parent organization. Therefore, an organization multiplier schedule hierarchy is used to identify the exceptions. You only define the multipliers for an organization if you’re overriding the multipliers of the parent organization.

The following diagram shows an example of organizations using multipliers. The parent organization, Headquarters, has two defined multipliers: Overhead with a multiplier of 2.0, and Administrative with a multiplier of 3.0.

- The application doesn’t find any multipliers when it processes transactions for the East organization. Therefore, the application uses the multipliers from the parent organization, Headquarters.
- The Boston and New York City organizations are assigned an Administrative multiplier of 3.1, and no Overhead multiplier. Therefore, the application uses the Administrative multiplier of 3.1, and the Overhead multiplier from the Headquarters organization, when processing transactions for the Boston and New York City organizations.
- The West organization is assigned an Overhead multiplier of 2.3, and no Administrative multiplier. Therefore, the application uses the Overhead multiplier of 2.3, and the Administrative multiplier from the Headquarters organization, when processing transactions for the West organization.
• No multipliers are assigned to the San Francisco and Los Angeles organizations. Therefore, the application uses the Overhead multiplier from the West organization, and the Administrative multiplier from the Headquarters organization, when processing transactions for the San Francisco and Los Angeles organizations.

**Burden Schedule Versions**

Burden schedule versions define the date range within which multipliers are effective. You build the burden schedule to make the burden schedule versions active and available for use.

**Note:** Submit the Build New Organization Burden Multipliers process if you add an organization to the hierarchy after you built the schedule. A burden schedule version must be active to add multipliers for a new organization.

**Related Topics**

• Considerations when Editing Burden Schedule Multipliers
Burden Multipliers for New Organizations: How They Are Added to Burden Schedules

The Build New Organization Burden Multipliers process adds burden multipliers to burden schedules for an organization when you add a new organization to your organization hierarchy. If you don’t add the organization to a specific burden schedule version, this process builds multipliers for the organization in all burden schedule versions. It uses the multipliers of the parent organization as defined in the organization hierarchy. A burden schedule version must be active to add multipliers for a new organization.

Run this process:

- After you create the organization and before you charge transactions using this organization as the expenditure organization.
- For the parent organization before you run it for the child organization.

If the new organization requires multipliers that are different than the multipliers assigned to the parent organization, you can manually add multipliers for each burden cost code on the burden schedule versions, and then rebuild the versions.

Settings That Affect Burden Multipliers for New Organizations

The process parameter is the new organization for which you want to build multipliers for existing burden schedule versions. Typically you run this process during implementation as part of the Burden Definition setup task list.

Process results are summarized in the Build New Organization Burden Multipliers Execution Report that displays the impacted burden schedules and burden schedule versions.

Related Topics

- Editing Burden Schedule Multipliers: Points to Consider

Recalculate Burden Costs

When you perform certain actions on a project that’s enabled for burdening, you need to recalculate the existing burden costs. Let’s say that you change the multiplier on an organization’s burden schedule version. All of the existing transactions that are associated with that organization need to be recalculated.

The conditions that require burden cost recalculation are:

- You updated a previously built burden schedule.
- You built an actual burden schedule version to replace a provisional burden schedule version.
- You modified the version dates such that the transactions for which burden is calculated using existing version no longer fall within the new version dates.
- You have previous unprocessed adjustments on transactions.
- An error occurs during the process.

Recalculate the costs for a burden schedule version.

1. In the Costs work area, click the Manage Burden Schedule task.
2. On the Manage Burden Schedules page, select the burden schedule.
3. Click the Recalculate Burden Costs button. The Recalculate Burden Costs process initiates the Import Costs process to create expenditure items and cost distribution lines for the eligible transaction. In case of separate line burdening, you must also run the Generate Burden Costs process after recalculating the burden costs.

4. Review the Recalculate Burden Cost output report and the Import Costs output report. If any transactions were excluded from the recalculation, fix the conditions and recalculate again.

Related Topics

- Editing Burden Schedule Multipliers: Points to Consider

Burden Cost Calculations Test

Test burden cost calculations to view a breakdown of the total burdened cost for a specific project transaction and to verify your burden structure and burden schedule implementation. The test emulates an actual burden cost transaction for a set of criteria consisting of the project, task, burden schedule, expenditure type, expenditure organization, raw cost, quantity, and transaction date.

The application uses the burden schedule that you specify as burden cost criteria to calculate burden amounts. If you specify a project as burden cost criteria, and you don’t specify a task or burden schedule, then the application uses the burden schedule on the project. If you specify a project and task, and you don’t specify a burden schedule, then the application uses the burden schedule on the task.

Test burden cost calculations to:

- Verify that the amounts for each burden cost code and for the total burdened cost are calculated correctly according to the specified criteria.
- Confirm that the correct schedule is used for the given project and task.
- Confirm that the desired burden cost codes and rates are used for the organization and expenditure type.

FAQs for Burden Schedules

How can I prepare for creating burden schedules?
Before you create burden schedules, you must define burden structures and optionally define organization hierarchy.

What’s a burden schedule?
Establishes the multipliers that are applied to the raw cost of each expenditure item to calculate the burdened cost, revenue, or bill amount charged to a project.

Assign burden schedules to project types, projects, or tasks. The project type provides the default burden schedule for a project. You can override the default burden schedule for each project by using a schedule of multipliers negotiated for the project or task.

In planning, when using planning rates, you assign a burden schedule in the project or financial planning options. The set of resources and rates are global and have no project context from which to derive a burden schedule.
What’s burden costing?
A method of applying burden costs to raw costs to track the burdened cost of your projects.

What’s the difference between a firm burden schedule and a provisional burden schedule?
Firm burden schedules are typically used for internal costing or commercial billing schedules. You can have multiple versions, but only one version for an effective date range. Use firm burden schedules if you expect no changes in your burden multipliers.

Provisional multipliers are typically estimates based on the annual forecast budget. When you determine the actual multipliers to apply to raw costs, then you replace the provisional multipliers with the actual multipliers. Use provisional multipliers if you don’t know burden multipliers when calculating total burdened costs.

The adjustments are processed from provisional to actual changes for costing, revenue, and billing transactions.

Why can’t I select a hierarchy tree version for the default organization hierarchy while creating burden schedules?
The organization tree version isn’t in the Active status. You must change the status of the organization tree version to Active for it to display in the Manage Burden Schedules page.

What happens if I recalculate burden costs?
The outcome of the Recalculate Burden Costs process depends on whether your project uses same line or separate line burdening. Recalculation uses the latest burden schedule.

In case of same line burdening, the adjusted expenditure item creates two distribution lines.

• A reversed cost distribution line for the original burden schedule.
• A new cost distribution line for the updated burden schedule.

In case of separate line burdening, after the Recalculate Burden Costs process finishes, run the Generate Burden Costs process to regenerate the burden costs. Any transactions that are being processed for the first time aren’t included because the burden on the expenditure item was already reserved when you imported the cost.

If the transactions are eligible for budgetary control, then the latest cost distribution lines for these transactions are used.

Project Types: Burdening Options

Considerations for Burden Cost Options for Project Types
Burdening is a method of applying one or more burden cost components to the raw cost amount of each individual transaction to calculate burden cost amounts. Use project types to control how burden transactions are created and accounted. If you enable burdening for a project type, you can choose to account for the individual burden cost components or the total burdened cost amount.
You specify the following options when setting up burdening options for project types.

- Default Cost Burden Schedule
- Allow Cost Burden Schedule Change for Projects and Tasks
- Include Burden Cost on Same Expenditure Item
  - Create Expenditure Items for Burden Cost Components
- Create Separate Expenditure Item for Burden Cost
- Create Burden Cost Accounting Journal Entries
- Create Burdened Cost Accounting Journal Entries
Default Cost Burden Schedule
If you enable burdening for the project type, you must select the burden schedule to use as the default cost burden schedule for projects that are defined with this project type.

Allow Cost Burden Schedule Change for Projects and Tasks
Enable this option to allow a change of the default cost burden schedule when entering and maintaining projects and tasks. Don’t enable this option if you want all projects of a project type to use the same schedule for internal costing.

Include Burden Cost on Same Expenditure Item
Enable this option to include the burden cost amount in the same expenditure item. You can store the total burdened cost amount as a value with the raw cost on each expenditure item. Oracle Fusion Project Costing displays the raw and burdened costs of the expenditure items on windows and reports.

If you include burden cost amounts on the same expenditure item, but want to see the burden cost details, enable the option to create expenditure items for each burden cost amount on an indirect project and task.

Create Separate Expenditure Item for Burden Cost
Enable this option to account for burden cost amounts as separate expenditure items on the same project and task as the raw expenditures. The expenditure items storing the burden cost components are identified with a different expenditure type that’s classified by the expenditure type class Burden Transaction. Oracle Fusion Project Costing summarizes the cost distributions to create burden transactions for each applicable burden cost code. The most important summarization attributes are project, lowest task, expenditure organization, expenditure classification, supplier, project accounting period, and burden cost code.

Create Burden Cost Accounting Journal Entries
Indicate whether to create an entry for the burden cost amount.

If burdened costs are calculated for reporting purposes only, and you don’t want to interface burdened costs to the general ledger, you can disable the creation of accounting journal entries. If you select this option, only the burden cost, which is the difference between the burdened cost and raw cost, is interfaced to general ledger.

Create Burdened Cost Accounting Journal Entries
Indicate whether to account for the total burdened cost amount of the items. You typically use this option to track the total burdened cost amount in a cost asset or cost work-in-progress account.

The burdened cost is the sum of raw and burden costs. Therefore, selecting this option may result in accounting for raw cost twice. For example, assume that the raw cost of an item is 100 USD, the burden cost is 50 USD, and the burdened cost is 150 USD. When the application creates a journal entry for 150 USD, it accounts for the 100 USD that was already accounted for as raw cost, plus the 50 USD burden cost.
13 Project Foundation Configuration: Project Types

Considerations for Burden Cost Options for Project Types

Burdening is a method of applying one or more burden cost components to the raw cost amount of each individual transaction to calculate burden cost amounts. Use project types to control how burden transactions are created and accounted. If you enable burdening for a project type, you can choose to account for the individual burden cost components or the total burdened cost amount.

The following graphic illustrates the burden cost accounting options for project types.
You specify the following options when setting up burdening options for project types.

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- Include Burden Cost on Same Expenditure Item
  - Create Expenditure Items for Burden Cost Components
- Create Separate Expenditure Item for Burden Cost
- Create Burden Cost Accounting Journal Entries
- Create Burdened Cost Accounting Journal Entries

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If you enable burdening for the project type, you must select the burden schedule to use as the default cost burden schedule for projects that are defined with this project type.

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Enable this option to allow a change of the default cost burden schedule when entering and maintaining projects and tasks. Don’t enable this option if you want all projects of a project type to use the same schedule for internal costing.

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The burdened cost is the sum of raw and burden costs. Therefore, selecting this option may result in accounting for raw cost twice. For example, assume that the raw cost of an item is 100 USD, the burden cost is 50 USD, and the burdened cost is 150 USD. When the application creates a journal entry for 150 USD, it accounts for the 100 USD that was already accounted for as raw cost, plus the 50 USD burden cost.

**Capitalization Options for Project Types**

You can assign assets to a project if capitalization is enabled for the project type. Use project types to enable capitalization and configure capitalization options that are inherited by the projects associated with that project type.
The following graphic illustrates the capitalization options for project types.

Specify the following information when setting up capitalization options for project types.

- Construction in Progress (CIP) Options
- Supplier Invoices Export Options
- Capitalized Interest Options
Construction in Progress Options
You specify the following Construction in Progress options when setting up capitalization options for project types.

Cost Type
Indicate whether to capitalize costs at the burdened or raw cost amount for projects with this project type.

Complete Asset Definition
Enable this option to require a complete asset definition in Oracle Fusion Project Portfolio Management before sending costs to Oracle Fusion Assets. If you select this option, you don’t need to enter information for the imported asset lines in Oracle Fusion Assets. The Transfer Assets to Oracle Fusion Assets process places asset lines with complete definitions directly into the post queue in Oracle Fusion Assets.

Asset Line Grouping Method
Specify one of the following methods to summarize asset lines.

- **All**, which is the highest level of summarization
- **Expenditure Category**
- **Expenditure Category Nonlabor Resource**
- **Expenditure Type**
- **Expenditure Type Nonlabor Resource**
- **Expenditure Organization**
- **Expenditure Item**

Asset Cost Allocation Method
Select one of the following predefined allocation methods to automatically distribute indirect and common costs across multiple assets, or select no allocation method.

- **Actual Units**
- **Current Cost**
- **Estimated Cost**
- **Standard Unit Cost**
- **Spread Evenly**

Event Processing Method
Specify a capital event processing method to control how assets and costs are grouped over time. You can select either periodic or manual events, or no events.
Group Supplier Invoices

Enable this option to consolidate the expenditure items on a supplier invoice into one asset line according to the asset line grouping method. Deselect this option to send the lines to Oracle Fusion Assets based on the supplier invoice export option.

If you specify the grouping method as All, then no grouping occurs and asset lines are split into multiple lines when you transfer them from Oracle Fusion Project Costing to Oracle Fusion Assets.

Supplier Invoice Export Options

If you choose not to group supplier invoices, then select one of the following supplier invoice export options.

- **As New Additions**: Sends each expenditure item on a supplier invoice line to Oracle Fusion Assets as a separate addition line with a status of New.
- **As Merged Additions**: Sends each supplier invoice line to Oracle Fusion Assets as a separate addition line with the status of Merged.

Previously capitalized assets are transferred as new additions to Oracle Fusion Assets. If the asset was assigned an asset number in Project Costing, then you must remove or change the asset number in Oracle Fusion Assets before you can post the new addition.

After the addition lines are sent to Oracle Fusion Assets, you can split, merge, or split the lines manually in Oracle Fusion Assets.

Capitalized Interest Options

Use this field to specify a default interest rate schedule for capitalized interest.

You can select the **Allow Override** option to allow an override of the default capitalized interest rate schedule for individual projects.

Example of Project Types Association with Class Categories

Project classifications group your projects according to categories and codes that you define. When you associate project classifications with project types, the classification is available for selection on projects with that project type.

Use any of the following methods to associate class categories with project types:

- Add a classification to the project type definition
- Add a project type to the class category definition
- Enable the **Assign to all Project Types** option on the class category definition
Add Classification to Project Type Definition

The following graphic shows an example of three classifications associated with a project type definition. In this example, the Industry Sector, Reporting Group, and Media Sector classifications are available for selection on projects with the Sales Proposal project type.

For each classification that you associate with the project type, you can enable the **Assign to All Projects** option to automatically add the classification to the project definition for all new projects with the project type. When this option is enabled, all projects with this project type must be assigned a class code for the class category.
Add Project Type to Class Category Definition

The following graphic shows an example of three project types associated with a class category definition. In this example, the Industry Sector classification is available for selection when you create projects with the Sales Proposal, Consulting, or Internal project types.

For each project type that you associate with the class category, you can enable the Assign to All Projects option to automatically add the class category to the project definition for all new projects with any of these project types. When this option is enabled, all projects with this project type must be assigned a class code for the class category.
Assign to All Project Types

The following graphic shows an example of a class category definition with the **Assign to All Project Types** option enabled. In this example, a code for the Industry Sector class category is required for all projects, regardless of the project type.

![Class Category Definition](image)

Asset Cost Allocation Methods

The asset cost allocation method determines how indirect or common costs incurred on a project are allocated to multiple assets.

You can specify an asset cost allocation method to enable Oracle Fusion Project Costing to automatically allocate unassigned asset lines and common costs across multiple assets. Unassigned asset lines typically occur when more than one asset is assigned to an asset grouping level.

Projects and project templates inherit a default asset cost allocation method from the associated project type. You can override the default at the project level. If you use capital events to allocate costs, then you can also override the asset cost allocation method at the event level.

### Asset Cost Allocation Methods

The following table describes the available asset cost allocation methods.

<table>
<thead>
<tr>
<th>Method</th>
<th>Basis of Cost Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Units</td>
<td>Number of units defined for each asset</td>
</tr>
<tr>
<td>Current Cost</td>
<td>Construction-in-process (CIP) cost of each asset</td>
</tr>
<tr>
<td>Estimated Cost</td>
<td>Estimated cost of each asset</td>
</tr>
<tr>
<td>Standard Unit Cost</td>
<td>Combination of the standard unit cost and the number of units defined for each asset</td>
</tr>
</tbody>
</table>
### Method of Cost Allocation Table

<table>
<thead>
<tr>
<th>Method</th>
<th>Basis of Cost Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spread Evenly</td>
<td>Equal allocation of cost to each asset</td>
</tr>
</tbody>
</table>

**Related Topics**

- What’s a standard unit cost method
Considerations for Setting Up Project Numbering

You have more flexibility to set up project numbering using the Configure Project Numbering task in the Setup and Maintenance work area. You can either specify a default configuration that determines project numbering for all your projects. Or, have it differently for any one of the predefined objects: project units, project types, or business units.

Look at these considerations while configuring the project numbering.

- You can either have manual or automatic numbering for your projects. By default, it’s manual method.
- If you choose manual method then you must also select if the project number should be numeric or alphanumeric. You can’t enter a duplicate project number.
- If you choose automatic method then you must define a next number to start your project numbering and optionally add a prefix for the numbering.
- If the next number conflicts with another project unit, project type, or business unit at setup level then the project isn’t created.

**Note:** You also have an option to disable the Flexibly Set Up Automatic Numbering for Projects feature in which case the Configure Project Numbering task will no longer be available in the Setup and Maintenance work area. The project numbering setup appears back in the Manage Project Unit Options task.
15 Project Foundation Configuration: Action Controls

Action Controls

Action controls control data that’s imported from other applications to Project Financial Management applications. An action control prevents you from performing an action in Project Financial Management applications on a record that originated in another application. The action controls aren’t applicable in Project Execution Management applications.

Available Action Controls

You can set controls on the following actions:

- Add Financial Task
- Delete Financial Task
- Update Project Dates
- Update Project Description
- Update Project Name
- Update Project Number
- Update Project Organization
- Update Project Status
- Update Financial Task Dates
- Update Financial Task Description
- Update Financial Task Name
- Update Financial Task Number
- Update Financial Task Organization

For example, consider the following scenario:

- You imported a project from Microsoft Project.
- Your business rule states that project and task dates are always maintained in Microsoft Project.
- To ensure data integrity, you want to prevent projects and tasks that originate in Microsoft Project from being deleted in Project Financial Management applications.

To enforce this rule, you enter the following action controls for the source Microsoft Project:

- Update Project Dates
- Update Financial Task Dates
- Delete Financial Task
How Project Costs are Imported

Collect and import all types of project costs from Oracle Fusion and third-party applications. During this process you can validate transactions to reduce corrections and rework. Before you import the transactions, you can review the exceptions and correct the errors.

Settings That Affect Transactions Import

Setup options in the transaction document and document entry specify how cost transactions are imported and processed.

How Transactions Are Imported

You create, validate, and transfer the transactions to the Oracle Fusion Project Costing interface as specified in the following table.

<table>
<thead>
<tr>
<th>Transactions Type</th>
<th>Creating Transactions</th>
<th>Validating Transactions</th>
<th>Importing Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Fusion Project Costing</td>
<td>Initially only in Excel templates.</td>
<td>Validation is compulsory and is performed automatically during transaction entry.</td>
<td>Click the Export button in Excel spreadsheet to export, and optionally, process transactions.</td>
</tr>
<tr>
<td>• Uncosted labor transactions</td>
<td>You can later edit or add transactions in the Manage Unreleased Costs page.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Uncosted nonlabor transactions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third-Party Application</td>
<td>Web services, ADFdi Excel spreadsheets, or Oracle Cloud templates.</td>
<td>If you are using the ADFdi Excel, optionally validate transactions during export.</td>
<td>Methods to import:</td>
</tr>
<tr>
<td>• Uncosted labor transactions</td>
<td>You can also create transactions in the Manage Unprocessed Costs page.</td>
<td>Validation is optional when you enter or export transactions but is always performed when you run the Import Costs process.</td>
<td>• For ADFdi Excel, click the Export button on the Excel spreadsheet to export, and optionally, process transactions.</td>
</tr>
<tr>
<td>• Uncosted nonlabor transactions</td>
<td></td>
<td></td>
<td>• Use web services to transfer transactions to the Oracle Fusion Project Costing interface.</td>
</tr>
<tr>
<td>• Costed or accounted labor or nonlabor transactions</td>
<td></td>
<td></td>
<td>• For Oracle Cloud, use the Load Interface File for Import process.</td>
</tr>
<tr>
<td>Other Oracle Fusion Applications</td>
<td>Source applications</td>
<td>Validation is compulsory.</td>
<td>Use the Import Costs process.</td>
</tr>
</tbody>
</table>


Transactions Type | Creating Transactions | Validating Transactions | Importing Transactions
---|---|---|---

The Import Costs process revalidates the cost transactions that you import if the Revalidate during import option is enabled at the transaction source document level. This option is available for the following transaction sources:

- Oracle Fusion Payables
- Oracle Fusion Cost Management
- Oracle Fusion Time and Labor

All transactions are validated but at different points, for example, transaction entry, transfer, or processing. If you’re exporting transactions from ADFdi Excel spreadsheets, you can release the transactions directly from the spreadsheet by selecting the Process Costs option. Costs are submitted for the Import Costs process avoiding the need to do it from the application.

The Process Costs option is not available in the Excel template, when you have separate duties for entering and releasing expenditure batches. You can review the expenditure batches in the Manage Unreleased Costs page and submit them for processing.

After you import the transactions, the application tracks transactions with errors including the details for the cause of the error and the action to be taken to fix the error. The successful transactions are ready for cost processing.

**Related Topics**

- Project Costs: How They’re Validated
- Transaction Document Import and Accounting Options
- How Source, Document, and Document Entry Components Work Together

**Document and Document Entry Edit Options of Predefined and Third-Party Sources**

You can define the transaction document and document entry options for transactions that originate from predefined sources and third-party application sources. However, there is a limitation in editing these options. The options that you can edit for each source depend on whether the document entry is predefined for use with Oracle Fusion Applications or defined during implementation for use with third-party application sources.

**Document Edit Options**

The following table provides a list of document options that you can edit for predefined and third-party application source transactions. For third-party application source transactions, the table specifies whether the options are editable after you have created and imported transactions for the source.
### Document Options

<table>
<thead>
<tr>
<th>Document Options</th>
<th>Predefined Sources</th>
<th>Third-Party Application Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import raw cost amounts</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Import burdened cost amounts</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Allow duplicate reference</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Allow override of person organization</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Reconcile with source</td>
<td>Not editable</td>
<td>Editable</td>
</tr>
<tr>
<td>Archive after import</td>
<td>Editable</td>
<td>Editable</td>
</tr>
<tr>
<td>Revalidate during import</td>
<td>Editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Accounted in source application</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Create raw cost accounting journal entries</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Create adjustment accounting journal entries</td>
<td>Editable</td>
<td>Editable</td>
</tr>
</tbody>
</table>

### Document Entry Edit Options

The following table provides a list of document entry options that you can edit for predefined and third-party application source transactions. For third-party application source transactions, the table specifies whether the options are editable after you have created and imported transactions for the source.

<table>
<thead>
<tr>
<th>Document Entry Options</th>
<th>Predefined Sources</th>
<th>Third-Party Application Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure type class</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Allow adjustments</td>
<td>Editable</td>
<td>Editable</td>
</tr>
<tr>
<td>Allow reversals</td>
<td>Not editable</td>
<td>Editable</td>
</tr>
<tr>
<td>Allow modifications to unprocessed transactions</td>
<td>Editable for Oracle Fusion Projects</td>
<td>Editable</td>
</tr>
<tr>
<td></td>
<td>Not editable for other predefined sources</td>
<td></td>
</tr>
<tr>
<td>Process cross-charge transactions</td>
<td>Editable</td>
<td>Editable</td>
</tr>
<tr>
<td>Create related items</td>
<td>Editable</td>
<td>Editable</td>
</tr>
</tbody>
</table>
FAQs for Distribute and Install Desktop Integrator Client

Can I change the source and document for transactions after exporting them to Oracle Fusion Project Costing?

No. You can't change the source, document, or document entry after exporting a transaction to Project Costing.

What's the difference between Export to Excel and desktop integration for Excel?

You use the **Export to Excel** button or menu option to download data from your table as a Microsoft Excel file. You can then use this file to view or analyze your data.

You use desktop integration for Excel to create or edit records in Excel workbooks, and then upload them back into the application. This comes in handy when you have to work offline or make mass updates. In most cases, you download the desktop integrated workbook from a link in a panel tab or your table.

**Related Topics**
- Guidelines for Using Desktop Integrated Excel Workbooks

Why can't I find the business unit in the downloaded desktop Excel integration spreadsheets?

If your access is revised, then you have to download the desktop Excel integration spreadsheets again. For example, if you initially have access to Vision Operations business unit, then you view only this business unit listed in the Excel spreadsheets. If new business units are assigned or removed, you must download the templates again to view the business units according to your access in the Excel spreadsheets.

**Related Topics**
- How Source, Document, and Document Entry Components Work Together
- Transaction Document Import and Accounting Options
17 Project Control Configuration: Overview

Security Privileges for Budgets and Forecasts

Budget and forecast security is determined by a combination of project role, security roles (job and duty roles) and privileges, and workflow setup.

The following sections describe the privileges required to perform various steps in the budget creation, submission, and approval process. They also describe the impact of using workflow to manage status changes.

Note: The privileges and workflow setup for forecasting mirrors that for budgeting.

Creating and Submitting a Budget Version

The following table describes the access required to create and submit a budget version.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Privilege</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Access budget versions for a project</td>
<td>Manage Project Budget</td>
</tr>
<tr>
<td>2</td>
<td>Create a budget version</td>
<td>Create Project Budget</td>
</tr>
<tr>
<td>3</td>
<td>Submit working version</td>
<td>Manage Project Budget Working Version</td>
</tr>
<tr>
<td>4</td>
<td>Create baseline directly</td>
<td>Create Baseline Version Data</td>
</tr>
</tbody>
</table>

Note: The privilege required for editing budget versions in Excel is Manage Project Budget Excel Integration.

Note: Project managers may select to create a baseline directly instead of submitting a version for approval first.

As a project application administrator, you can configure the financial plan approval rules to support integration with other Oracle cloud services. For example, you can add workflow rules to validate that the total budget amount doesn’t exceed that of the strategic budget imported from the Enterprise Planning and Budgeting Cloud Service. The application auto-rejects the budget version if its total amount exceeds that of the Enterprise Planning and Budgeting Cloud Service (EPBCS) budget version with current baseline status.
This following figure describes the steps for creating and submitting a budget version for creation of a baseline.

Creating a Baseline for a Budget Version
The following table describes the access required to create a baseline for a budget version or reject it.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Privilege</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>If using workflow, receive notification of budget submission</td>
<td>NA (Approver e-mail ID is entered manually by users)</td>
</tr>
</tbody>
</table>
### Table: Project Control Configuration: Overview

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Privilege</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Access budget versions for a project</td>
<td>Manage Project Budget</td>
</tr>
<tr>
<td>3</td>
<td>Create baseline or reject budget</td>
<td>Create Baseline Version Data</td>
</tr>
</tbody>
</table>

This following figure describes the steps for creating a baseline for a budget version.

![Flowchart](image-url)
Reworking a Rejected Budget Version

The following table describes the access required to rework a rejected version (set it back to Working status) or delete it, if it's no longer required.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Privilege</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Access budget versions for a project</td>
<td>Manage Project Budget</td>
</tr>
<tr>
<td>2</td>
<td>Rework working version</td>
<td>Manage Project Budget Working Version</td>
</tr>
<tr>
<td>3</td>
<td>Delete working version</td>
<td>Manage Project Budget Working Version</td>
</tr>
</tbody>
</table>
The following figure describes the steps for reworking a rejected budget version.

**Related Topics**
- Project Roles in Budgeting and Forecasting

**Workflow of Budget and Forecast Approvals**

Use Business Process Engineering Language (BPEL) workflows to manage budget and forecast approvals. To do so, select to use workflow for status changes when creating or editing a financial plan type.

The following is a description of security considerations, approval rules, and the workflow process.
Addressing Security and Setting Approval Rules

Project administrators can use the Manage Project Roles task in the Setup and Maintenance work area to configure the project roles and individual participants that receive budget or forecast version creation and withdrawal notifications. Such notifications can include various descriptive flexfields.

When the project administrator or project manager creates a budget or forecast version and submits them for approval, the application sends notifications to all the participants that are configured to receive notifications.

The project administrator can configure the project roles and individual participants who receive notifications using the Manage Project Roles task in the Setup and Maintenance work area.

The submitted budget or forecast versions undergo a single level of approval. However, during implementation, you can define approval rules based on the following parameters:

- Total raw cost
- Total burdened cost
- Labor effort
- Equipment effort
- Margin percentage
- Margin

For example, set rules such as:

- If total burdened cost is less than or equal to $50,000, then the project administrator can approve budget versions.
- If total burdened cost is greater than $50,000, then the project manager must approve budget versions.

By default, the project manager can approve the budget or forecast versions. Additionally, a project administrator can configure which participants can approve the budget or forecast versions, depending on the business requirements.

When the project administrator or project manager withdraws the notifications or the workflow results in errors, the application reverts the status of the budget or forecast versions to the previous status.

Understanding the Budget and Forecast Status Flow

The following table and figure describe the stages in the budget and forecast status flow.

<table>
<thead>
<tr>
<th>Action Performed</th>
<th>Status</th>
<th>Notification Sent To</th>
<th>Action Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create version</td>
<td>Working</td>
<td>Creator (requester)</td>
<td>None.</td>
</tr>
<tr>
<td>Submit version</td>
<td>Submitted</td>
<td>Requester, approver, project roles, and participants</td>
<td>Approver can approve or reject version.</td>
</tr>
<tr>
<td>Approve version</td>
<td>Approved or Baseline</td>
<td>Requester, approver, project roles, and participants</td>
<td>None.</td>
</tr>
<tr>
<td>Reject version</td>
<td>Rejected</td>
<td>Requester, approver, project roles, and participants</td>
<td>None. Requester can optionally rework version.</td>
</tr>
</tbody>
</table>
FAQs for Project Control Configuration: Overview
What happens when a budget or forecast version is submitted?

Several changes occur when you submit a current working version of a budget or forecast for approval.

- The version status changes to Submitted.
- If the project manager approves the version, the version status changes to either Current Baseline or Current Approved.

**Note:** A new current working version is created simultaneously when you submit the current working version for approval.

If you use Business Process Engineering Language (BPEL) workflow for status changes, then submitting a budget or forecast triggers a notification to the project manager and the requesters must manually specify the approver details.

Can I include attachments when sending approval notifications?

Yes, you can include attachments in the project financial plan version approval workflow notifications. You can add attachments from the project or the financial plan version when you submit the budget version for baseline or the forecast version for approval so that approvers can view them.
Chapter 18

Project Control Configuration: Period Profiles

Period Profiles

Period profiles specify how periods are grouped and displayed when you edit financial or project plans that allow entry of amounts based on a calendar.

Note: Period profiles don't affect the periods for which you enter amounts. That is determined by the start and end dates of the financial or project plan line.

You select a period profile when specifying plan settings for a financial plan type or a project plan type. With the appropriate access, you can override this selection when creating budget or forecast versions for a project. Similarly, you can override the period profile associated with the project plan type at the project template or project level.

Period profiles are based on groups of periods from either an accounting calendar or a project accounting calendar. You can define an unlimited number of period groupings of varying duration in a period profile.

Predefined Period Profiles

The Project Financial Management applications contain two predefined period profiles:

- One based on the accounting calendar
- One based on the project accounting calendar

Both have 52 single period groupings. That is, each period grouping contains one period of a week's duration.

Designate Current Period for a Period Profile

You designate one period grouping in a period profile as the current period. The current period provides a reference point for grouping historical, current, and future period amounts.

When reviewing financial or project plans, the current planning period determines the period grouping with the current period. Periods before and after the current period are grouped using the period groupings. Amounts for periods outside the range specified by the period profile are summed and displayed as total amounts for a preceding period or succeeding period.

Scenario

The following table describes a period profile set up to accommodate detailed and summary-level planning for long-term projects. This period profile enables entry of amounts for a mix of monthly, quarterly, semiannual, and annual periods for a span of five years.
## Chapter 18

### Project Control Configuration: Period Profiles

Assume that the period profile is associated with a project with the following details:

- **Start Date:** July 1, 2005
- **Duration:** 10 years
- **Current Planning Period:** Aug-2010

When you review financial or project plans, information appears as described in the following table:

<table>
<thead>
<tr>
<th>Period or Period Group</th>
<th>Number of Periods</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preceding</td>
<td>36</td>
<td>July 2005 to June 2008</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
<td>July 2008 to June 2009</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>July 2009 to December 2009</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>January 2010 to March 2010</td>
</tr>
</tbody>
</table>
Period or Period Group | Number of Periods | Duration
--- | --- | ---
4 | 3 | April 2010 to June 2010
5 | 1 | July 2010
6 | 1 | August 2010
7 | 1 | September 2010
8 | 1 | October 2010
9 | 1 | November 2010
10 | 1 | December 2010
11 | 3 | January 2011 to March 2011
12 | 3 | April 2011 to June 2011
13 | 12 | July 2011 to June 2012
14 | 12 | July 2012 to June 2013
Succeeding | 36 | July 2013 to June 2015

Examples of Period Profiles

Period profiles specify how periods are grouped and displayed when you edit financial or project plans that allow entry of amounts based on a calendar.

The following are examples of defining period profiles for planning short-term and long-term projects. Both examples assume the use of one-month periods from the accounting calendar.

Period Profiles for Short-Term Projects

The following table describes a period profile configuration that accommodates detailed planning for short-term projects. This period profile enables entry of amounts by month for a period of one year.
### Period Profiles for Long-Term Projects

The following table describes a period profile configuration that accommodates detailed and summary-level planning for long-term projects. This period profile enables entry of amounts for a mix of monthly, quarterly, semiannual, and annual periods for a span of five years.

<table>
<thead>
<tr>
<th>Period Grouping</th>
<th>Number of Periods</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>
### Period Grouping

<table>
<thead>
<tr>
<th>Period Grouping</th>
<th>Number of Periods</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>12</td>
<td>5</td>
</tr>
</tbody>
</table>
19 Project Control Configuration: Spread Curves

Spread Curves

Spread curves let you distribute quantity, cost, and revenue amounts automatically across accounting or project accounting periods. You assign a spread curve to each resource class. Planning resources (in the planning resource breakdown structure) inherit the spread curve setting from the associated resource class. You can change the spread curve for the planning resource and for any corresponding task assignments, or budget or forecast lines.

You can create spread curves, use predefined spread curves, or edit them as required. This topic describes the following spread curve components:

- Spread curves
- Spread points
- Distribution factors
- Predefined spread curves

Spread Curves, Spread Points, and Distribution Factors

Spread curves other than Daily Spread Basis and Even contain 10 spread points. Specify distribution factors for any combination of the spread points.

When using a daily spread basis, the application allocates amounts to each period based on the ratio of the days in the period to the duration of the task assignment. Spread points are distributed proportionately across periods during financial or project planning. For example, if amounts are to be spread across four periods, the application allocates the combined value of 2.5 spread points to each period. The spread points for each period are the total number of spread points divided by the total number of periods (10 / 4).

Distribution factors are prorated according to the spread points allocated to each period. For example, if $100 is to be spread across four months for a planning resource that uses an even spread curve (where amounts are distributed evenly), the application assigns each period $25. The amount assigned to each period is the total amount multiplied by the spread points for the period (2.5 * 10).

Note: Spread points without values are assigned a zero distribution factor and hence corresponding periods aren’t allocated any amounts.

Predefined Spread Curves

The following table lists the predefined spread curves:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Distribution Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Even</td>
<td>Linear distribution of financial or project plan values across periods.</td>
<td>10-10-10-10-10-10-10-10-10-10</td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
<td>Distribution Factors</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>Prorated Even</td>
<td>Linear distribution of financial or project plan values across periods, with an exception of the first period and last period in the financial plan. Financial or project plan values for the first period and last period are prorated based on the number of days in the period.</td>
<td>10-10-10-10-10-10-10-10-10-10</td>
</tr>
<tr>
<td>Front Loaded</td>
<td>Front-loaded distribution of financial or project plan values across periods. Assigned amounts decrease over succeeding periods.</td>
<td>45-40-35-30-25-20-15-10-5-0</td>
</tr>
<tr>
<td>S Curve</td>
<td>S-shaped distribution of financial or project plan values across periods.</td>
<td>18-10-8-10-15-17-18-17-15-8</td>
</tr>
<tr>
<td>Bell Curve</td>
<td>Bell-shaped distribution of financial or project plan values across periods. Assignment of plan values is highest in the middle periods.</td>
<td>0-4-10-12-14-12-10-4-0-0</td>
</tr>
<tr>
<td>Daily Spread Basis</td>
<td>Spread is based upon the number of days in each financial period throughout the duration of the task assignment. Amounts are proportionally distributed throughout all periods for the duration of the task assignment.</td>
<td>None</td>
</tr>
</tbody>
</table>

**Spread Curve Distribution**

As a project manager, with the Enhanced Spread Curve Distribution feature, you can now manage the different stages in your project timeline by extending resource assignment dates in the financial project plan without spreading the periodic amounts again. You can modify the resource assignment to end early, and select a period from which to spread the amounts that aren’t allocated. Use the Edit Task Assignment Dates window of the Edit Period Amounts page to extend resource assignments dates.

**Calculate Project and Financial Plan Period Amounts Using Daily Spread Basis**

Assign the Daily Spread Basis spread curve to a resource class or planning resource to proportionately distribute budget, forecast, or project plan amounts across periods based on the ratio of the days in each period to the duration of the task assignment.
Settings That Affect Amount Distribution

You can’t define spread points for the Daily Spread Basis spread curve. Therefore, distribution factors aren’t calculated. Task assignment start and finish dates determine the number of days in each period, including the first and last periods, and consequently the allocation factor for each period.

Note: Assignment start and finish dates are included in the number of days in the period.

How Daily Spread Basis Amounts Are Calculated

When calculating period amounts, Oracle Fusion Project Portfolio Management performs the following steps:

1. Determines the number of days in the first and last period within the task assignment duration using assignment start and finish dates.
2. Determines the number of days in the other periods within the assignment duration.
3. Determines the total number of days for the duration of the task assignment.
4. Calculates the allocation factor for each period using the following formula:
   \[
   \text{period allocation factor} = \frac{\text{number of days in period}}{\text{task assignment duration}}
   \]
5. Calculates the periodic amount using the following formula:
   \[
   \text{amount} = \text{period allocation factor} \times \text{total resource cost or revenue}
   \]

Example: Standard Accounting Calendar

In this example, a company uses an accounting calendar with periods that are identical to calendar months. A resource is assigned to a task for 121 days, from February 21 until June 21.

The following table shows how the task assignment days are determined, and the resulting allocation factors.

<table>
<thead>
<tr>
<th>Month</th>
<th>Period Dates</th>
<th>Days in Period</th>
<th>Task Assignment Days</th>
<th>Period Allocation Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>January 1 through January 31</td>
<td>31</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>February</td>
<td>February 1 through February 28</td>
<td>28</td>
<td>8</td>
<td>8 / 121 = 0.0661</td>
</tr>
<tr>
<td>March</td>
<td>March 1 through March 31</td>
<td>31</td>
<td>31</td>
<td>31 / 121 = 0.2561</td>
</tr>
<tr>
<td>April</td>
<td>April 1 through April 30</td>
<td>30</td>
<td>30</td>
<td>30 / 121 = 0.2479</td>
</tr>
<tr>
<td>May</td>
<td>May 1 through May 31</td>
<td>31</td>
<td>31</td>
<td>31 / 121 = 0.2561</td>
</tr>
<tr>
<td>June</td>
<td>June 1 through June 30</td>
<td>30</td>
<td>21</td>
<td>21 / 121 = 0.1735</td>
</tr>
</tbody>
</table>
Example: 4-4-5 Accounting Calendar

In this example, a company uses a 4-4-5 accounting calendar, with four weeks in the first and second months of the quarter, and five weeks in the third month of the quarter. A resource is assigned to a task from February 21 until June 21.

The following table shows how the task assignment days are determined, and the resulting allocation factors.

<table>
<thead>
<tr>
<th>Month</th>
<th>Weeks in Period</th>
<th>Week Number</th>
<th>Ledger Start Date</th>
<th>Ledger End Date</th>
<th>Days in Period</th>
<th>Days in Ledger</th>
<th>Task Assignment Days</th>
<th>Period Allocation Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>121 / 121 = 1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>8</td>
<td>14</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>15</td>
<td>21</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>22</td>
<td>28</td>
<td>7</td>
<td>28</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>4</td>
<td>1</td>
<td>29</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>5</td>
<td>11</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>12</td>
<td>18</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>19</td>
<td>25</td>
<td>7</td>
<td>28</td>
<td>5</td>
<td>5 / 121 = 0.0413</td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>5</td>
<td>1</td>
<td>26</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>5</td>
<td>11</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>12</td>
<td>18</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>19</td>
<td>25</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>26</td>
<td>1</td>
<td>7</td>
<td>35</td>
<td>35</td>
<td>35 / 121 = 0.2892</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>9</td>
<td>15</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>16</td>
<td>22</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Examples of Distribution Factor Calculations for Spread Curves

Distribution factors are prorated according to the spread points allocated to each period.

For example, if $100 is to be spread across four months for a planning resource that uses a prorated even spread curve (where amounts are distributed evenly), then each period is assigned $25 each. That is, 10 spread points spread over 4 months equals 2.5 spread points per period. Each spread point has a distribution factor of 10.

The following is a description of how distribution factors are calculated for full or partial periods.

<table>
<thead>
<tr>
<th>Month</th>
<th>Weeks in Period</th>
<th>Week Number</th>
<th>Ledger Start Date</th>
<th>Ledger End Date</th>
<th>Days in Period</th>
<th>Days in Ledger</th>
<th>Task Assignment Days</th>
<th>Period Allocation Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>4</td>
<td>1</td>
<td>30</td>
<td>6</td>
<td>7</td>
<td>28</td>
<td>28</td>
<td>28 / 121 = 0.2314</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>7</td>
<td>13</td>
<td>7</td>
<td>28</td>
<td>28</td>
<td>28 / 121 = 0.2314</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>14</td>
<td>20</td>
<td>7</td>
<td>28</td>
<td>28</td>
<td>28 / 121 = 0.2314</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>21</td>
<td>27</td>
<td>7</td>
<td>28</td>
<td>28</td>
<td>28 / 121 = 0.2314</td>
</tr>
<tr>
<td>June</td>
<td>5</td>
<td>1</td>
<td>28</td>
<td>3</td>
<td>7</td>
<td>25</td>
<td>25</td>
<td>25 / 121 = 0.2066</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
<td>10</td>
<td>7</td>
<td>25</td>
<td>25</td>
<td>25 / 121 = 0.2066</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>11</td>
<td>17</td>
<td>7</td>
<td>121</td>
<td>121/121 = 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>18</td>
<td>24</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>25</td>
<td>1</td>
<td>7</td>
<td>35</td>
<td>25</td>
<td>25 / 121 = 0.2066</td>
</tr>
</tbody>
</table>
Calculating Weighted Distribution Factors

To continue our previous example: Say our planning resource was using a back-loaded spread curve rather than a prorated even spread curve.

⚠️ **Note:** Default distribution factors for a back-loaded spread curve are as follows: 0-5-10-15-20-25-30-35-40-45. Hence the total distribution for the spread curve is 225.

The following table describes how distribution factors are determined and amount allocated over the four planning periods.

<table>
<thead>
<tr>
<th>Period</th>
<th>Distribution Factor Calculation</th>
<th>Weighted Distribution Factor</th>
<th>Distribution Percentage</th>
<th>Distributed Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Distribution factors assigned to spread points 1 and 2 plus half of the distribution factor assigned to spread point 3: 0 + 5 + (0.5 * 10)</td>
<td>10.0</td>
<td>4.44%, (10.0/225)</td>
<td>$4.44</td>
</tr>
<tr>
<td>2</td>
<td>Half of distribution factor assigned to spread point 3 plus distribution factors assigned to spread points 4 and 5: (0.5 * 10) + 15 + 20</td>
<td>40.0</td>
<td>17.78%, (40.0/225)</td>
<td>$17.78</td>
</tr>
<tr>
<td>3</td>
<td>Distribution factors assigned to spread points 6 and 7 plus half of the distribution factor assigned to spread point 8: 25 + 30 + (0.5 * 35)</td>
<td>72.5</td>
<td>32.22%, (72.5/225)</td>
<td>$32.22</td>
</tr>
<tr>
<td>4</td>
<td>Half of distribution factor assigned to spread point 8 plus distribution factors assigned to spread points 9 and 10: (0.5 * 35) + 40 + 45</td>
<td>102.5</td>
<td>45.56%, (102.5/225)</td>
<td>$45.56</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>225</td>
<td>100%</td>
<td>$100</td>
</tr>
</tbody>
</table>
Deriving Spread Point Values and Prorating Distribution Factors for Partial Periods

Transaction start dates associated with a planning resource or task frequently don’t coincide with the start or end dates of a period. In such a case, the actual number of planning resource or task transaction days determines how spread points and constituent distribution factors are allocated to full and partial periods.

Assume that the dates for a task assignment cover only 15 days of the first month (a 30-day month) of a four-month planning period. That first month represents the value of 0.5 spread points.

In such a case, the spread point value for each full period is calculated by dividing the total number of spread points (10) by the number of periods corresponding to the transaction (3.5). In other words, spread point values are as follows:

- Full period: \(10/3.5 = 2.8571\)
- Partial Period: \((10/3.5) \times 0.5 = 1.4287\)

Related Topics

- How are distribution factors calculated for forecast ETC periods
20 Project Control Configuration: Financial and Project Plan Types

Financial and Project Plan Types

Financial plan types contain default setup information and planning options that you use for creating different types of budgets or forecasts. Similarly, project plan types contain default information used for creating a project plan and capturing progress.

When creating budget or forecast versions for a project, you must select an appropriate financial plan type. Versions inherit planning options from the financial plan type. Depending on access levels, you can change some settings.

You associate one project plan type to a project template, and override planning options if required. Projects created using the template inherit the updated planning options. You can revise these options at the project level, or even replace the project plan type.

As a project application administrator, you can now modify the project workflow status changes and enable the multicurrency support for a financial plan type after creating a financial plan type version.

Financial and Project Plan Setup Options

The following table describes the basic budget, forecast, or project plan setup options that determine how a plan type is used in the context of a project. Except for third-party scheduling, you can’t edit these options at the project level.

<table>
<thead>
<tr>
<th>Option</th>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
</table>
| Planning amounts              | Financial plan type | Indicates that the financial plan type supports the creation of versions with the following amounts:  
  • Cost amounts  
  • Revenue amounts  
  • Both cost and revenue amounts  
  • Either cost or revenue amounts |
| Approved budget or primary forecast | Financial plan type | Determines whether a financial plan type is used for creating approved budget versions or primary forecast versions that are used for plan comparison or project performance reporting. |
| Default financial plan type   | Financial plan type | Determines whether the financial plan type is the default selection when you create budget or forecast versions. |
| Workflows                     | Financial plan type | Enables the use of a workflow for managing budget or forecast status changes. |
### Related Topics

- What happens if I use Microsoft Project as a third-party scheduling application

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## How Financial Plan Types and Project Budget Versions Work With Budgetary Control

Financial plan types and budget versions in Project Control contain attributes that enable you to automatically create control budgets in Budgetary Control. Configuring these attributes on a financial plan type enable the budget versions that you create from that financial plan type to create control budgets.

The following figure shows the components of a financial plan type that you must configure to enable a project budget version for creating a control budget in Budgetary Control. The general budget information includes the plan class, planning amounts,
Implementing Project Financial Management and Grants Management

Chapter 20

Project Control Configuration: Financial and Project Plan Types

and the enable budgetary control option. The budgetary control settings are the control budget, control level, default rate type, and tolerance percentage.

<table>
<thead>
<tr>
<th>Financial Plan Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information and Budget Options</td>
</tr>
<tr>
<td>Plan Class</td>
</tr>
<tr>
<td>Planning Amounts</td>
</tr>
<tr>
<td>Budgetary Controls</td>
</tr>
<tr>
<td>Budgetary Control Settings</td>
</tr>
<tr>
<td>Control Budget</td>
</tr>
<tr>
<td>Control Level</td>
</tr>
<tr>
<td>Default Rate Type</td>
</tr>
<tr>
<td>Tolerance Percentage</td>
</tr>
</tbody>
</table>

General Information and Budget Options

Select the following options on the Edit Financial Plan Type page:

- Plan Class: Budget
- Planning Amounts: Costs

To enable a project template for budgetary control, as a project application administrator, select the Enable budgetary control from the Edit Basic Information window in the General tab of the Edit Project Template page. You can’t create an award if the project or project template is not enabled for budgetary control, but the award financial plan type that you select as the default plan type is enabled for budgetary control. When creating a project budget or an award budget, the application displays the financial plan types enabled for budgetary controls only if the budgetary control is enabled in the source project or template.

When using a project template that is enabled for budgetary control, by default, all the projects that you create using this template are enabled for budgetary control. When budgetary control is enabled for the project, you can create budgets with budgetary control using the financial plan type that is enabled for budgetary control. Similarly, you can create budgets using the financial plan type that is not enabled for budgetary control.

**Note:** A project can have only one financial plan type that is enabled for budgetary control. If a financial plan type that is enabled for budgetary control is used by a budget version on a project, then you can’t create another budget version with a different financial plan type enabled for budgetary control.
Managing Budget by Award and Funding Source for a Sponsored Project

For sponsored projects that are funded by multiple awards and funding sources, you can maintain a budget version for each award and project combination. You must enable this plan type as an approved cost financial plan type and an award financial plan type. For sponsored projects, you must also enable this financial plan type for budgetary control.

Budgetary Control Settings

The Budgetary Control Settings tab in the Planning Options section of the financial plan type and budget version contains the instructions for creating control budgets. The following table describes the attributes and their impact on control budgets.

<table>
<thead>
<tr>
<th>Attribute Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Budget</td>
<td>The level in the project hierarchy where you can enter budgetary control amounts. Enter amounts in the budget version at either the project level or the top resource level. The control budget contains these amounts, and Budgetary Control uses the project and top resource information to create the control budget account segments. For sponsored projects associated to multiple awards or funding sources, you can set one of the following control segments:</td>
</tr>
</tbody>
</table>
Baseline Budgets with Future-Dated Budget Managers

You can set budgetary control enabled project and award budgets that have future-dated budget managers to baseline. For example, if the project manager for a budgetary control enabled project budget or the principal investigator for a budgetary control enabled award budget is active in the future, even then you can set such budgets to baseline. This feature applies to both existing managers who will play the role in future and managers who will be hired in the future for the role.

Related Topics

- Why can't I edit the budgetary control settings for a budget version

Options for Planning Amounts in Financial Plan Versions

For each financial plan type, you select the planning amounts included in the financial plan versions created using the plan type.

Options include the following:

- Cost amounts only
- Revenue amounts only
- Both cost and revenue amounts
- Either cost or revenue amounts

Planning for Cost Only or Revenue Only

If you select to plan only for cost or revenue, then all budget or forecast versions created for the financial plan type contain only those amounts.

When you review versions created for cost-only financial plan types, margin values and other comparisons dependent on revenue amounts aren't available. Similarly, cost amounts are unavailable during review of versions of revenue-only financial plan types.

Planning for Both Cost and Revenue

You can select to plan for cost and revenue together. In such a case, each budget or forecast version created for the financial plan type contains both cost and revenue amounts.
Planning for Either Cost or Revenue

If you select to plan for cost and revenue separately, then each budget or forecast version created for the financial plan type can contain either cost or revenue amounts. When you review cost versions, select any revenue version created for the same financial plan type as the source for revenue amount for use in plan comparison.

Summarized Financial Plan Types

Summarized financial plan types are financial plan types whose previous and current approved versions (for forecasts) or original and current baseline versions (for budgets) are used in summarization of project performance data. Particular financial plan types are included in summarization by default, while you must manually select others.

Default Financial Plan Types

Approved forecast and baseline budget versions of the following financial plan types are automatically included in summarization of project performance data:

- Approved Revenue Budget
- Approved Cost Budget
- Primary Revenue Forecast
- Primary Cost Forecast

A budget or forecast financial plan type may support both cost and revenue in one version.

User-Selected Financial Plan Types

Apart from the default financial plan types, you can include up to four others in summarization of project performance data.

💡 Tip: You can include a financial plan type before it's used on a project for creating a version.

You can replace a user-selected financial plan type until project performance data is summarized for reporting. After that, you can only disable the financial plan type to exclude it from further summarization.

Related Topics

- Project Performance Data Summarization

Financial and Project Plan Types: General Planning Options
Example of Set Association with Financial Plan Types

You associate sets with financial or project plan types so that project managers can use them to create financial plans (budget or forecast versions) or project plans for projects or project templates. Financial or project plan types are available for selection only when projects or project templates are created for project units linked to selected sets.

The following example illustrates the relationship between financial plan types, sets, and project units. Project plan types share an identical relationship with sets and project units.

Scenario

An organization has two designated project units for project creation: Project Unit 1 and Project Unit 2. Project Unit 1 is associated with Set 1 and Project Unit 2 is associated with Set 2.

During implementation, two financial plan types were created: Financial Plan Type A and Financial Plan Type B. Financial Plan Type A is associated with Set 1. However, Financial Plan Type B is associated with both Set 1 and Set 2.

In such a case, project managers working on projects for Project Unit 1 can use only Financial Plan Type A to create financial plan versions. Project managers working on projects for Project Unit 2 can use both Financial Plan Type A and Financial Plan Type B.
The following graphic further illustrates the relationship between financial plan types, sets, and projects. Project plan types share the same relationship with sets.

Considerations for Selecting Rate Schedules for Project and Financial Planning

When specifying rate settings for financial or project plan types, you select to use either actual or planning rates for calculating cost or revenue for planning resources.

Actual rates are those that are used for calculating actual amounts for expenditure items. If you use planning rates, then you can select rate schedules created specifically for planning purposes.
The following is a description of the points to consider when selecting actual or planning rate schedules for calculating raw costs, burdened costs, and revenue.

**Selecting Rate Schedules when Using Actual Rates**

When using actual rates for project plan types and financial plan types that support cost amounts, you select cost rate schedules at the resource class level. Similarly, for financial plan types that support revenue amounts, you select bill rate schedules at the resource class level. If the application is unable to determine cost or bill rates for a planning resource, then it uses the resource class rates schedules you specify here.

**Selecting Rate Schedules when Using Planning Rates**

Some of the reasons for using planning rates are as follows:

- Project planning extends into the future, beyond dates for which actual rates are available. Using planning rates enables you to plan for future periods by making assumptions about potential rate increases or decreases.
- Planning is at a more summary level than when using actual rates. For example, use job-based rate schedules to plan, but actually track labor costs using cost rates defined at the employee level.

When using planning rates, you select rate schedules at the resource, job, and resource class levels. The following table summarizes the precedence order for determining cost or bill rates for a planning resource when deriving raw costs or revenue for rate-based planning resources.

<table>
<thead>
<tr>
<th>Rate Source</th>
<th>Precedence</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Override rate</td>
<td>1</td>
<td>Rate manually entered by users in the budget, forecast, or project plan</td>
</tr>
<tr>
<td>Labor or nonlabor rate schedules</td>
<td>2</td>
<td>Rate schedules selected for labor or nonlabor resources</td>
</tr>
<tr>
<td>Job rate schedules</td>
<td>3</td>
<td>Applicable only for labor resources</td>
</tr>
<tr>
<td>Resource class rate schedules</td>
<td>4</td>
<td>Used when rates aren’t available at the resource level. Specifying a resource class rate schedule is optional.</td>
</tr>
</tbody>
</table>

**Specifying a Burden Schedule when Using Planning Rates**

Optionally specify a burden schedule when specifying planning rate schedules. Project Financial Management applications use this burden schedule to calculate the burdened cost for all planning resources (including those that aren’t rate-based). If an expenditure type isn’t associated with the planning resource, then Project Financial Management applications use the expenditure type defined for the associated resource class to determine the burden multiplier, and ultimately, the burdened cost.
FAQs for Financial and Project Plan Types

What happens if I edit a financial or project plan type after using it on a project?
Once you associate a project plan type with a project or project template, or create budget or forecast versions using a financial plan type, you can’t edit certain financial or project plan setup options. These options include the primary forecast and approved budget designations, use of workflow, and the use of multiple transaction currencies.

Also, changes made to a financial plan type apply only to new financial plan versions. Similarly, there is no impact on existing project associations when you modify a project plan type.

Why can’t I select some financial plan types when generating a budget version while setting a baseline for the financial project plan?
As a project manager, when you generate a budget when setting a baseline financial project plan, you can select any active budget financial plan type that’s available for budget creation. However, some financial plan types (including the default financial plan type selected in the budget generation options of the project plan type) are unavailable for selection in the following circumstances:

- If you already selected an approved cost or revenue budget financial plan type for creating a budget version, then no other approved budget financial plan types are available.
- If you want to select a financial plan type with budgetary control enabled on it, then it’s unavailable for selection in the following circumstances:
  - The project or template isn’t enabled for budgetary control.
  - The business unit isn’t enabled for budgetary control.
  - The project is a sponsored project, then only an award budget is expected to be enabled for budgetary controls.
  - A different budgetary control enabled financial plan type is already used.

How can I enable budgetary control and encumbrance accounting for my transactions?
Use the Manage Budgetary Control or Manage Encumbrance Accounting task from the Setup and Maintenance work area to enable budgetary control and encumbrance accounting for your ledger and business unit. These tasks also allow you to enable budgetary control and encumbrance accounting for procure-to-pay business functions such as, requisitioning, procurement, and so on. Additionally, for project accounting business functions, you can exclude specific transaction sources and documents from budgetary control.

The project accounting business function requires that you enable budgetary control for a business unit before enabling encumbrance accounting.

Why can’t I enable budgetary control on a financial plan type?
Certain conditions must exist for you to enable the budgetary controls option on a financial plan type. You can enable budgetary controls if:

- Budgetary control is enabled for the Project Accounting Business Function. Manage this option in the Manage Budgetary Control task of the Setup and Maintenance work area.
- The plan class is Budget.
- The planning amounts contain a cost component.
Note: The option to enable budgetary controls isn’t present on the financial plan type if the planning amounts are for revenue only.

Can I create a version of a financial plan type before I run summarization?
Yes.

Financial Plan Types: Forecasting Options

Forecast Approval Options
Forecast approval options determine the approval process for forecast versions created for a particular financial plan type. Approval options determine whether you can do the following:

- Use workflow and notifications for approvals
- Automatically approve forecast versions
- Automatically submit forecasts for approval when creating baseline budgets

Using Workflow for Status Changes
Select this option if you want to use Business Process Execution Language (BPEL) workflows and notifications for forecast approvals. Workflows enable you to define a chain of approvers for moving forecasts from the working to the approved status.

Automatically Approving Forecasts
If you don’t use workflow for forecast approvals, then you can select to approve forecast versions directly. The automatically approve forecasts option applies even if you aren’t entitled to approve forecasts.

Tip: Use this option to enable automatic approval for certain financial plan types while controlling the forecast approval entitlement for others.

For example, disable this option for primary forecast financial plan types to ensure that only entitled users approve corresponding versions. Enable the option for other financial plan types that don’t require explicit approval, for example, those whose versions are used for what-if analysis.

Note: The automatic approval option applies only when manually approving forecasts. To approve forecasts versions that are generated automatically when publishing progress, you must be entitled to approve forecasts.

Automatically Submitting Forecast for Approval
Automatic submission for approval applies only to primary forecasts. If you select this option, the current working primary forecast version is submitted for approval when you create a baseline for an approved budget version for a project.

Note: If you select to automatically approve forecasts, the newly created working version of the primary forecast is directly approved.
The option to automatically submit forecasts for approval doesn’t apply when manually creating forecasts.

**Related Topics**

- Workflow of Budget and Forecast Approvals

**FAQs for Forecasting Options**

**What's a primary forecast?**

You can designate forecast financial plan types as primary cost forecasts, primary revenue forecasts, or both. You use versions of such financial plan types for plan comparison when reviewing budgets or forecasts. Primary forecast versions are also used by default when reporting on project performance.

For each project, you can use only one financial plan type that’s designated as a primary cost forecast or a primary revenue forecast. Either select separate financial plan types (one primary cost forecast and one primary revenue forecast) or a single financial plan type with both designations.

**Project Plan Types: Project Plan Options**

**How Task Dates Work with Assignment Dates**

Project application administrators can specify the task planned dates and task assignment date options when defining project planning options. These settings determine how planned and transaction dates are set for tasks and how dates are set for task assignments.

Want to see the settings? In the Setup and Maintenance work area, open the Manage Project Plan Types page in the Project Financial Management offering. Now, let’s see what happens when you select or deselect the various settings.

**Use Task Planned Dates as Task Assignment Dates**

When you select this option, task assignments last for the entire task duration. Let’s say the project manager set the task duration from January 1 through May 31, and the task assignment is from February 1 through March 1. The task assignment now runs from January 1 until May 31.

If you don’t select this option, the project manager can set the task assignment dates in the project and edit individual task dates.

**Automatically Roll Up Task Planned Dates**

When you select this option, the planned dates for the lowest level tasks are rolled up the task hierarchy. In this case:

- The project manager can only edit the planned dates for the lowest level tasks.
- Planned dates at the summary and project levels are equal to the earliest start date and last end date of the lowest level tasks.

If you don’t select this option, the project manager can edit project, summary, and lowest-level tasks dates in the project.
Synchronize Task Transaction Dates with Planned Dates

When you select this option, planned dates and task transaction dates are synchronized. The transaction dates always match task planned dates, plus or minus the number of days specified as a date adjustment buffer.

<table>
<thead>
<tr>
<th>Buffer Value</th>
<th>What Does It Mean?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>The number of days before or after the planned start or finish dates, respectively, that a transaction can be charged to a task.</td>
</tr>
<tr>
<td>Negative</td>
<td>The number of days after or before the planned start or finish dates, respectively, that a transaction can be charged to a task.</td>
</tr>
</tbody>
</table>

Note: With negative buffer, the transaction dates are always within the range of planned dates.

If you don’t synchronize the dates, the project manager can edit the project, summary, and lowest-level transaction dates in the project. This table lists the available options for each task level.

<table>
<thead>
<tr>
<th>Task Levels</th>
<th>Dates To Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest-level</td>
<td>Summary level-task dates as default transaction dates</td>
</tr>
<tr>
<td>Subtasks</td>
<td>Dates are within the transaction dates for the summary task</td>
</tr>
<tr>
<td>Transaction</td>
<td>Within the project date range</td>
</tr>
</tbody>
</table>

You can modify the date synchronization option until you charge transactions to a task. Let’s see the implications of changing between options.

<table>
<thead>
<tr>
<th>Change</th>
<th>What Happens?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deselected to selected</td>
<td>Existing transaction dates are replaced with dates calculated based on task planned dates plus or minus the date adjustment buffer.</td>
</tr>
<tr>
<td>Selected to deselected</td>
<td>Existing transaction dates become editable and dates outside the project dates are cleared. New transaction tasks have blank dates.</td>
</tr>
</tbody>
</table>

Related Topics

- Manage Financial and Project Plan Types: Set General Planning Options
- Financial and Project Plan Types: Explained
Project Date Cascade Options

Use the **Cascade option** choice list to determine whether your changes to project dates cascade to tasks.

Use the Basic Information region on the Edit Project Template page to select one of the following options:

- **Do not cascade project date changes to tasks:** Both start and finish dates are editable. However, you must ensure the following:
  - The project start date is not later than the earliest task date.
  - The project finish date is not earlier than the latest task date.

- **Cascade project start date change to affected tasks:** You can edit only the project start date.

- **Cascade project finish date change to affected tasks:** You can edit only the project finish date.

**Do not cascade project date changes to tasks** is the default value. You must select the cascade option each time you change the project dates, as your selection isn’t saved for future date changes.

If you select to roll up planned dates for tasks or are using an external application for scheduling, then you can’t modify the project start or finish dates.

Cascading Changes to Transaction Dates

If you selected to synchronize transaction dates with planned dates, then transaction dates are updated automatically when date changes cascade to tasks.

> **Note:** If transactions are already charged to a task, ensure that the existing transaction dates on the task lie within the new transaction dates.

Cascading Changes to Assignment Dates

If you selected to synchronize task assignment dates with task dates, then your changes to project dates will cascade to assignments automatically. Otherwise, you must ensure that all task assignment dates are within the range of the new task dates.

FAQs for Project Plan Options

**What's a baseline financial project plan?**

Key planned information for tasks and task assignments, including dates, costs, quantity, effort, and rates, that you can save from current project plan values. Setting a baseline for a financial project plan doesn’t create a new plan version. Rather, current plan information is saved in baseline columns of the current project plan.

As a project manager, you must set a baseline for your project plan before capturing progress. You can use the Manage Financial Project Plan page to set a baseline. Baseline amounts determine earned value for lowest-level tasks, which in turn are used to roll up physical percent complete to summary tasks.

You can’t delete baseline data, and baseline data doesn’t change unless you override it when you next set a baseline for the tasks.
Tip: By generating a budget version when you set a baseline for your financial project plan, you can maintain an historical record of past baseline data.
21 Overview of Microsoft Project Integration

How Microsoft Project Works with Project Financial Management

Microsoft Project integration enables project managers to create projects, complete in-depth scheduling using dependencies and constraints, and perform what-if analysis offline before synchronizing project plan and progress information with Project Financial Management applications in Oracle Fusion Project Portfolio Management.

Project executives, project accountants, and billing specialists can use the information exported to Oracle Fusion Project Portfolio Management for financial planning, project costing, billing and revenue accrual, and performance reporting.

The integration of Microsoft Project versions 2007, 2010, 2013, or 2016 for desktop with Project Financial Management applications lets you to do the following:

- Import templates or existing projects from Project Financial Management applications to create projects in Microsoft Project.
- Export projects from Microsoft Project to create projects in Project Financial Management applications.
- Synchronize existing projects with Project Financial Management applications.

**Note:** If Oracle Fusion Project Management is implemented, the synchronization option isn’t available.

- Import resources from the primary planning resource breakdown structure to use for creating task assignments in Microsoft Project.
- Plan and schedule projects, assign resources, and track progress.
- Import planned quantities and costs into Microsoft Project for progress collection.
- Export project plan and progress information to Project Financial Management applications.

Installing the Microsoft Project Integration Client

A project manager or project administrator can download and install the integration clients available for different versions of Microsoft Project to integrate with Project Management or Project Financial Management applications.

Before downloading the client, ensure that you have .NET Framework 4.5.2 or later versions installed on your computer. Contact your Help Desk to find the existing .NET Framework version and steps to upgrade it, if needed.

The following table provides the list of available clients and their features.

<table>
<thead>
<tr>
<th>Client for Project Financial Management Applications</th>
<th>Supported Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Project 2007</td>
<td>Scheduling only.</td>
</tr>
<tr>
<td>Microsoft Project 2010, 2013, or 2016 for desktop</td>
<td>Scheduling along with support of manual tasks, inactive tasks, free text, and so on.</td>
</tr>
</tbody>
</table>
Note that you can only have one integration client, either for Project Management or Project Financial Management applications, on your desktop. To switch between different clients, you must uninstall the existing client and install the other client.

To install the Microsoft Project Integration client for Project Financial Management applications:

1. From the Navigator, open Project Financial Management.
2. From the My Projects page, open the Actions panel tab and select Install Microsoft Project Integration to download the required client.
3. Save the client, extract the installation files to a local folder, and run the installation file from that folder.
4. Open the Microsoft Project application and from the Oracle Fusion Projects menu, select **Change Environment** and enter the URL for Oracle Fusion Applications.

You can change the environment URL at any time to support subsequent server changes.

**Importing Projects**

You can import a template or an existing project from Project Financial Management applications to create a new project file in Microsoft Project. During import, select to import all project information or only planning resources. If you want to subsequently export new task assignments for the project to Project Financial Management applications, you must import resources from the primary planning resource breakdown structure.

While importing templates from Project Financial Management applications, you can’t select a template that allows changes to the primary planning resource breakdown structure at the project level. This restriction doesn’t apply when importing projects.

When importing an existing project, retain the link if you intend to synchronize the project. If you only want to view project details, or intend to export the project to Project Financial Management applications as a different project later, then don’t retain the project link. The retain link isn’t available if Oracle Fusion Project Management is implemented and you can’t retain the project link if third-party scheduling is disabled for the project.

**Importing Resources and Rates**

You can import all planning resources from the primary planning resource breakdown structure associated with the project in Project Financial Management applications or import selected resources only.

Import rates from Project Financial Management applications to calculate planned costs in Microsoft Project. The **Cost Type** synchronization option determines whether raw cost rates or burdened cost rates are imported.

Before import, rates are derived for each resource based on the actual or planning rate schedules specified on the associated project plan type. Any override rates you specify on the project plan in Oracle Fusion Project Portfolio Management aren’t imported.

**Importing Actual Costs and Exporting Progress**

You can import actual quantity and costs either from the latest summarized data or from draft progress. The source of actual amounts determines how progress is exported, as described in the following table.

<table>
<thead>
<tr>
<th>Source of Actual Amounts</th>
<th>Impact on Exporting Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latest summarized data</td>
<td>Actual amounts on the draft progress are refreshed from the latest summarized data when you export progress. Also, you specify the progress as-of date in the synchronization options.</td>
</tr>
</tbody>
</table>

---

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When you export progress from Microsoft Project, the estimate-to-complete (ETC) method and physical percent complete calculation method are set to Manual. Values for planned, actual, and estimated finish dates and physical percent complete are exported at each level in the task hierarchy and don’t roll up in Project Financial Management applications. Values for all other attributes are transferred at the task assignment level and roll up in Project Financial Management applications.

After export, draft progress is published. A forecast version is generated depending on progress settings defined for the associated project plan type. You can export progress with raw cost if burdening isn’t enabled on the project type. If burdening is enabled, then you must use burdened cost to export progress. To achieve this, set the Cost Type synchronization option to **Burdened cost**.

### Exporting Projects from Microsoft Project

You can export a project from Microsoft Project to create a new project in Project Financial Management applications. Exporting links the projects in the two applications. Optionally, set a baseline for the project plan, and simultaneously generate a budget version and create a baseline.

> **Note:** When creating a new project, the financial plan type field shows the budgetary control enabled financial plan types only if the source project or template is enabled for budgetary control.

When exporting a project, you must select a source project or template unless you had originally imported a project or template from Project Financial Management applications. The source project or template must allow for third-party scheduling and the associated primary planning resource breakdown structure must not allow changes at the project level.

When exporting projects to Project Financial Management applications, Microsoft Project 2010 or later versions export the tasks based on various conditions as given in the following table.

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inactive tasks</td>
<td>Doesn’t export.</td>
</tr>
<tr>
<td>Manual tasks</td>
<td>Exports only if the manual tasks have valid dates and duration.</td>
</tr>
<tr>
<td>Manual summary tasks</td>
<td>Exports only if the schedule mode of all summary tasks is automatic. This is because the roll up doesn’t happen in Project Financial Management applications.</td>
</tr>
</tbody>
</table>

### Synchronizing Project Information

Use synchronization rules to transfer information from and to Microsoft Project. Select the required synchronization rule to synchronize all information, or import or export selected information only. For example, you can select to only synchronize schedule updates for the project. Depending on the synchronization rule, select synchronization options to determine how information is transferred. Also, ensure that you save the changes in Microsoft Project after synchronizing projects to avoid losing your data.

The following table describes the default direction in which attributes are transferred.
Chapter 21
Overview of Microsoft Project Integration

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Imported into Microsoft Project</th>
<th>Exported from Microsoft Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task structure</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Resources and resource rates</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Task attributes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Actual quantities and costs</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Scheduling and progress</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Note:** While importing or exporting projects, if you use a screen reader application, ensure that the focus is on the Transfer Report to read the details after your project transfer.

**Import Options while Synchronizing Projects**

Microsoft Project schedules tasks differently from the Project Financial Management applications. For example, Microsoft Project considers resource availability and tasks dependencies while the Project Financial Management applications don’t.

Microsoft Project uses three key attributes to schedule tasks: work, dates, and units. A change to one attribute must be offset by a change to one of the other two attributes. Because Microsoft Projects schedules tasks differently, you can’t import work and dates for new task assignments and still have the assignment units as 100%. When you import, you must select which of the three values you want Microsoft Project to calculate and the remaining two values are imported.

For example, assume you import a new task assignment with the following attributes:

- Work: 16 hours
- Start date: 03-AUG-15
- Finish date: 03-AUG-15

The new task assignments are imported as explained in the following table based on the option selected during synchronization:

<table>
<thead>
<tr>
<th>Option</th>
<th>Example Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculate Dates</td>
<td>With the start date as 03-Aug-15, the work as 16 hours, and the units as 100%, Microsoft Project calculates the finish date as 04-Aug-15.</td>
</tr>
<tr>
<td>Calculate Work</td>
<td>With the start date as 03-Aug-15, the finish date as 03-Aug-15, and the units as 100%, Microsoft Project calculates the work as 8 hours.</td>
</tr>
<tr>
<td>Calculate Units in Microsoft Project 2007 or Peak in Microsoft Project 2010 and later versions</td>
<td>With the start date as 03-Aug-15, the finish date as 03-Aug-15, and the work as 16 hours, Microsoft Project calculates the units or Peak as 200%.</td>
</tr>
</tbody>
</table>
22 Project Costing Configuration: General Costing Setup

Overview of Project Costing Configuration

The table lists the setup tasks for Oracle Fusion Project Costing with their grouping in task lists.

<table>
<thead>
<tr>
<th>Task List Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define General Costing Setup</td>
<td>Configure transaction sources, documents, profile options, and descriptive flexfields related to Oracle Fusion Project Costing functionality.</td>
</tr>
<tr>
<td>Define Capital Projects</td>
<td>Configure options used to capitalize project costs and place assets in service.</td>
</tr>
<tr>
<td>Define Borrowed and Lent Accounting</td>
<td>Configure borrowed and lent accounting to distribute project costs across organizations.</td>
</tr>
<tr>
<td>Define Project Costing Integrations</td>
<td>Configure options used to integrate Oracle Fusion Project Costing with other Oracle Fusion applications.</td>
</tr>
</tbody>
</table>

This chapter provides detailed setup steps for defining an additional segment for the cost collection flexfield. See the Implementing Subledger Accounting guide for more details.

Related Topics

- Implementing Subledger Accounting guide

How Time and Labor Works with Project Costing

The integration between Time and Labor and Project Costing allows project managers and accountants to manage time cards for employees and contingent workers.

Employees and contingent workers can view and update the time cards that they create. Based on the setup, a time card displays:

- All projects in the business unit.
- Only those projects in which the user is a team member.

Project managers review and approve the time card entries created for their projects. Project accountants import the time cards into Project Costing for costing, accounting, and analysis.
The following figure provides an overview of how time cards are created and approved in Time and Labor, validated and imported into Project Costing, and adjusted if required.

Using Time and Labor

Employees and contingent workers report project-related time in the Time work area. They account for their worked hours by selecting one or more projects, tasks, and expenditure types. Project managers approve the time cards submitted for their projects.

- Submitted time cards are validated automatically before they’re sent to project managers of associated projects for approval.
- You can choose the option to validate time cards on saving by configuring the Manage Time Consumer Sets task in the Setup and Maintenance work area.
- When the time card field is defined to filter projects based on team membership, then team members must be internal project team members on the projects for which they want to enter time.
Using Project Costing

Project accountants use the Import Costs process to validate and import approved time cards into Project Costing.

- Validations ensure that the project is valid, active, and supports transaction charges. The process also validates the following attributes.
  - Business unit
  - Transaction source information
  - Expenditure type and organization
  - Expenditure item date
  - Person
  - Worked hours
  - Batch name
  - Original transaction reference

- The project must be enabled for multiple language support and the project name must appear in the user session language.

- All time entries on a time card must be approved to import the time card.

- The time entry for a transaction must contain either the project number or project name, but not both.

Note: Document and document entry values for imported time card transactions are received from Time and Labor.

Certain expenditure item attributes are derived during import. The following table describes the derivation rules for the expenditure item attributes derived during import.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Derivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure end date</td>
<td>Calculated from expenditure item date and business unit.</td>
</tr>
<tr>
<td>Expenditure batch end date</td>
<td>Set to the maximum expenditure end date in the batch.</td>
</tr>
<tr>
<td>Work type</td>
<td>Derived from task details if the work type isn’t entered on the time card.</td>
</tr>
</tbody>
</table>

Additionally, you can edit the following values after import.

- Project
- Task
- Expenditure item
- Quantity
- Billable indicator
- Capitalizable indicator
- Utilization
Adjusting Time Cards

Employees and contingent workers can't modify their time cards in Project Costing. However, they can modify their time cards in the Time work area. For example, they can delete time cards for their projects or adjust time card details such as project, task, hours, or expenditure type.

Project accountants and project managers can modify time cards in Project Costing after importing them.

**Note:**
- Adjustments made in Project Costing are reversed if the time card is modified in Time and Labor and reimported.
- Adjust time cards in Time and Labor and then import to Project Costing instead of performing adjustments in Project Costing. This ensures that the latest time card information is present in Time and Labor.

**Related Topics**
- Implementing Time and Labor Guide

Project Transaction Sources

Transaction Sources

Transaction sources identify the source of transactions that you import into Oracle Fusion Project Costing. You control the transaction import and processing by specifying the source, document, and document entry options.

The transaction sources can be classified into two categories:

- Predefined sources
- Third-party application sources

Predefined Sources

Oracle Fusion Project Costing provides a set of predefined transaction sources that you can use to import transactions from other Oracle Fusion applications. The following table lists the predefined sources and their associated documents.

<table>
<thead>
<tr>
<th>Predefined Source</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Fusion Payables</td>
<td>• Supplier invoice</td>
</tr>
<tr>
<td></td>
<td>• Expense report</td>
</tr>
<tr>
<td></td>
<td>• Intercompany invoice</td>
</tr>
<tr>
<td></td>
<td>• Interproject invoice</td>
</tr>
<tr>
<td></td>
<td>• Payment</td>
</tr>
<tr>
<td>Oracle Fusion Projects</td>
<td>• Time card</td>
</tr>
<tr>
<td></td>
<td>• Usage expenditure</td>
</tr>
<tr>
<td></td>
<td>• Miscellaneous expenditure</td>
</tr>
<tr>
<td></td>
<td>• Inventory expenditure</td>
</tr>
<tr>
<td></td>
<td>• Burden expenditure</td>
</tr>
<tr>
<td></td>
<td>• Summarized burden expenditure</td>
</tr>
</tbody>
</table>
Predefined Source | Document
---|---
Predefined Source | Document
- Work-in-progress expenditure
- Capitalized interest expenditure
- Allocation expenditure
Oracle Fusion Cost Management | Purchase receipt
| Miscellaneous inventory
Oracle Fusion Purchasing | Purchase requisition committed cost
| Purchase order commitment cost
Oracle Fusion Time and Labor | Time card

**Third-Party Application Sources**

You can define additional transaction sources to import transactions from non-Oracle applications. For example, you can define the transaction source Payroll to identify expenditure items imported from an external payroll system. Similarly, you can create documents for a specific transaction source and document entries for a specific document.

**How Source, Document, and Document Entry Components Work Together**

When you create a transaction source, you select the transaction source options to control the transaction import processing. Transaction source, document, and document entry definitions determine how the application handles validation, import, processing, adjustment, and accounting of project cost transactions.
The following figure provides an example of a transaction source called Oracle Fusion Payables, associated documents called Supplier Invoice and Expense Report, and their document entries such as Invoice Price Variance, Exchange Rate Variance, Freight, Item Cost, and Nonrecoverable Tax.

**Sources**

At the transaction source level, you define the source and the processing set size. When transferring large number of transactions, you can reduce the impact of unexpected errors by processing transactions in sets. Define the set size by providing a value for the processing set size.
Documents
Documents represent the transactions that are imported to Oracle Fusion Project Costing. They are associated to a source. You specify the import and accounting options for transactions. Some of the options are interdependent.

- If the document entry is associated with the expenditure type class, Supplier Invoice or Expense Report, you cannot deselect the **Accounted in Source Application** and **Import raw cost amounts** options.
- If the document entry is associated with the expenditure type class, Burden Transactions, you cannot deselect the **Import raw cost amounts** or **Import burdened cost amounts** options.
- You can select the **Import burdened cost amounts** option only when the **Import raw cost amounts** option is selected.
- You can select the **Create raw cost accounting journal entries** option, if the **Accounted in Source Application** option is set to **No**.
- You cannot create a document for predefined transaction sources.

Document Entries
Document entries are a further breakdown of the document. They represent different types of transactions that come under a single, specific document. For the Burden Transactions expenditure type class, you specify the **Import raw cost amounts** and **Import burdened cost amounts** options at the document level; however, you cannot specify the **Allow adjustments** and **Allow reversals** options at the document entry level. Therefore, to allow adjustments and reversals, you either change the document options or select a different expenditure type class. You can define the following document entry options:

- **Allow modifications to unprocessed transactions**: After importing transactions from third-party application sources, you can edit the unprocessed transactions. You can also delete unprocessed transactions from third-party application and Oracle Fusion Projects sources.
- **Process cross-charge transactions**: You can allow cross-charge transactions processing.

**Related Topics**
- Document and Document Entry Edit Options of Predefined and Third-Party Sources

Transaction Source Options
Transaction sources identify the source of external transactions and determine how you import them into Project Financial Management. Consider the following aspects when you set up transaction sources:

- Transaction Source Options
- Document Options
- Document Entry Options
- Predefined Transaction Sources

**Transaction Source Options**
You specify the following option when setting up transaction sources.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing Set Size</td>
<td>Number of records processed in each set. When processing a large amount of data, reduce the impact of unexpected errors by processing transactions in sets. The import process saves</td>
</tr>
</tbody>
</table>
Oracle Project Portfolio Management Cloud
Implementing Project Financial Management and Grants Management

Chapter 22

Project Costing Configuration: General Costing Setup

Document Options
You specify the following options when setting up transaction source documents.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment Source</td>
<td>Identifies if the document is used for importing commitment transactions.</td>
</tr>
<tr>
<td>Commitment Type</td>
<td>Identifies type of the commitment transaction that you can import using the document. Possible values are:</td>
</tr>
<tr>
<td></td>
<td>• Purchase order</td>
</tr>
<tr>
<td></td>
<td>• Purchase requisition</td>
</tr>
<tr>
<td></td>
<td>• Supplier invoice</td>
</tr>
<tr>
<td></td>
<td>• Any other commitment transaction</td>
</tr>
<tr>
<td>Import Raw Cost Amounts</td>
<td>Imports transactions with the raw costs already calculated. The amount remains the same after you import the transaction. Designating an imported transaction as costed doesn’t affect burdening or accounting.</td>
</tr>
<tr>
<td></td>
<td>If Burden Transaction is the expenditure type class for one or more document entries, you can’t disable the Import Raw Cost Amounts option for the document. If the Commitment Source option is activated, then the Import Raw Cost Amounts option is available, but not available for editing.</td>
</tr>
<tr>
<td>Import Burdened Cost Amounts</td>
<td>Imports burdened costs for transactions. If selected, transactions without a burdened cost amount are rejected. When you select this option, the Import Raw Cost Amounts option is automatically selected.</td>
</tr>
<tr>
<td></td>
<td>If Burden Transaction is the expenditure type class for one or more document entries, you can’t disable the Import Burden Amounts option for the document.</td>
</tr>
<tr>
<td>Allow Duplicate Reference</td>
<td>Allows the document to have multiple transactions with the same original application reference.</td>
</tr>
<tr>
<td></td>
<td>If you select this option, then you can’t uniquely identify the item by source, document, or original application reference.</td>
</tr>
<tr>
<td>Revalidate During Import</td>
<td>Select this option to revalidate cost transactions that you import from other Oracle Fusion applications. This option is available for all the documents for the following predefined sources:</td>
</tr>
<tr>
<td></td>
<td>• Oracle Fusion Payables</td>
</tr>
<tr>
<td></td>
<td>• Oracle Fusion Cost Management</td>
</tr>
<tr>
<td></td>
<td>• Oracle Fusion Time and Labor</td>
</tr>
<tr>
<td></td>
<td>For example, time cards are validated according to business rules when you create them in Oracle Fusion Time and Labor. However, when this option is enabled, these time cards are rejected during import if the project is closed.</td>
</tr>
</tbody>
</table>

You can’t edit the following options for commitment document if you activate the Commitment Source option.
Option | Description
--- | ---
Allow Override of Person Organization | Allows the external application to provide an expenditure organization that is different from the owning organization of the person. If no expenditure organization is provided, the import process considers the owning organization of the person as the expenditure organization.

Reconcile with Source | Reconciles transactions between the document and the source application.

Archive After Import | Automatically archives successfully imported transactions when the import process completes.

Accounted in Source Application | Controls the accounts that are imported and the fields that are required from the transaction source application.

Create Raw Cost Accounting Journal Entries | Transfers cost accounting journals for the raw cost to the general ledger. Settings on the project type determine whether accounting journal entries for the burden cost and burdened cost are sent to the general ledger.

Create Adjustment Accounting Journal Entries | Transfers adjustments to the general ledger.

Document Entry Options
You specify the following option when setting up transaction source document entries.

Option | Description
--- | ---
Expenditure Type Class | Expenditure type class used for the document entry. If the document is a commitment document, then the expenditure type class is set to Supplier Invoice and you can’t edit the expenditure type class.

You can’t edit the following options if the document is a commitment document.

Option | Description
--- | ---
Allow Adjustments | Allows adjustments imported transactions in Project Financial Management after import. If Burden Transaction is the expenditure type class, you can’t disable the Allow Adjustments option.

Allow Reversals | Allow reversals of expenditure batches or expenditure items for the document entry. To manage reversals between the external application and Project Financial Management:
- Create reversals in the external application.
- Import the raw costs. This process creates reversal entries in Project Financial Management.

If Burden Transaction is the expenditure type class, you can’t select the Allow Reversals option.

Allow Modifications to Unprocessed Transactions | For transactions from third-party applications, allows deletion and edits to:
- rejected transactions after the import process is completed.
Option | Description
--- | ---
• pending transactions after they are loaded to the interface table and before the import process is submitted.
For transactions from the Oracle Fusion Projects predefined source, allows deletion of rejected and pending transactions.

Process Cross-Charge Transactions | If you select this option for a document entry, Project Financial Management performs cross-charge processing for transactions that originate from the source, document, and document entry.

Predefined Transaction Sources
Project Financial Management provides a set of predefined transaction sources that you use to import transactions from other Oracle Fusion applications. In addition, Project Financial Management uses predefined transaction sources to import the following:

• Project allocations
• Capitalized interest transactions
• Summarized burden transactions generated internally

You can define additional transaction sources to import transactions from third-party applications. For example, you can define the transaction source Payroll to identify expenditure items imported from an external payroll application. You control the transaction import processing by the options that you select for each transaction source.

Predefined transaction sources exist for the following Oracle Fusion applications:

• Payables
• Cost Management
• Projects
• Purchasing
• Time and Labor

Transaction Document Import and Accounting Options
Specify the import and accounting options in the transaction document to define the way in which cost transactions are imported and processed.

Transaction Import Options
The import options that you define for documents impact how the application imports transactions for that document. You specify the import options described in the following table for each document.

<table>
<thead>
<tr>
<th>Import Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import raw cost amounts</td>
<td>Select this option to import raw cost amounts on transactions from this document.</td>
</tr>
<tr>
<td>Import burdened cost amounts</td>
<td>Select this option to import burdened cost amounts on transactions from this document.</td>
</tr>
<tr>
<td>Allow duplicate reference</td>
<td>Select this option to allow the same original application reference for transactions from this document.</td>
</tr>
</tbody>
</table>
Import Options | Description
--- | ---
Allow override of person organization | Select this option to override the primary human resources assignment organization of the person on transactions from this document.
Reconcile with source | Select this option to reconcile transactions associated to this document in the source application.
Archive after import | Select this option to archive transactions from this document after importing them successfully.
Revalidate during import | Select this option to revalidate cost transactions that you import from this document. This option is available for all the documents for the following predefined sources:
- Oracle Fusion Payables
- Oracle Fusion Cost Management
- Oracle Fusion Time and Labor

Transaction Accounting Options
The accounting options that you define for documents impact how the application accounts transactions for that document. You specify the accounting options listed in the following table for each document.

| Accounting Options | Description |
--- | ---
Accounted in source application | Select this option to specify that cost transactions can be accounted in the source application. That is, you can account for raw, burden, or burdened costs externally. If the raw cost, burden, or burdened cost is accounted in the source, then the respective general ledger accounts are required to import the transactions successfully.
Create raw cost accounting journal entries | Select this option to create raw cost accounting journal entries on transactions.
Create adjustment accounting journal entries | Select this option to create adjustment accounting journals entries on transactions.

Related Topics
- Document and Document Entry Edit Options of Predefined and Third-Party Sources

Document and Document Entry Edit Options of Predefined and Third-Party Sources
You can define the transaction document and document entry options for transactions that originate from predefined sources and third-party application sources. However, there is a limitation in editing these options. The options that you can edit for each source depend on whether the document entry is predefined for use with Oracle Fusion Applications or defined during implementation for use with third-party application sources.
**Document Edit Options**

The following table provides a list of document options that you can edit for predefined and third-party application source transactions. For third-party application source transactions, the table specifies whether the options are editable after you have created and imported transactions for the source.

<table>
<thead>
<tr>
<th>Document Options</th>
<th>Predefined Sources</th>
<th>Third-Party Application Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import raw cost amounts</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Import burdened cost amounts</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Allow duplicate reference</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Allow override of person organization</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Reconcile with source</td>
<td>Not editable</td>
<td>Editable</td>
</tr>
<tr>
<td>Archive after import</td>
<td>Editable</td>
<td>Editable</td>
</tr>
<tr>
<td>Revalidate during import</td>
<td>Editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Accounted in source application</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Create raw cost accounting journal entries</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Create adjustment accounting journal entries</td>
<td>Editable</td>
<td>Editable</td>
</tr>
</tbody>
</table>

**Document Entry Edit Options**

The following table provides a list of document entry options that you can edit for predefined and third-party application source transactions. For third-party application source transactions, the table specifies whether the options are editable after you have created and imported transactions for the source.

<table>
<thead>
<tr>
<th>Document Entry Options</th>
<th>Predefined Sources</th>
<th>Third-Party Application Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure type class</td>
<td>Not editable</td>
<td>Not editable</td>
</tr>
<tr>
<td>Allow adjustments</td>
<td>Editable</td>
<td>Editable</td>
</tr>
<tr>
<td>Allow reversals</td>
<td>Not editable</td>
<td>Editable</td>
</tr>
<tr>
<td>Allow modifications to unprocessed transactions</td>
<td>Editable for Oracle Fusion Projects</td>
<td>Not editable for other predefined sources</td>
</tr>
<tr>
<td>Process cross-charge transactions</td>
<td>Editable</td>
<td>Editable</td>
</tr>
</tbody>
</table>
FAQs for Project Transaction Sources

**Can I assign a document to multiple sources?**
You can have a document with the same name in multiple sources but you can’t share documents across sources. For example, a corporation with multiple time capture systems can associate a time card document with Oracle Fusion Project Financial Management and a non-Oracle application as sources. The rules on how these transactions are treated differ based on how they’re processed in the source applications.

**Can I create documents and document entries for predefined transaction sources?**
No. You can create documents and document entries only for third-party transaction sources.

**Can I delete transaction sources, documents, and document entries?**
You can delete third-party transaction sources, documents, and document entries only if no cost transactions exist for them. However, you can’t delete the predefined transaction sources, documents, or document entries.

**Can I allow adjustments and reversals for all transactions in a document entry?**
No. You decide whether to allow transaction adjustments and reversals for each document entry that you create during implementation. However, you can’t define document entries to allow adjustments and reversals for transactions that are generated by the application, such as allocation transactions, capital interest expenditure transactions, or summarized burden transactions.

You can’t cancel an adjustment performed on an expenditure item for which funds are already reserved against a control budget.

**Can I change the source and document for transactions after exporting them to Oracle Fusion Project Costing?**
No. You can’t change the source, document, or document entry after exporting a transaction to Project Costing.
23  Project Costing Configuration: Capital Projects

Asset Cost Allocation Methods

The asset cost allocation method determines how indirect or common costs incurred on a project are allocated to multiple assets.

You can specify an asset cost allocation method to enable Oracle Fusion Project Costing to automatically allocate unassigned asset lines and common costs across multiple assets. Unassigned asset lines typically occur when more than one asset is assigned to an asset grouping level.

Projects and project templates inherit a default asset cost allocation method from the associated project type. You can override the default at the project level. If you use capital events to allocate costs, then you can also override the asset cost allocation method at the event level.

Asset Cost Allocation Methods

The following table describes the available asset cost allocation methods.

<table>
<thead>
<tr>
<th>Method</th>
<th>Basis of Cost Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Units</td>
<td>Number of units defined for each asset</td>
</tr>
<tr>
<td>Current Cost</td>
<td>Construction-in-process (CIP) cost of each asset</td>
</tr>
<tr>
<td>Estimated Cost</td>
<td>Estimated cost of each asset</td>
</tr>
<tr>
<td>Standard Unit Cost</td>
<td>Combination of the standard unit cost and the number of units defined for each asset</td>
</tr>
<tr>
<td>Spread Evenly</td>
<td>Equal allocation of cost to each asset</td>
</tr>
</tbody>
</table>

FAQs for Capital Projects

What's a standard unit cost method?

Standard unit cost method is one of the asset cost allocation methods that is used to allocate common and indirect costs to different assets. For example, you can allocate amounts such as salaries, administrative overhead, and equipment charges across several assets.
A standard unit cost is defined for an asset book and asset category combination. When you use this method, Oracle Fusion Projects multiplies the standard unit cost times the actual units based on the asset book and asset category of each asset and it determines the proration basis for allocating costs. Optionally, you can override the asset cost allocation method when defining capital events.

Can I designate cost of removal and proceeds of sale amounts when processing retirement costs?

Yes. When capturing retirement costs in a capital project, enter proceeds of sale amounts using expenditure types specifically created for that purpose. Oracle Fusion Project Costing automatically classifies amounts for all other expenditure types associated with the retirement cost task as cost of removal.

Capitalized Interest

Capitalized Interest Setup

To set up capitalized interest, you must specify the following capitalized interest options to calculate and capitalize interest on construction-in-progress costs.

- Capitalized Interest Rate: Define thresholds when projects or tasks become eligible for interest calculation and selecting the basis attributes used to calculate interest amounts.
- Capitalized Interest Rate Schedules: Create capitalized interest rate schedules with multipliers for organization and interest rate combinations to calculate capitalized interest.
- Capitalized Interest Rate Schedules for Project Types: Review and update project types to specify the default rate schedule for a capital project type. The rate schedule that you specify for a project type is the default rate schedule for all projects that you create for this project type. You can specify to override the default rate schedule at the project level.
- Capitalized Interest Generation on Project Status Controls: Use project status controls to determine the capitalized interest calculation through the various stages of a project. You must determine the project statuses for which you want to allow the calculation of capitalized interest and update project status controls accordingly. You can review the statuses at a later stage and modify them as required.

Capitalized Interest Setup Options

To correctly calculate capitalized interest, ensure that correct capitalization options are defined at the project type, project template, and project levels. At the project level, verify the following:

- The project allows capitalized interest calculation
- The appropriate capital interest rate schedule and capitalized interest stop date are specified

Allowing Capitalized Interest for a Project

Indicate whether the project is eligible for capitalized interest. By default, this option is enabled for all capital projects. However, you can update the option as required.
Selecting a Capital Interest Schedule and Capital Interest Stop Date
Capitalized interest rate schedules define rates of interest calculation for organizations. The default interest schedule is inherited from the project type. You can override it if the project type allows schedule changes at the project level.

Related Topics
- Asset Cost Allocation Methods

How Capitalized Interest Rate Schedule Components Work Together
Capitalized interest rate schedules help you maintain the interest rates at the organization level. If the capitalized interest rate is not defined for the organization, the application automatically uses the next higher-level organization in the organization hierarchy.

Capitalized Interest Rate Schedule Components
The following components work together to define a schedule for capitalized interest rates. Provide the rate schedule attributes and then build new multipliers for the version to take effect. You can assign the interest rate schedule to a project type and allow the override of the assigned capitalized interest rate schedule at the project level.

<table>
<thead>
<tr>
<th>Rate Schedule Components</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Organization Hierarchy</td>
<td>Organization hierarchy to assign rates to organizations. If there is no rate for an organization, the capitalized interest calculation uses the rate for the next higher-level organization in the organization hierarchy.</td>
</tr>
<tr>
<td>Hierarchy Version</td>
<td>The default version of the organization hierarchy to be applied to the schedule.</td>
</tr>
<tr>
<td>Hierarchy Start Organization</td>
<td>Start organization to indicate which branch of the organization hierarchy is used as the top of the hierarchy for assigning capitalized interest rates to organizations.</td>
</tr>
<tr>
<td>Hold from Build</td>
<td>Select this option to prevent the rate schedule version from being built, if version is not yet ready for the build.</td>
</tr>
<tr>
<td>Rate Multipliers</td>
<td>Specify rate multiplier for an organization and capitalized interest rate combination. Optionally, copy multipliers from other schedule version to this version and use it.</td>
</tr>
</tbody>
</table>

To delete an interest rate schedule, you must build the schedule and then delete it.

How Capitalized Interest Rate Attributes Work Together
Capitalized interest rates represent interest types that are used for capitalizing costs. The application calculates and capitalizes interest on construction-in-progress costs based on the attributes you define for a capitalized interest rate.

Capitalized Interest Rate Attributes
Define the following key attributes for a capitalized interest rate:
Capitalized Interest Rate Attributes | Description
--- | ---
Expenditure Type | Specifies the type of interest transaction that the rate generates.
Expenditure Organization Source | Specifies the expenditure organization source for the generated capitalized interest transactions.

### Threshold

- **Note:** All threshold specifications must be met before capitalized interest is calculated.

Thresholds determine when projects with the capitalized interest rate are eligible for interest calculation. Thresholds are defined for a business unit and capitalized interest rate combination. A rate can have more than one business unit, but the threshold that you define is specific to a business unit. You can specify any combination of the following threshold settings:

- **Amount Type:** Determines if a project is eligible for capitalized interest. The available options are: Budget, Total Construction-in-Progress, and Open Construction-in-Progress. If the amount type is budget, then select the budget type or plan type to define cost budget amounts.
- **Project Amount:** Specifies the project threshold amount. If you use the threshold amount type Budget and a budget is not defined for a project, then the project is ineligible for interest calculation.
- **Project Days:** Specifies the number of days from the project start date at which the project is eligible for capitalized interest calculation.
- **Task Amount:** Task threshold amount. Similar to project amount, if the amount type is budget, and a budget is not defined for a project, then the project is ineligible for interest calculation.
- **Task Days:** Number of days from the task start date at which the task is eligible for capitalized interest calculation.

### Current Period Calculation Method

You can control the construction-in-progress balance on which interest is calculated by specifying current period calculation method and excluded expenditure types. The current period calculation method specifies how much of the current period construction-in-progress costs are included in the construction-in-progress balance.

### Interest Method

Specify if interest must be calculated on a simple or compound basis.

### Basis Method

Determines if interest amounts are spread evenly across accounting periods or are derived based on the number of days in each accounting period.

### Excluded Expenditure Types

You can exclude one or more expenditure types from the construction-in-progress costs basis for a business unit to calculate capitalized interest.

---

**Capitalized Interest Calculation**

This section covers the settings that affect capitalized interest calculation and how simple interest is calculated.
Settings that Affect Capitalized Interest Calculation

The Calculate Capitalized Interest process takes the following settings into consideration.

- If asset lines are generated for expenditure items, the process doesn't generate capital interest for those items.
- If the expenditure type of a transaction is the same as the expenditure type defined on the Manage Capitalized Interest Rates page, and:
  - If the Interest Method is Simple, then the process doesn't generate interest on those interest transactions.
  - If the Interest Method is Compound, then the process generates interest even on those interest transactions.
- If the project setup date is before the period end date, the process doesn't generate capital expenditures.
- Here's how amount type affects capitalized interest:
  - If Budget is the Amount Type, the process checks if the Project Amount or Task budget for the Financial Plan Type meets the threshold Project Amount or Task Amount defined. Only if the threshold is met, it generates capital interest for expenditure items which haven't been capitalized.
  - If Open CIP is the Amount Type, the process checks if the sum of expenditure items which aren't capitalized meets the threshold Project Amount or Task Amount defined. Only if the threshold is met, it generates capital interest for items which haven't been capitalized.
  - If Total CIP is the Amount Type, the process checks if the sum of all the expenditure items (the ones that have been capitalized and the ones that haven't been capitalized) meets the threshold Project Amount or Task Amount defined. Only if the threshold is met, it generates capital interest for items which haven't been capitalized. Keep in mind that Capitalized Interest is not generated for expenditure items for which asset lines have been generated.

How Simple Interest is Calculated

Here's the formula used by the Calculate Capitalized Interest process to calculate simple interest.

\[
\text{Capital Interest Amount} = \text{Eligible Costs} \times \text{Period Multiplier} \times \text{Rate Multiplier}
\]

Here are the formulas to determine Eligible Costs, Period Multiplier and Rate Multiplier.

- Eligible Costs = Sum of Costs from Prior Periods + Current Period Costs * Current Period Calculation Method - Costs in Which Asset Lines were Generated
- If Basis Method is set to Spread evenly, then Period Multiplier = 1/12.
- If Basis Method is set to By number of days, then Period Multiplier = Number of days in the month/365. For example, for January, the value of Period multiplier is 31/365.
- Rate Multiplier = Interest Rate/100

Examples of Simple Interest Calculation

Let's look at examples of how simple interest is calculated for different settings.

Here's a table that contains the values of settings, such as Current Period Costs, Asset Lines Generated, Period Multiplier and Rate Multiplier, that affect simple interest for a period of 6 months. The table also contains the derived values of Eligible Costs for various Current Period Calculation Method settings.

<table>
<thead>
<tr>
<th>Month</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Period Costs</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
</tr>
</tbody>
</table>
Here’s a table that contains the values of simple interest calculated based on the settings in previous table for all the combinations of Current Period Calculation Method and Basis Method.

<table>
<thead>
<tr>
<th>Month</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Expenditure Items)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asset Lines Generated</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$10,000</td>
<td>$10,000</td>
<td>$10,000</td>
</tr>
<tr>
<td>Sum of Costs from Prior Periods</td>
<td>$0</td>
<td>$50,000</td>
<td>$100,000</td>
<td>$150,000</td>
<td>$200,000</td>
<td>$250,000</td>
</tr>
<tr>
<td>Eligible Costs when Current Period Calculation Method is Full (1)</td>
<td>$50,000</td>
<td>$100,000</td>
<td>$150,000</td>
<td>$190,000</td>
<td>$240,000</td>
<td>$290,000</td>
</tr>
<tr>
<td>Eligible Costs when Current Period Calculation Method is Half (0.5)</td>
<td>$25,000</td>
<td>$75,000</td>
<td>$125,000</td>
<td>$165,000</td>
<td>$215,000</td>
<td>$265,000</td>
</tr>
<tr>
<td>Eligible Costs when Current Period Calculation Method is None (0)</td>
<td>$0</td>
<td>$50,000</td>
<td>$100,000</td>
<td>$140,000</td>
<td>$190,000</td>
<td>$240,000</td>
</tr>
<tr>
<td>Period Multiplier if Basis Method is Spread evenly</td>
<td>1/12</td>
<td>1/12</td>
<td>1/12</td>
<td>1/12</td>
<td>1/12</td>
<td>1/12</td>
</tr>
<tr>
<td>Number of Days in the Month</td>
<td>31</td>
<td>28</td>
<td>31</td>
<td>30</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>Period Multiplier if Basis Method is By number of days</td>
<td>31/365</td>
<td>28/365</td>
<td>31/365</td>
<td>30/365</td>
<td>31/365</td>
<td>30/365</td>
</tr>
<tr>
<td>Rate multiplier</td>
<td>5% (0.05)</td>
<td>5% (0.05)</td>
<td>5% (0.05)</td>
<td>5% (0.05)</td>
<td>5% (0.06)</td>
<td>5% (0.06)</td>
</tr>
<tr>
<td>Month</td>
<td>January</td>
<td>February</td>
<td>March</td>
<td>April</td>
<td>May</td>
<td>June</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>----------</td>
<td>-------</td>
<td>-------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Simple Interest when:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Current Period Calculation Method is Full</td>
<td>$208.33</td>
<td>$416.67</td>
<td>$625.00</td>
<td>$791.67</td>
<td>$1,000.00</td>
<td>$1,208.33</td>
</tr>
<tr>
<td>• Basis Method is Spread evenly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple Interest when:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Current Period Calculation Method is Half</td>
<td>$104.17</td>
<td>$312.50</td>
<td>$520.83</td>
<td>$687.50</td>
<td>$895.83</td>
<td>$1,104.17</td>
</tr>
<tr>
<td>• Basis Method is Spread evenly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple Interest when:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Current Period Calculation Method is None</td>
<td>$0.00</td>
<td>$208.33</td>
<td>$416.67</td>
<td>$583.33</td>
<td>$791.67</td>
<td>$1,000.00</td>
</tr>
<tr>
<td>• Basis Method is Spread evenly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple Interest when:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Current Period Calculation Method is Full</td>
<td>$212.33</td>
<td>$383.56</td>
<td>$636.99</td>
<td>$780.82</td>
<td>$1,019.18</td>
<td>$1,191.78</td>
</tr>
<tr>
<td>• Basis Method is By number of days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple Interest when:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Current Period</td>
<td>$106.16</td>
<td>$287.67</td>
<td>$530.82</td>
<td>$678.08</td>
<td>$913.01</td>
<td>$1,089.04</td>
</tr>
</tbody>
</table>
Let's take a closer look at some of the examples.

Here's how simple interest is calculated for March when Current Period Calculation Method is Full and Basis Method is Spread evenly.

- Eligible Costs = $100,000 (Sum of Costs from Prior Periods. That is, costs for January and February.) + $50,000 (Current Period Costs. That is, costs for March.) * 1 (Current Period Calculation Method is Full) - $0 (Costs in Which Asset Lines were Generated) = $150,000
- Period Multiplier = 1/12 (Basis Method is Spread evenly)
- Rate Multiplier = 5/100 (Interest Rate is 5 percent)
- Simple Interest = $150,000*(1/12)*(5/100) = $625

Here's how simple interest is calculated for April when Current Period Calculation Method is Half and Basis Method is By number of days.

- Eligible Costs = $150,000 (Sum of Costs from Prior Periods. That is, costs for January, February and March.) + $50,000 (Current Period Costs. That is, costs for April.)*0.5 (Current Period Calculation Method is Half) - $10,000 (Costs in Which Asset Lines were Generated) = $165,000
- Period Multiplier = 30/365 (Basis Method is By number of days)
- Rate Multiplier = 5/100 (Interest Rate is 5 percent)
- Simple Interest = $165,000*(30/365)*(5/100) = $678.08

<table>
<thead>
<tr>
<th>Month</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculation Method is Half</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basis Method is By number of days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple Interest when:</td>
<td>$0.00</td>
<td>$191.78</td>
<td>$424.66</td>
<td>$575.34</td>
<td>$806.85</td>
<td>$986.30</td>
</tr>
</tbody>
</table>
FAQs for Capitalized Interest

What's a capital interest stop date?
Date that determines the accounting period up to which capital interest is calculated for a project or task.

For example, assume the stop date for your project is December 27, 2010 and your accounting periods are weekly. That is, the stop date falls in the fourth period of December. In such a case, capital interest is calculated only up to the third period in December 2010.
Chapter 24  Project Costing Configuration: Borrowed and Lent Accounting

Borrowed and Lent Business Unit Options

Cross-Charge Options for Project Business Units

Oracle Fusion Projects provides two methods to process cross-charge transactions.

- **Borrowed and Lent Accounting**: Creates accounting entries that move an amount equal to the transfer price between the provider and receiver organizations within a legal entity. There is no formal internal invoice created with this method. Costs or revenue are shared based on transfer price rules.
  
  Use the Borrowed and Lent processing method to apply cross-charge transactions within a business unit or between business units.

- **Intercompany Billing**: Enables the provider organization to present a formal invoice based on the transfer price to the receiver organization and receive payment for services rendered and materials supplied. You can use this processing method between legal entities.
  
  You must set up the contract business unit to use the Intercompany Billing processing method.

This section describes the project business unit options for setting up cross-charge transactions for sharing costs and revenue within and between business units in the same legal entity.

Transfer Price Currency Conversion

Select the date type, either transaction date or project accounting date, and rate type that the application uses by default to determine the conversion rate to convert the transfer price amount from the transaction currency to the ledger currency.

Cross-Charge Transactions Within a Legal Entity

The method of creating cross-charge transactions can be different for transactions within a business unit than the method used across business units. You can choose either the Borrowed and Lent Processing method of creating cross-charge transactions, or specify that no cross-charge transactions will be created.

The processing method that you specify for cross-charge transactions between business units is the default method used between the provider business unit and any other receiver business unit. You can override the default processing method for specific receiver business units.

**Note**: If you delete the override of the default processing method for a specific receiver business unit, you must manually adjust transactions to reflect the deleted controls.
Prerequisites for Setting Up Business Unit Options for Cross-Charge Transactions

Before you can set up the cross-charge options during business unit implementation to enable cross-charge transactions within a business unit and between business units, you must complete prerequisite setup steps.

Prerequisites for Creating Cross-Charge Transactions

You must define the following objects before you can create cross-charge transactions.

- Legal entities, including setting up accounting and associating the balancing segment values to the legal entity.
- Business units with the project accounting business function.
- Organizations and organization hierarchies that share resources.

Note: If you use organization hierarchies, the application uses the project expenditure organization hierarchy, and the project and task owning organization hierarchy, to determine the transfer price defined for the provider organization and receiver organization combination.

Prerequisites for Borrowed and Lent Processing Method

You can implement the Borrowed and Lent processing method of creating cross-charge transactions after defining the following objects.

- Transfer price rule and schedule
- Either a rate schedule or burden schedule, based on the transfer price rule

Prerequisites for Intercompany Billing Processing Method

For the Intercompany Billing processing method of creating cross-charge transactions, set up at least one of the following schedules.

- Rate schedule
- Burden schedule
- Transfer price rule and schedule

FAQs for Borrowed and Lent Business Unit Options

What’s the difference between intercompany billing and interproject billing?

Intercompany billing creates internal invoices and accounting entries to pass costs and share revenue across organizations on an intercompany billing contract. A provider organization performs work and charges it a project owned by the receiver organization. The provider organization creates an invoice in Oracle Fusion Receivables and the receiver organization imports the invoice from Oracle Fusion Payables. Accounting entries for revenue are created between the organizations.

Interproject billing creates internal invoices for costs incurred between a provider project and a receiver project defined on an interproject billing contract. The provider project generates an Oracle Fusion Receivables invoice, which the receiver project receives as an Oracle Payables invoice.
25 Project Costing Configuration: Project Costing Integrations

How Project Costing Integrates with Oracle Applications

Oracle Fusion Project Costing fully integrates with Oracle Fusion Purchasing, Oracle Fusion Self Service Procurement, Oracle Fusion Receipt Accounting, Oracle Fusion Expenses, Oracle Fusion Payables, Oracle Fusion Inventory Management, and Oracle Fusion Cost Management and enables you to capture and transfer project-related transactions. For example when you purchase goods, the project information is carried from the requisition to purchase orders to supplier invoices to finally project expenditure items.

Oracle Fusion Project Costing also integrates with Oracle Fusion Assets to capture capital assets and retirement adjustment costs. Oracle Fusion Project Costing fully integrates with Oracle Fusion Subledger Accounting so that you can create accounting for your project-related transactions.

Implementing Oracle Fusion Payables

Implement Oracle Fusion Payables to enter project-related supplier invoices in Oracle Fusion Payables and to import project-related expense reports from Oracle Fusion Expenses. You use supplier and invoice information in Oracle Fusion Payables to create expenditure items for projects in Oracle Fusion Project Costing.

When the primary accounting method is accrual basis accounting, you transfer invoice distributions and payment discounts as actual costs. When invoices are matched to receipt accrual purchase orders, Oracle Fusion Supply Chain Management transfers invoice variances to Oracle Fusion Project Portfolio Management. For receipt accruals, Oracle Fusion Payables transfers discounts to Oracle Fusion Project Portfolio Management.

Implementing Oracle Fusion Purchasing, Oracle Fusion Self Service Purchasing, Oracle Fusion Receipt Accounting, and Oracle Fusion Cost Management

Implement Oracle Fusion Purchasing and Oracle Fusion Self Service Purchasing to enter project-related requisitions, requests for quotations, and purchase orders, and then report them as outstanding committed costs of requisitions and purchase orders on your projects.

Implement Oracle Fusion Receipt Accounting to create receipts against purchase orders. Thereafter, Oracle Fusion Cost Management transfers project-related receipt accruals as actual supplier costs. When the primary accounting method is accrual basis accounting, you transfer the costs associated with the receipt as actual costs. Oracle Fusion Cost Management transfers the variances for receipt accruals by accumulating the costs from Oracle Fusion Payables and then transfers them to Oracle Fusion Project Portfolio Management.

Implementing Oracle Fusion Inventory Management

Implement Oracle Fusion Inventory Management to order and receive items into inventory before assigning them to a project. You can capture project information for miscellaneous transactions and movement requests as you take items out of or receive items into Oracle Fusion Inventory Management. When you enter project-related transactions in Oracle Fusion...
Inventory Management, you enter the project information on the source transaction. Oracle Fusion Cost Management transfers project-related miscellaneous inventory issues and move orders to Oracle Fusion Project Portfolio Management.

Implementing Oracle Fusion Expenses

Employees and contingent workers can enter and submit expense reports. Oracle Fusion Expenses doesn’t reimburse employees and contingent workers in the same manner. When you submit an expense report for reimbursement, the reimbursement process creates:

- Payment requests for employees
- Invoices for contingent workers

Oracle Fusion Expenses integrates with Oracle Fusion Payables to provide quick processing of expense reports for payment. You can create project-related expense reports in Oracle Fusion Expenses and transfer to Oracle Fusion Payables and then to Oracle Fusion Project Costing.

Implementing Oracle Fusion Assets

Implement integration with Oracle Fusion Assets to collect construction-in-progress and expense costs in Oracle Fusion Project Costing for each asset you’re building. You can then update your fixed asset records when assets are ready to be placed in service or retired. In addition, you can perform retirement cost processing to capture retirement-work-in progress costs associated with the retirement of assets in Oracle Fusion Assets.

Implementing Oracle Fusion Subledger Accounting

Oracle Fusion Subledger Accounting is the single source of all internally derived accounting. Oracle Fusion Project Costing seamlessly integrates with Oracle Fusion Subledger Accounting for accounting costs. After the accounting events are generated in Oracle Fusion Project Portfolio Management, the subledger accounting entries are created and then transferred to the Oracle Fusion General Ledger.

For transactions imported from other Oracle Fusion applications, such as Oracle Fusion Payables, Oracle Fusion Receipt Accounting, and Oracle Fusion Cost Management, you can view accounting entries created in Oracle Fusion Subledger Accounting without navigating to the source application. For transactions imported from non-Oracle applications, you can view the accounts imported into Oracle Fusion Project Costing without navigating to the third-party application.

Project Costs Capture

Capture project-related costs from both Oracle Fusion applications and third-party applications and then transfer them to Oracle Fusion Project Costing. You can capture costs manually by creating uncosted, costed, and accounted transactions for third-party application sources in Project Costing.

Transaction Sources

Costs are created in internal and external applications before being processed. The following table lists cost types and the corresponding source applications.

<table>
<thead>
<tr>
<th>Source Name</th>
<th>Type of Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Fusion Expenses</td>
<td>Expense Reports</td>
</tr>
</tbody>
</table>
## Oracle Fusion Payables
- **Supplier Invoices**
- **Self-Assessed Tax**
  
  Self-assessed tax transactions from Oracle Fusion Payables are created as payable commitments in Project Costing.

## Oracle Fusion Purchasing
- **Self-Assessed Tax**
  
  Self-assessed tax transactions from Oracle Fusion Purchasing are created as PO commitments in Project Costing.
- **Purchase Orders**
- **Purchase Requisitions**

Purchase orders and purchase requisitions are available as committed costs for reporting in Project Costing.

## Oracle Fusion Receivables
- **Receipts**

## Oracle Fusion Inventory
- **Miscellaneous Transactions**
- **Movement Requests**

## Oracle Fusion Cost Management
- **Expense-Based Receipts**
- **Inventory Miscellaneous Transactions**
- **Inventory Movement Requests**

## Oracle Fusion Project Costing
- **Costs in Unreleased Expenditure Batches**
- **Adjustment Transactions**
- **Unprocessed Transactions**

## Third-Party Applications
- **External Costs** imported using desktop Excel integration, web services, or Oracle Cloud interface.
Capture of Costs

The following figure illustrates how you can capture different types of costs from internal and external applications, and then transfer them to Oracle Fusion Project Costing.

![Capture Project Costs Diagram]

The following table shows various sources of transactions and how they are exported to Oracle Project Costing.

<table>
<thead>
<tr>
<th>Source of Cost Transactions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Oracle Fusion applications</td>
<td>Enter and process project-related transactions, and then submit the Import Costs process. For example, you enter invoices with project-related distributions in Oracle Fusion Payables, validate, account, and then import them to Project Costing.</td>
</tr>
</tbody>
</table>
Capturing Additional Transaction Attributes

Use the Cost Collection Flexfield to capture product-specific attributes on actual cost and commitment transactions. You can manage naming, validation, and ordering of these attributes within each of the documents that capture them, such as expense reports and purchase orders. You can capture, store, display, search, and report project-related attributes in the transaction source applications.

Related Topics
- How Project Costs are Imported
- ADFdi Spreadsheets to Enter Project Costs: Explained
- File Based Data Import for Oracle Project Portfolio Management Cloud

Time and Labor and Project Costing Integration Setup

Time and Labor managers and administrators, and application implementation consultants can enable employees, contingent workers, and team members to enter project time by creating new objects for them or adding them to existing user groups. They can also restrict the list of visible projects for time entry.

Entering Project and Payroll Time on a Single Time Card

The following table lists the various delivered objects that Time and Labor managers and administrators can use to allow entry of project and payroll time on a single time card.

<table>
<thead>
<tr>
<th>Object Type</th>
<th>Delivered Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM User Group</td>
<td>Projects and Payroll Usage</td>
</tr>
<tr>
<td>Time Entry Profile</td>
<td>Projects and Payroll Time Entry Profile</td>
</tr>
</tbody>
</table>
Object Type | Delivered Object
--- | ---
Time Processing Profile | Projects and Payroll Time Processing Profile
Layout Set | Projects and Payroll Layout Set

### Entering Time for Assigned Projects

Time and Labor managers and administrators can use the following objects to enable team members to enter time only for the projects to which they’re assigned.

<table>
<thead>
<tr>
<th>Object Type</th>
<th>Delivered Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects Usage</td>
<td>HCM User Group</td>
</tr>
<tr>
<td>Projects Layout Set Filtered by Project Team Members</td>
<td>Layout Set</td>
</tr>
</tbody>
</table>

To enable team members to enter time only for their projects, new time entry and time processing profiles must be created.

### Restricting the List of Projects for Time Entry

Time and Labor managers and administrators can restrict the list of visible projects for which resources can enter time.

The list of projects in Time and Labor can be restricted by:

- Team Members: Team members can view and enter time for only those projects that they’re assigned to.
- Transaction controls: Only those resources that are added to the project transaction control can view and enter time for the project.

**Related Topics**
- Enable Team Members to Enter Project Time

### Project-Related Accounts Derivation for Oracle Applications

Account rules specify how the Account Combination is derived on subledger journal entry lines. You can specify the conditions under which a rule becomes applicable. Using this feature, you can develop complex rules for deriving accounts under different circumstances. Accounts imported from third-party applications or the Oracle Application Desktop Framework Desktop Integration are available as sources in Oracle Fusion Subledger Accounting.

You can optionally create account rules with your specifications. If you define an account rule for an account combination, then the rule determines each segment of the Accounting flexfield. If you define an account rule for a segment, then the rule determines the value for a single Accounting flexfield segment. You can use both segment and account combination rules to derive a single account. If you assign both types of account rules to a single journal line definition, then Oracle Fusion Subledger Accounting uses the account segment rules first and then takes the remaining values from the account combination rule.
Deriving Projects-Related Accounts

The only method to derive project-specific accounts is to use project sources in the accounting method. You define account rules to derive project-related accounts for the following Oracle Fusion applications:

- Oracle Fusion Purchasing: Project-specific accounts, such as the purchasing charge account and accrual account, are derived by using transaction account derivation rules.
- Oracle Fusion Cost Management: All project-specific accounts are derived during accounting creation in Oracle Fusion Subledger Accounting.
- Oracle Fusion Payables: The project-specific accounts are not derived until the journal entries are created within Oracle Fusion Subledger Accounting. Oracle Fusion Payables need not derive project-specific accounts because they are derived after the records are transferred to Oracle Fusion Payables.
- Oracle Fusion Receivables: AutoAccounting generates a default account for invoices originating from Oracle Fusion Project Billing. If you need a contract-specific account, you must set up account rules in Oracle Fusion Subledger Accounting to override the default account when the final accounting is performed by Oracle Fusion Receivables.

You must update the account rules to derive project-specific accounting. Create project-specific rules by evaluating the Project Identifier. Derive a project-specific account combination or override a single account segment with a project-specific value. Use more than 100 project-specific sources to create mapping sets and account rule conditions. Examples of these sources include:

- Billable Indicator
- Capitalizable Indicator
- Retirement Indicator
- Project Type
- Expenditure Type
- Expenditure Type Descriptive Flexfield Attribute 1
- Task Descriptive Flexfield Attribute 1

**Related Topics**

- Account Rules
- Project Costing Accounts for Budgetary Control: Explained

FAQs for Budgetary Control Integration

How can I enable budgetary control and encumbrance accounting for my transactions?

Use the Manage Budgetary Control or Manage Encumbrance Accounting task from the Setup and Maintenance work area to enable budgetary control and encumbrance accounting for your ledger and business unit. These tasks also allow you to enable budgetary control and encumbrance accounting for procure-to-pay business functions such as requisitioning, procurement, and so on. Additionally, for project accounting business functions, you can exclude specific transaction sources and documents from budgetary control.
The project accounting business function requires that you enable budgetary control for a business unit before enabling encumbrance accounting.

Can I perform budgetary control validation for cross-charge transactions?

The application performs budgetary control validation in context of the transaction ledger and expenditure business unit. If you enable budgetary control for the transaction ledger and business unit, then budgetary control validation is performed against project control budgets if the project control budgets also exist in the same ledger.

FAQs for Purchasing Integration

Where do I provide project information for project-related requisitions and supplier invoices?

You enter project information at the distribution line level for project-related requisitions and purchase orders in Oracle Fusion Purchasing, and for project-related supplier invoices in Oracle Fusion Payables. For requisitions, the requisition distribution attributes default from what is specified during the implementation. For purchase orders, the purchase order attributes default from the purchase order line and the purchase order line attributes default from the purchase order header. The distribution level values are used for validation and import.

FAQs for Payables Integration

How can I validate distribution sets for projects information?

Oracle Fusion Projects performs validations on Oracle Fusion Payables distribution sets for payables invoices at the time you create the actual distribution set lines. It validates the project and task number during the invoice validation.

Distribution sets are typically used on recurring transactions, and the associated project does not have transaction controls. When you create a distribution set in Oracle Fusion Payables, the distribution set line is not validated against the project transaction controls in Oracle Fusion Projects because you do not enter an expenditure item date, which is required for transaction control validation. The expenditure item date is not provided because you use the distribution sets for an indefinite period of time.

FAQs for Inventory Integration
How can I define bill rates for inventory items?

You can enter cost markups in the nonlabor rate schedule instead of rates for expenditure types that are related to inventory items.

Alternatively, if you enter a bill rate for an expenditure type that relates to inventory items, then the base unit of measure for inventory transactions reported under the expenditure type must be the same as the unit of measure for the expenditure type. If the base unit of measure for an inventory transaction differs from the unit of measure for the expenditure type, the Generate Revenue process reports an error and doesn’t process the transaction.
## 26 Project Billing Configuration: Overview

### Overview of Project Billing Configuration

In the Define Project Billing Configuration activity, you configure enterprise contracts and project billing components to invoice customers and recognize revenue for project contracts in Project Financial Management.

The following table lists the essential setup tasks in the Define Project Billing Configuration activity.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define Contracts Configuration for Project Billing</td>
<td>Define and manage setup related to project contracts including contract types and content that can be used consistently across contracts.</td>
<td>Task list</td>
</tr>
<tr>
<td>Manage Contract Layout Templates</td>
<td>Create and maintain layout templates used to preview or print contract documents.</td>
<td>Task</td>
</tr>
<tr>
<td>Manage Contract Types</td>
<td>Create and maintain contract types to specify properties of different contracts such as the type of permitted contract lines, party roles, contract validation checks, and the contract acceptance and signature requirements.</td>
<td>Task</td>
</tr>
<tr>
<td>Specify Customer Contract Management Business Function Properties</td>
<td>Specify and manage currency conversion rules, project billing rules and default values, adoption rules for contract standards and policies, and other contract management functions.</td>
<td>Task</td>
</tr>
<tr>
<td>Define Project Contract Parties</td>
<td>Create and maintain parties for use on a contract.</td>
<td>Task list</td>
</tr>
<tr>
<td>Define Project Contract Roles</td>
<td>Define the roles for parties and contacts on a contract.</td>
<td>Task list</td>
</tr>
<tr>
<td>Define Project Contract Types and Lookups</td>
<td>Define and manage types and lookup values used on contracts, such as contract types, risks, and hold reasons.</td>
<td>Task list</td>
</tr>
<tr>
<td>Define Project Contract Business Unit Options</td>
<td>Configure the business unit implementation options used in Oracle Fusion Enterprise Contracts.</td>
<td>Task list</td>
</tr>
<tr>
<td>Define General Project Billing Setup</td>
<td>Enable project billing, manage the general project billing setup, and configure the project billing business unit options.</td>
<td>Task list</td>
</tr>
</tbody>
</table>
### Project Billing Configuration: Overview

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define Project Billing Common Reference Objects</td>
<td>Review and manage common objects, for example value sets and messages, that are used by Oracle Fusion Project Billing.</td>
<td>Task list</td>
</tr>
<tr>
<td>Manage Project Billing Descriptive Flexfields</td>
<td>Define validation and display properties of descriptive flexfields, which are used to add attributes to Oracle Fusion Project Billing.</td>
<td>Task</td>
</tr>
<tr>
<td>Manage Project Types: Billing Indicator</td>
<td>Review and update project types to indicate whether the project type is billable.</td>
<td>Task</td>
</tr>
<tr>
<td>Manage Work Types: Billing Indicator</td>
<td>Review and update work types to indicate whether the work types are billable.</td>
<td>Task</td>
</tr>
<tr>
<td>Manage Billing Cycles</td>
<td>Create billing cycles to control how often and on which dates a project is billed.</td>
<td>Task</td>
</tr>
<tr>
<td>Manage Event Types</td>
<td>Configure options used to control how billing events are entered, processed, accounted, and reported. Billing events are used as source transactions, representing milestones or progress, in the generation of invoices and revenue for fixed-price contract lines.</td>
<td>Task</td>
</tr>
<tr>
<td>Manage Revenue Methods</td>
<td>Create revenue methods used to recognize revenue.</td>
<td>Task</td>
</tr>
<tr>
<td>Manage Invoice Methods</td>
<td>Create invoice methods used to calculate the invoice amount.</td>
<td>Task</td>
</tr>
<tr>
<td>Define Project Billing Business Unit Options</td>
<td>Configure the customer contract management business function options used in project billing.</td>
<td>Task list</td>
</tr>
</tbody>
</table>

Refer the following guides for more information:

- Implementing Enterprise Contracts
- Implementing Receivables Credit to Cash
- Implementing Subledger Accounting
- Implementing Tax

**Related Topics**

- Implementing Enterprise Contracts guide
- Implementing Receivables Credit to Cash guide
- Implementing Subledger Accounting guide
- Implementing Tax guide
27  Project Billing Configuration: Configure Contracts for Project Billing

Define Document Sequences

Document Sequences

You can assign a document sequence number to each business document or business event to uniquely identify it. For example, you can assign a document sequence number to an invoice that gets generated in response to a purchase order. However, you must enable the document sequencing option for that business document or event to start assigning the number. A document sequence number is useful in tracking completed or failed transactions.

You can set up document sequencing in three different modes:

- Automatic
- Manual
- Gapless

Note: Plan your document sequencing carefully before you start applying sequence numbers. Avoid switching to a different mode after you saved your work on the Manage Document Sequences and Manage Document Sequence Categories pages.

Automatic Sequencing

Automatic document sequencing assigns a unique number to each document automatically when the document is generated. That unique number is stored in the database. You can set an initial value for the numbering sequence. Thereafter, the numbering is sequential by date and time of creation. If you don't provide an initial value, the application sets the default initial value as 1.

Manual Sequencing

Use the manual sequencing mode to assign a unique number to each document before the document is generated. In manual sequencing, the numeric ordering and completeness of a transaction isn't automatically enforced. As a result, users can skip or omit numbers when entering the sequence value. However, each time a user assigns a number, the application validates its uniqueness.

Gapless Sequencing

Gapless sequencing is similar to automatic sequencing. It automatically generates a unique number for each document, but does that only for successfully generated documents. Sequence numbers aren't assigned to incomplete or failed documents. As a result, the sequence is maintained for all the successfully generated documents.

Additionally, you can control the gapless document sequencing by enforcing the Transaction Date Validation option. When enabled, this option checks for the transaction date of a particular document and assigns the sequence number accordingly, to chronologically maintain the documents. The sequence numbers and the transaction dates are chronologically correlated.
to prevent any mismatch of a new document sequence assigned to an older document or an older document sequence assigned to a new document.

Note: Use this type of sequencing only if necessary because it may affect the performance of the application and slow down transaction processing.

Related Topics
- Modules in Application Taxonomy

Document Sequence Categories

A document sequence category is a set of documents that share similar characteristics and that are formed into a logical group. Document sequence categories simplify the task of assigning number sequences to specific documents. Instead of assigning a number to each document, you assign a document sequence to one or more document sequence categories. The document sequence category automatically takes care of numbering the documents.

A document sequence category identifies the database table that stores documents resulting from transactions that your users enter. When you assign a sequence to a category, the sequence numbers the documents that are stored in a particular table. You must create document sequence categories to be able to manage the task of assigning document sequences.

Note: Once a document sequence category is created, you can't change the application, the category code, or the table name. Therefore, carefully consider these details and plan your document sequencing requirement before you begin working with the application.

Once you create a document sequence category, it's available for use in the Document Sequences: Assignments section on the Manage Document Sequences page. The Category field contains the name of the document sequence category. After you create a document sequence, you can assign it to a document sequence category.

Guidelines for Managing Document Sequences

Sequencing documents is an important business and legal requirement. Therefore, you must first decide the appropriate document sequence to use for a set of documents. Before you begin, here are a few prerequisites:

- Determine beforehand the mode of document sequencing, because you can't switch to other types once a sequence is in use.
- Note details such as the document sequence and document sequence category, for later reference.
- Identify if there are any restrictions or configuration prerequisites.

Note: Products that implement document sequencing have specifications about its usage. Refer to the corresponding product documentation for specific details and also to determine if there are any restrictions or configuration prerequisites.

Creating and Editing Document Sequences

You can create document sequences that are automatic, manual, or gapless, depending on the business or legal requirement. By default, the current date is considered as the start date. The sequence definition never expires if you don’t
provide an end date. Among the several options used in creating and editing document sequences, the following options are functionally more important and therefore must be carefully determined:

- **Determinant Type**: Select to limit the document sequencing activity to certain documents that belong to a specific business entity, such as Ledger, Tax Registration, and so on.
- **Initial Value**: Enter a value for the first document in your sequence. This field applies only to sequences with automatic or gapless numbering types. Sequence numbers must not be greater than eight digits. If you leave this field blank, the first document is automatically assigned a value of 1. Once a document sequence is defined, you can’t change this initial value.

**Creating and Editing Document Sequence Categories**

Document sequence categories are defined to make it easy to assign document sequence definitions to a group of documents instead of to individual documents. Each document sequence category is mapped to a specific table, where the documents belonging to that category are stored. When specifying the table, you must consider the following points:

- When the sequential numbering feature checks for completeness or generates a report, it locates the category’s documents in the table.
- Select only those tables that belong to the application associated with the category.
- Once a category is defined, you can’t switch to another table.

**Assigning Document Sequences**

Identify the documents to be numbered before assigning them a document sequence. For each document sequence, there can be only one active assignment to a document sequence category, and a determinant value (if applicable). As part of the assignment, specify whether the document is created automatically (for example, due to a batch process, or manually through a form). If you don’t specify an end date, the assignment continues to remain active throughout the process cycle. If a determinant type was specified for the document sequence, then enter a specific determinant value related to the determinant type.

At run time, when users create documents, the document sequence to be assigned is determined based on the following:

- An active assignment that matches the correct combination of category
- The numbering method
- The date range containing the transaction date

**Auditing Document Sequences**

You can audit document sequences, if required, to provide an audit trail of the document sequences used in a specific product. However, before enabling the audit functionality for a document sequence, you must have created an audit table for the specific document sequence, using appropriate details. Enabling the audit functionality is permitted only for newly created document sequences. You can’t audit document sequences that are already in use by a specific product.

For more information about defining a document sequence audit table, see the Oracle Fusion Applications Developer’s Guide.

**Related Topics**

- Guidelines for Managing Modules in Application Taxonomy

**Project Contract Business Unit Options**
Contract Components for Internal Billing

To use intercompany billing or interproject billing, your implementation team must configure a number of distinct features within Oracle Fusion Enterprise Contracts. These features work in cohesion with financial and project features to create internal invoices and transfer revenue between organizations.

Contract Type for Intercompany Billing

Select the intercompany billing option on a contract type to identify a contract as enabled for intercompany billing. This option permits editing of the internal billing options of contracts of that contract type. These internal billing options include the attributes required to create the intercompany payables invoice such as expenditure type, expenditure organization, receiver project, receiver task, and the provider business unit.

Contract Type for Interproject Billing

Select the interproject billing option on a contract type to identify a contract as enabled for interproject billing. This option permits editing of the internal billing options of contracts of that contract type. These internal billing options include the attributes required to create the interproject payables invoice such as expenditure type, expenditure organization, receiver project, and the receiver task.

Contract Business Unit Internal Billing Options

Review and update the customer contract management business function options to control the processing of interproject billing. The following table describes the internal billing options that you must define for the contract business unit.

<table>
<thead>
<tr>
<th>Feature Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| Invoice Numbering Method | - If you want to enter invoice numbers manually, select the manual option and either the alphanumeric or numeric invoice number type.  
|                       | - If you want the application to create invoice numbers automatically, select the automatic option, and enter a starting invoice number. |
| Invoice Batch Source  | Specify the invoice batch source for the interproject contract invoices that are transferred to Oracle Fusion Receivables. |

Contract Line and Receiver Project

After you create an internal contract, link a contract line to the receiver project and task. This allows for the cross-charge transactions that are charged to the project and task to be billed from the provider business unit to the receiver business unit.

By default, the receiver project is also the associated project for the contract line, and you can’t add another associated project or change the associated project for that contract line. However, the associated task and receiver task can be different, so you can select another associated task for the project if necessary.

The receiver project must have the same legal entity as the internal customer.

Note: Only one receiver project can be linked to a contract line. The intercompany invoice generation process automatically groups invoice lines by the contract lines. Interproject invoices have a fixed format.
Accounts Receivable Transaction Type for Internal Billing

You can choose to set the Open Receivables or Post to GL indicators on the Accounts Receivable Transaction Type setup to Yes or No for intercompany and interproject contracts.

Deselect the Open Receivables indicator on the Receivables Transaction Type if you want to transfer funds to clear balances, rather than paying individual invoices. You can also choose to leave the Post to GL indicator unchecked to prevent accounting of these invoices in Oracle Receivables.

Related Topics

- Example of an Intercompany Billing Contract

Project Components for Internal Billing

To use the intercompany billing or interproject billing functionality, your implementation team must configure a number of distinct features within Oracle Fusion Projects. These features work in cohesion with contract and financial features to create internal invoices and revenue transfers between organizations.

Invoice Formats

Define internal invoice formats for invoices generated by intercompany or interproject billing contracts. The invoice formats control the grouping of transactions on invoice lines for intercompany contracts. Specify the grouping options to summarize expenditure items and events, and the fields that should be displayed on the invoice line. Create different invoice formats for intercompany labor, nonlabor, and event billing.

If you want the invoice format to be used for both customer and internal invoices, enable the invoice format for customer invoices and internal invoices.

⚠️ Note: All internal invoices must have a fixed format. Enable the fixed format feature to prevent the rearranging or regrouping invoice line details on intercompany invoices.

Invoice Methods and Revenue Methods

Define invoice methods and revenue methods to determine the calculation method of invoice and revenue amounts for intercompany contracts during invoice generation and revenue recognition. Enable the invoice methods and revenue methods for intercompany billing.

Select from the following labor and nonlabor schedule types that are available for rate-based intercompany invoice generation and revenue recognition:

- Bill rate
- Burden rate
- Transfer price
- Cost reimbursable

Billing Resource Breakdown Structure

Enter resource formats and resource types for the intercompany billing resource structure that is shared by business units. This billing resource breakdown structure defines the types of resources that can be referenced on billing controls for intercompany and interproject contracts.
Receiver Project

Create a receiver project in the receiver business unit. The receiver project can be a project that is linked to both and external contract (for external billing) and intercompany contract (for creating internal cross-charge transactions). The receiver business unit receives the supplier invoices.

Each receiver project can receive invoices from multiple internal contracts or from multiple contract lines of the same contract. Enable the tasks on the receiver project that can be used for interproject billing and to allow cross-charge transactions.

Provider Project

Create a provider project to use during interproject billing. Each receiver project can have one or more provider projects. The provider project can be in the same business unit or a different business unit as the receiver project.

Expenditures are charged to the provider project during interproject billing scenarios.

Related Topics

- Invoice Formats

FAQs for Project Contract Business Unit Options

Can I create a contract for intercompany billing with transfer price rules?

Yes, but only if you derive rates for an intercompany contract based on an organization hierarchy structure instead of the bill rates defined on a bill plan. The contract line and bill plan architecture lets you specify a different bill plan for each provider and receiver organization. Select a bill rate or burden rate schedule for each of your contract bill plans. However, if your rates are defined at a granular level, you may need to derive rates for an organization hierarchy structure using transfer price rules.

Why can't I see the internal billing details on a contract?

If you do not see the internal billing features on a contract, check the attributes on the contract type. The internal billing options of a contract are only visible if the contract type is designated as either intercompany or interproject.
28 Project Billing Configuration: General Project Billing Setup

Invoice and Revenue Method Components

Invoice methods and revenue methods control the way you create invoices and recognize revenue for contracts. During implementation you create the methods and assign them to bill plans and revenue plans. Any contract or contract line that uses the bill or revenue plan calculates the invoice or revenue amount according to the instructions in the invoice or revenue method.

Method Classification

Invoice method classifications and revenue method classifications are predefined by Oracle Fusion Project Billing. Select an invoice or revenue method classification to set the approach for calculating invoice or revenue amounts.

The following table describes the different invoice method classifications.

<table>
<thead>
<tr>
<th>Invoice Method Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Based</td>
<td>Generate invoices and revenue as billing events are completed.</td>
</tr>
</tbody>
</table>
| Percent Complete             | Generate invoices as progress is estimated. 

The percent complete invoice method automatically creates a billing event using an inception-to-date formula based on the calculation level in the bill plan. If the calculation level is contract line, the event is created for the contract and contract line. If the calculation is associated project, the event is created for the contract line and its associated project and task.

| Percent Spent                | Generate invoices as progress is calculated, based on actual cost to date over budget cost. 

The percent spent invoice method automatically creates a billing event using an inception-to-date formula based on the calculation level in the bill plan. If the calculation level is contract line, the event is created for the contract and contract line. If the calculation is associated project, the event is created for the contract line and its associated project and task.

| Rate Based                   | Generate invoices as costs are incurred, using an invoice-specific set of bill rates, a burden schedule, or transfer price rates. 

The cost reimbursable classification method bills on cost directly, without applying any rate or markups.

The following table describes the different revenue method classifications.

<table>
<thead>
<tr>
<th>Revenue Method Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Based</td>
<td>Recognize revenue as billing events are completed.</td>
</tr>
</tbody>
</table>
### Revenue Method Classification

<table>
<thead>
<tr>
<th>Revenue Method Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>As Billed</td>
<td>Recognize revenue after invoices are finalized, using a common set of bill rates, a burden schedule, or transfer pricing for both invoicing and revenue.</td>
</tr>
<tr>
<td>As Incurred</td>
<td>Recognize revenue as costs are incurred, using a revenue specific set of bill rates, a burden schedule, or transfer pricing for both invoicing and revenue.</td>
</tr>
<tr>
<td>Percent Complete</td>
<td>Recognize revenue as progress is estimated. The percent complete revenue method automatically creates a billing event using an inception-to-date formula based on the calculation level in the revenue plan. If the calculation level is contract line, the event is created for the contract and contract line. If the calculation level is associated project, the event is created for the contract line and its associated project and task.</td>
</tr>
<tr>
<td>Percent Spent</td>
<td>Recognize revenue as progress is calculated, based on actual cost to date over budget cost. The percent spent revenue method automatically creates a billing event using an inception-to-date formula based on the calculation level in the revenue plan. If the calculation level is contract line, the event is created for the contract and contract line. If the calculation level is associated project, the event is created for the contract line and its associated project and task.</td>
</tr>
<tr>
<td>Rate Based</td>
<td>Recognize revenue as costs are incurred, using a revenue-specific set of bill rates, a burden schedule, or transfer price rates.</td>
</tr>
</tbody>
</table>

**Tip:** Use this revenue classification method if you are using a fixed price for invoices, or if you require different burden schedules for invoices and revenue.

### Intercompany Billing Option

If the invoice or revenue method will be used for intercompany contracts, enable the intercompany billing option to calculate the intercompany invoice or revenue amounts. Intercompany invoices and revenue use a rate-based classification method. Select a labor and nonlabor schedule for use when generating invoices or calculating revenue.

**Note:** An intercompany contract can use an invoice or revenue method that’s not enabled for intercompany billing, or an invoice or revenue method that’s enabled for intercompany billing. Enable the intercompany billing option if the invoice or revenue method will be used for intercompany contracts only. Intercompany invoices can use any type of invoice method classification.

### Rate Definition

Select schedules for labor and nonlabor if your invoice or revenue method uses a rate-based classification method.

The schedule types for labor are **Person** and **Job**.
Invoice and Revenue Method Classifications

Only bill plans and revenue plans with certain combinations of invoice and revenue method classifications can be used on the same contract line. If you add a bill plan and revenue plan with an invalid invoice and revenue method classification to the same contract line, you will receive an error message when you submit the contract for approval.

The possible revenue method classifications are:

- Amount based
- As incurred
- As invoiced
- Percent complete
- Percent spent
- Rate based

The possible invoice method classifications are:

- Amount based
- Rate based
- Percent complete
- Percent spent

Invoice and Revenue Method Combinations

Valid bill plan and revenue plan combinations for a contract line are dependent on the invoice method classification and revenue method classification. Most invoice method and revenue method classifications are valid. The following table describes the invalid combinations.

<table>
<thead>
<tr>
<th>Revenue Method Classification</th>
<th>Invoice Method Classification</th>
<th>Valid Combination?</th>
</tr>
</thead>
<tbody>
<tr>
<td>As incurred</td>
<td>Amount based</td>
<td>No</td>
</tr>
<tr>
<td>As incurred</td>
<td>Percent complete</td>
<td>No</td>
</tr>
<tr>
<td>As incurred</td>
<td>Percent spent</td>
<td>No</td>
</tr>
<tr>
<td>As invoiced</td>
<td>Amount based</td>
<td>No</td>
</tr>
<tr>
<td>As invoiced</td>
<td>Percent complete</td>
<td>No</td>
</tr>
<tr>
<td>As invoiced</td>
<td>Percent spent</td>
<td>No</td>
</tr>
<tr>
<td>Rate based</td>
<td>Rate based</td>
<td>Yes, but a burden schedule is required for the bill plan and revenue plan.</td>
</tr>
</tbody>
</table>
Note: After the contract is approved, any changes to the bill plan including the revenue or invoice method classification must go through the change management process.

Project Invoicing Options

How Project and Contract Invoice Components Work Together

Project and contract components work together to create invoice distributions. The contract contains the instructions for calculating invoice amounts, and the project owns the cost transaction details. When you generate an invoice, invoice distributions are created for the contract.

Expenditure items and events are the transactions for projects and contracts. Invoice method classifications determine how transactions are invoiced. The invoice method determines how invoice amounts are derived.

- Enter an invoice method on a bill plan, which you create for a contract and assign to contract lines to provide a set of instructions for creating an invoice.
- Create billing controls for a contract or contract line to define the valid transaction dates, billing resources, and amount limits for transactions associated with the contract.
- Generate invoices to calculate the invoice amounts for a contract.
The following figure illustrates the components of a project and a contract that determine invoice amounts, and the relationships between the components.

**Invoice Method Classification**

Assign a predefined invoice method classification to an invoice method. The invoice method classification determines whether the invoice amount is calculated based on rates, amounts, or progress.
Invoice Method

Create invoice methods for bill plans to use for determining the approach for generating invoice amounts. The invoice methods contain invoice generation instructions in the form of the invoice method classification and rate definition schedule types. Rate definition schedule types determine whether the rate source for invoicing comes from rate schedules, burden schedules, or transfer price schedules.

You must assign an invoice method to a bill plan, which contains the invoice generation instructions for a specific contract or contract line. An invoice method can be used by more than one bill plan.

⚠️ Caution: Enable the invoice method for intercompany billing if it will be used for intercompany billing only.

Bill Plan

Create a bill plan within a contract that uses the invoice method you require. Assign the bill plan to one or more contract lines.

🔍 Note: Oracle Project Billing doesn’t create new invoices for:
- Contracts on hold
- Contract lines on hold
- Contract lines with a bill plan on hold

Previously generated invoices can still be updated, submitted for approval, approved, rejected, released, and transferred when the contract, contract line, or bill plan is on hold.

Billing Control

A billing control defines the types of permitted transactions (using billing resources), transaction date range, and maximum invoice (and revenue) amounts for a contract or contract line. Create a billing control within a contract at either the contract or contract line level. The inception-to-date (ITD) invoice amount can’t exceed the hard limit amount of a billing control. If the ITD invoice amount exceeds the soft limit, invoice generation will still occur, but you will receive a warning the first time this occurs.

Expenditure Item

The project and task for an expenditure item are matched to the associated contract line during invoice generation. Invoicing can occur if the transaction date, billing resource, and amount for the expenditure item pass the contract billing controls. If the expenditure item is mapped to more than one eligible contract line, the processing order is determined as follows:

- The contract billing sequence determines the processing order of multiple contracts.
- The contract billing controls determine the processing order of multiple contract lines within a single contract.
- The contract contribution percentage determines the eligible invoice amount for each contract line.

Oracle Fusion Project Billing creates a billing transaction for each unique combination of expenditure item and contract line. The billing transaction is the source for creating invoice distributions.

Event

Invoice events are automatically created during invoice generation if the invoice method is percent spent or percent complete. Manual events are also processed during invoice generation. Oracle Fusion Project Billing creates a billing transaction for each automatic or manual event. The billing transaction is the source for creating invoice distributions.
Specify the Unit of Measure for Invoice Lines Sent to Oracle Receivables

The Specify Unit of Measure for Invoice Lines Sent to Oracle Fusion Receivables profile option indicates the unit of measure to use for all invoice lines transferred from Oracle Fusion Projects to Oracle Fusion Receivables. This profile option is required in order to use Oracle Fusion Project Billing. If you are using Oracle Fusion Projects without Oracle Fusion Receivables, you do not need to set this profile.

Oracle Fusion Receivables requires a unit of measure for each invoice line. Oracle Fusion Projects creates each invoice line with a quantity of 1, a unit of the unit type you specify in your profile option, and an amount equal to the currency amount of the invoice line as it appears in Oracle Fusion Projects.

>Note: The internal name for this profile option is PJB_AR_INVOICE_UOM.

Unit of Measure Class

Define a unit of measure class before you define a unit of measure. Oracle Fusion Receivables requires that you associate each unit of measure you define with a unit of measure class. You must define a unit of measure class before you can set the profile option.

Unit of Measure

The default unit of measure value is Each. Define a unit of measure of Each in Oracle Fusion Receivables to use with this profile option.

Invoice Formats

An invoice format determines how Oracle Fusion Projects creates an invoice line. You can define different formats for labor, nonlabor and event invoice line items, and specify if you want to use the format for customer invoices, internal invoices, or both. Additionally, you can specify how you want to summarize expenditure items, and the fields you want an invoice line to display. You can also include free-form text on an invoice line.

You can use customer invoice formats only for regular contract invoices, and internal invoice formats only for invoices generated by intercompany and interproject contracts. You can also use an invoice format for both customer and internal invoices.

You configure the following components of an invoice format:

- Format type
- From and to dates
- Grouping option
- Customer or internal invoice option
- Fixed format
- Start and end position
Format Type
The format type controls the invoice formats you see for labor, nonlabor and events when you enter invoice formats using the Projects window.

From and To Dates
The from and to dates determine the period during which the invoice format is active.

Grouping Option
A grouping option specifies the way invoice distribution lines are grouped together to form an invoice line.

Customer or Internal Invoice Option
If you are using intercompany or interproject billing, create an internal invoice format to summarize cross-charge transactions. Depending on the requirements of the receiver business units, you may need to define several internal invoice formats. All internal formats automatically have a fixed format.

If you create an internal invoice format, you must select contract line as an attribute. This is to ensure that no two contract lines can be combined into a single invoice line, as they could be tied to different receiver projects or tasks, and would need to be created as separate invoice lines to post to the correct receiver project or task.

Although one invoice format can support both customer and internal invoices, the list of values for the Field Name only includes those values that are shared by the two formats.

Fixed Format
A fixed format prohibits distributions from being moved to other invoice lines. Intercompany and interproject invoices must have a fixed format.

Start and End Positions
The start and end positions are values between 1 and 240 that specify where the text in the Field Name appears on the invoice line.

Text Column
Enter the text in this column that you want to display on the invoice.

FAQs for Project Invoicing Options

What's an invoice method?
Rule defined by the implementation team that determines the calculation method of invoice amounts for contracts during invoice generation.

What's an invoice method classification?
Predefined classification for an invoice method that determines the basis for calculating invoice amounts.
The predefined invoice method classifications are: amount based, percent complete, percent spent, and rate based.

Assign an invoice method classification to an invoice method.
Project Revenue Options

How Project and Contract Revenue Components Work Together

Project and contract components work together to create revenue distributions. The contract contains the instructions for calculating revenue amounts, and the associated project contains the cost transaction details. When you generate revenue, revenue distributions are created for the contract.

Expenditure items and events are the transactions for projects and contracts. Revenue method classifications determine how transactions recognize revenue.

The revenue method determines how revenue rates are derived. Enter a revenue method on a revenue plan, which you create for a contract and assign to contract lines to provide a set of instructions for recognizing revenue.

Create billing controls for a contract or contract line to define the valid transaction dates, billing resources, and amount limits for transactions associated with the contract.

Generate revenue to calculate the revenue amounts for a contract.
The following figure illustrates the components of a project and a contract that determine revenue amounts, and the relationships between the components.

**Revenue Method Classification**

Assign a predefined revenue method classification to a revenue method. The revenue method classification determines whether the revenue amount is calculated based on rates, amounts, or progress.
Revenue Method

Create revenue methods for revenue plans to use for recognizing revenue. The revenue methods contain revenue recognition instructions in the form of the revenue method classification and rate definition schedule types.

You must assign a revenue method to a revenue plan, which will give the revenue recognition instructions to a specific contract or contract line. A revenue method can be used by more than one revenue plan.

⚠️ Caution: Enable the revenue method for intercompany billing if it will be used for intercompany billing only.

Revenue Plan

A revenue plan contains a set of instructions for recognizing revenue on a contract or contract line. Create a revenue plan within a contract that uses the revenue method you require. Assign the revenue plan to one or more contract lines that are enabled for billing.

 ebooks

Revenue cannot be recognized for a revenue plan on hold.

Billing Control

A billing control defines the type of permitted transactions (using billing resources), transaction date range, and maximum invoice and revenue amounts for a contract or contract line. Create a billing control within a contract at either the contract or contract line level. The revenue amount cannot exceed the hard limit amount of a billing control. If the revenue amount exceeds the soft limit, revenue recognition will still occur, but you will receive a warning.

Expenditure Item

The project and task for an expenditure item are matched to the associated contract line during revenue generation. Revenue recognition can occur if the transaction date and billing resource for the expenditure item pass the contract billing controls.

If the expenditure item is mapped to more than one eligible contract line, the processing order is determined as follows:

- The contract billing sequence determines the processing order of multiple contracts.
- The contract billing controls determine the processing order of multiple contract lines within a single contract.
- The contract contribution percentage determines the eligible amount of revenue to recognize for each contract line.

Oracle Fusion Project Billing creates a billing transaction for each unique combination of expenditure item and contract line. The billing transaction is the source for creating revenue distributions.

Event

Revenue events are automatically created during revenue generation if the revenue method is percent spent or percent complete.

Manual events are also processed during revenue generation. Oracle Fusion Project Billing creates a billing transaction for each event. The billing transaction is the source for creating revenue distributions.

Related Topics

- Billing Event Components
- Import Project Billing Events
FAQs for Project Revenue Options

What's a revenue method?
Rule defined by the implementation team that determines the calculation method of revenue amounts for contracts during revenue generation.

What's a revenue method classification?
Predefined classification for a revenue method that determines the basis for calculating revenue amounts.
The predefined revenue method classifications are as-billed, as-incurred, amount based, percent complete, percent spent, and rate based.

Assign a revenue method classification to a revenue method.
29 Project Billing Configuration: Project Billing Business Unit Options

Customer Contract Management Business Function Properties

Customer Contracts Business Unit Setup

Using the Specify Customer Contract Management Business Function Properties task, available by navigating to Setup and Maintenance work area and searching on the task name, you can specify a wide variety of business function settings for customer contracts in a specific business unit. The selections you make for these business functions impact how Oracle Enterprise Contracts behaves during contract authoring.

Using the Specify Customer Contract Management Business Function Properties task, manage these business function properties:

- Enable related accounts
- Set currency conversion details

⚠️ Note: You must select a default currency in the customer or supplier business function properties page, if not populated automatically from the ledger assigned to the business unit in the assign business function setup task.

- Manage project billing options
- Set up clause numbering
- Set up the Contract Terms Library

The setup options available for the Contract Terms Library are applicable to both customer and supplier contracts, and are described in the business unit setup topic for the Contract Terms Library. That topic is available as a related link to this topic.

Enabling Related Customer Accounts

Contract authors can specify bill-to, ship-to, and other accounts for the parties in a contract. Enable the related customer accounts option if you want accounts previously specified as related to the contract party to be available for selection.

Managing Currency Conversion Options

If your organization plans to transact project-related business in multiple currencies, then select the multicurrency option. This allows a contract author to override a contract’s currency, which is derived from the ledger currency of the business unit. It also enables the contract author to specify currency conversion attributes to use when converting from the bill transaction currency to the contract currency and from the invoice currency to the ledger currency.

In the Bill Transaction Currency to Contract Currency region, enter currency conversion details that will normally be used, by all contracts owned by this business unit, to convert transaction amounts in the bill transaction currency to the contract
currency. Newly created contracts contain the default currency conversion values, but you can override the values on any contract, if needed.

In the Invoice Currency to Ledger Currency region:

- Enter invoice transaction conversion details if the invoice and ledger currencies can be different.
- Enter revenue transaction conversion details if the revenue and ledger currencies can be different for as-incurred and rate-based revenue.

Managing Project Billing Options

The options available for selection in the Project Billing region control the behavior of project invoicing and revenue recognition for contracts with project-based work. Project billing can act differently for external contracts (customer billing) or intercompany and interproject contracts (internal billing).

Set these options, which apply to all contracts:

- Select the **Transfer Revenue to General Ledger** option if you want to create revenue accounting events and entries, and transfer revenue journals to the general ledger. If this option is not selected, then revenue can still be generated, but will not be transferred to the general ledger.
- Indicate if a reason is required for credit memos that are applied to invoices.

There are two sets of the following options, one for customer billing and a second for internal billing:

- Select an invoice numbering method, either **Manual** or **Automatic**. The invoice numbering method is the method that Oracle Fusion Receivables uses to number its invoices, upon release of draft invoices from Project Billing.
  - If the invoice numbering method is **Manual**, then select an invoice number type, which sets the type of Receivables invoice numbers that are allowed. Valid values are **Alphanumeric** and **Numeric**.
  - If the invoice numbering method is **Automatic**, then enter the next invoice number to use when generating Receivables invoice numbers.
- Select the Receivables batch source to use when transferring invoices to Receivables.

Set this option only for customer billing:

- Indicate if you want contract authors to manually enter the Receivables transaction type on the customer contracts they create.

Managing Clause Numbering

You can choose to number clauses manually or automatically.

If you choose the automatic numbering method, you must select a determinant level for the numbering. You must then select the appropriate clause sequence category from document sequences that you set up for this numbering level.

Contract Terms Library Business Unit Setup

You can specify a wide variety of Contract Terms Library settings for either customer or supplier contracts within each business unit, by using either the **Specify Customer Contract Management Business Function Properties** or the **Specify Supplier Contract Management Business Function Properties** tasks. These tasks are available in the Setup and Maintenance work area as part of the Enterprise Contracts offering in the Enterprise Contracts Base functional area.

For the Contract Terms Library in each business unit, you can:

- Enable clause and template adoption.
- Set the clause numbering method.
- Set the clause numbering level for automatic clause numbering of contracts.
- For a contract with no assigned ledger or legal entity, set the document sequence to Global or Business Unit level.
- Enable the Contract Expert enabling feature.
- Specify the layout for printed clauses and contract deviation reports.

**Enabling Clause Adoption**

If you plan to use clause adoption in your implementation, then set up the following:

1. **Specify a global business unit**

   You must designate one of the business units in your organization as the global business unit by selecting the **Global Business Unit** option. This makes it possible for the other local business units to adopt and use approved content from that global business unit. If the **Global Business Unit** option is not available for the business unit you are setting up, this means that you already designated another business unit as global.

2. **Enable automatic adoption**

   If you are implementing the adoption feature, then you can have all the global clauses in the global business unit automatically approved and available for use in the local business by selecting the **Autoadopt Global Clauses** option. If you do not select this option, the employee designated as the Contract Terms Library Administrator must approve all global clauses before they can be adopted and used in the local business unit. This option is available only for local business units.

3. **Specify the administrator who approves clauses available for adoption**

   You must designate an employee as the Contract Terms Library administrator if you are using adoption. If you do not enable automatic adoption, then the administrator must adopt individual clauses or localize them for use in the local business unit. The administrator can also copy over any contract terms templates created in the global business unit. The clauses and contract terms templates available for adoption are listed in the administrator’s Terms Library work area.

4. **Adopt global clauses for new business unit**

   If you are creating a new local business unit and have to adopt existing global clauses, run the Adopt Global Clauses for a New Business Unit process. Refer to the Enterprise Scheduler processes topic for more information.

**Setting Clause Numbering Options**

You can set up automatic clause numbering for the clauses in the business unit by selecting Automatic in the **Clause Numbering** field and setting the clause numbering level. Then select the appropriate clause sequence category for the specified numbering level. You must have previously set up document sequences for the document sequence categories of global, ledger, and business unit. If clause numbering is manual, contract terms library administrators must enter unique clause numbers each time they create a clause.

You can choose to display the clause number in front of the clause title in contracts by selecting the **Display Clause Number in Clause Title** option.

**Setup Consistent Clause Numbering**

When you skip numbering and suppress the title for a clause or section, the numbering format may look different when you download the contract. The difference in numbering format occurs as your downloaded contract follows the Microsoft Word numbering format. To enable Microsoft Word numbering format for your contract in the Enterprise Contracts UI, you must set the **Consistent Microsoft Word Numbering for Contract Terms Enabled** profile option as Yes.
If this profile option is set as **No**, you may see inconsistent numbering when you download the contract as the Microsoft Word document.

Here are the steps to enable the profile option:

1. In the Setup and Maintenance work area, go to the **Manage Administrator Profile Values** task.
2. On the Manage Administrator Profile Values page, search for and select the **Consistent Microsoft Numbering for Contract Terms Enabled** profile option.
3. Set the profile option to **Yes**.
4. Click **Save and Close**.

**Enabling Contract Expert**

You must select the **Enable Contract Expert** option to be able to use the Contract Expert feature in a business unit. This setting takes precedence over enabling Contract Expert for individual contract terms templates.

**Specifying the Printed Clause and Deviations Report Layouts**

For each business unit, you can specify the Oracle BI Publisher RTF file that serves as the layout for:

- The printed contract terms
  Enter the RTF file you want used for formatting the printed clauses in the **Clause Layout Template** field.
- The contract deviations report
  The RTF file you select as the **Deviations Layout Template** determines the appearance of the contract deviations report PDF. This PDF is attached to the approval notification sent to contract approvers.

**Related Topics**

- How Business Unit Affects Clauses and Other Objects in the Library
- How Contract Expert Works
- Contract Printing and Layout Templates

**FAQs for Project Billing Business Unit Options**

**Why can't I locate an invoice?**

Access to invoices is secured by the business unit. You only have access to invoices that belong to contracts in the business unit assigned to your role. You can see all invoices for projects that are linked to the contracts which you can access.
30 Project Billing Configuration: Intercompany Project Billing

Intercompany Balancing Rules

Intercompany balancing rules are used to generate the accounts needed to balance journals that are out of balance by legal entity or primary balancing segment values. You specify the intercompany receivables and intercompany payables accounts that you want to use as the template for building the intercompany receivables and intercompany payables accounts. The intercompany balancing feature then uses these rules to generate the accounts of the balancing lines it creates.

Journals lines are first summarized by the legal entity and are balanced by the legal entity. Since a legal entity can have many primary balancing segment values, it is possible that a journal could have multiple lines for a legal entity with different primary balancing segment values. In that case, when intercompany balancing is done, the lowest primary balancing segment value within each legal entity in the journal is used. After this, balancing occurs across balancing segment values within each legal entity.

These same rules are also used to generate the intercompany receivables account and intercompany payables account of transactions entered in the Intercompany module.

The intercompany balancing rules are also used to generate the intercompany receivables account for the provider side of an intercompany transaction. The balancing rules also used to generate the intercompany payables account for the receiver side of an intercompany transaction.

▲ Caution: After you create an Intercompany balancing rule, you cannot modify it. However, you can end date an existing rule and create a new rule.

Defining Intercompany Balancing Rules

You can define intercompany balancing rules at the following levels:

1. Primary balancing segment
2. Legal entity
3. Ledger
4. Chart of accounts

The rules are evaluated in the order shown. For example, you can define a Primary Balancing Segment rule and a Legal Entity level rule. If both rules can be used to balance a particular journal, the Primary Balancing Segment rule is used, as it has a higher precedence.

You have flexibility in defining your intercompany balancing rules. You can have a simple setup in which you define one rule for your chart of accounts. This rule is used for all intercompany balancing for all ledgers that use this chart of accounts. Alternatively, you can have a more granular set of rules. For example, you can define a different rule for each legal entity and one chart of accounts rule to cover any gaps in your rule definitions. You can gain even more granularity by defining rules for specific journal and category combinations or intercompany transaction types.
Using Chart of Accounts Rules for Intercompany

Use chart of accounts rules for intercompany balancing. You have flexibility in defining your intercompany balancing rules with the setup of a single chart of accounts rule to use for all ledgers that use this chart of accounts. When you create a chart of accounts rule, you specify the chart of accounts, intercompany receivables, and intercompany payables accounts you want to use, as well as the source and category. It is recommended that the intercompany receivables account be an asset type account, and the intercompany payables account be a liability type account.

You can define rules that are applied to a specific source and category, such as Payables and Invoices, or a specific intercompany transaction type, such as Intercompany Sales. Alternatively, you can choose to create rules for all sources and categories by selecting the source of Other and the category of Other.

Intercompany Balancing will then evaluate the journal source and journal category combination in determining which rule to use for balancing. The order of precedence is as follows.

- Specific journal source and journal category
- Specific journal source and journal category of Other
- Journal source of Other and specific journal category
- Journal source of Other and journal category of Other

Additional Intercompany Balancing and Clearing Company Options

Additional Intercompany Balancing and Clearing options are used to balance the second balancing segment or the third balancing segment or both, when a transaction is unbalanced by one of these segments but is already balanced by the primary balancing segment. This option is defined for a ledger but you can create rules for various Source and Category combinations.

Additional Intercompany Balancing and Clearing options include the following settings:

- Intercompany Receivables and Intercompany Payables accounts: You can use as the accounts as the template to build balancing accounts for balancing segment 2 and balancing segment 3 when the journal is already balanced by primary balancing segment.
- Summarization options: You can choose to summarize lines within a legal entity before balancing lines are generated by choosing the Summary Net option. Alternatively choose the Detail options so lines are not summarized before balancing within a legal entity. Note that summarization always applies to balancing lines generated in a cross legal entity scenario.
- Clearing company options: Oracle recommends always setting clearing company options to handle many-to-many journals as this avoids balancing failing during General Ledger Posting or Subledger Accounting Create Accounting process.

Clearing Company Options

You can choose to set clearing company options to balance a many-to-many journal. Set the following options to manage your clearing company balancing.

- Clearing Company Condition: Choose when to use a clearing company.
  - Use clearing company only for intracompany journals.
  - Use clearing company for all many-to-many journals.
  - Error out if many-to-many journal. This is the default value for this option.
• Clearing Company Source: Choose how the clearing company value is derived for your balancing lines, from the following options:
  
  o Default clearing balancing segment value.
  
  o Manually entered clearing balancing segment value. Note that if you select Manually entered clearing balancing segment value, you will need to manually enter a value in the create journals screen. This option will not work for subledger accounting entries as they do not have a field on the user interface to enter this value.

• Clearing Company Value: If you selected Default clearing balancing segment value for Source, you must select a primary balancing segment value in this field. This is the value used to balance your intracompany or many-to-many journals.

Example of Intercompany Balancing Rules

This topic provides examples of intercompany balancing rules and the intercompany balancing lines generated. These rules are used to generate the accounts needed to balance journals that are out of balance by legal entity or primary balancing segment values.

Intercompany Balancing Rules Precedence

In this example the legal Entity InFusion Textiles intercompany manufacturing activities are tracked separately from its non-manufacturing activities. In order to achieve this legal entity level rules are defined specifically between the legal entity InFusion Textiles and the two manufacturing legal entities, InFusion Products (East) and InFusion Products (West). A chart of accounts rule is created to cover all other intercompany activities.

Setup

• InFusion USA Chart of Accounts as shown in the following table.

<table>
<thead>
<tr>
<th>Segment Name</th>
<th>Company (CO)</th>
<th>Cost Center (CC)</th>
<th>Division (DM)</th>
<th>Account (ACCT)</th>
<th>Intercompany (IC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment Qualifier</td>
<td>Primary Balancing Segment</td>
<td>Second Balancing Segment</td>
<td>Third Balancing Segment</td>
<td>Account</td>
<td>Intercompany Segment</td>
</tr>
</tbody>
</table>

• Ledger, Legal Entity, Primary Balancing Segment Value Assignments as shown in the following table.

<table>
<thead>
<tr>
<th>Ledger</th>
<th>Legal Entity</th>
<th>Primary Balancing Segment Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>InFusion USA</td>
<td>InFusion Farms</td>
<td>3100, 3200, 3300, 3400, 3500</td>
</tr>
<tr>
<td>InFusion USA</td>
<td>InFusion Textiles</td>
<td>4000</td>
</tr>
<tr>
<td>InFusion USA</td>
<td>InFusion Products (East)</td>
<td>5000</td>
</tr>
<tr>
<td>InFusion USA</td>
<td>InFusion Products (West)</td>
<td>6000</td>
</tr>
</tbody>
</table>
• Chart of Accounts Rule as shown in the following table.

<table>
<thead>
<tr>
<th>Rule Number</th>
<th>Chart of Accounts</th>
<th>AR Account</th>
<th>AP Account</th>
<th>Source</th>
<th>Category</th>
<th>Transaction Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>InFusion USA Chart of Accounts</td>
<td>1000 - 000 - 0000 - 0000 - 0000</td>
<td>1000 - 000 - 0000 - 21050 - 0000</td>
<td>Other</td>
<td>Other</td>
<td>None</td>
</tr>
</tbody>
</table>

• Legal Entity Level Rule as shown in the following table.

<table>
<thead>
<tr>
<th>Rule No.</th>
<th>From Legal Entity</th>
<th>To Legal Entity</th>
<th>AR Account</th>
<th>AP Account</th>
<th>Source</th>
<th>Category</th>
<th>Transaction Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>InFusion Textiles</td>
<td>InFusion Products (West)</td>
<td>1000 - 000 - 0000 - 13020 - 0000</td>
<td>1000 - 000 - 0000 - 21020 - 0000</td>
<td>Other</td>
<td>Other</td>
<td>None</td>
</tr>
<tr>
<td>3</td>
<td>InFusion Textiles</td>
<td>InFusion Products (East)</td>
<td>1000 - 000 - 0000 - 13030 - 0000</td>
<td>1000 - 000 - 0000 - 21030 - 0000</td>
<td>Other</td>
<td>Other</td>
<td>None</td>
</tr>
</tbody>
</table>

• Journal Balancing
  o Journal before Balancing as shown in the following table.

<table>
<thead>
<tr>
<th>Line</th>
<th>Line Type</th>
<th>Legal Entity</th>
<th>CO</th>
<th>CC</th>
<th>DIV</th>
<th>ACCT</th>
<th>IC</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Expense</td>
<td>InFusion Farms</td>
<td>3100</td>
<td>100</td>
<td>1200</td>
<td>52330</td>
<td>0000</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Expense</td>
<td>InFusion Products (East)</td>
<td>5000</td>
<td>100</td>
<td>1200</td>
<td>52340</td>
<td>0000</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Expense</td>
<td>InFusion Products (West)</td>
<td>6000</td>
<td>200</td>
<td>1300</td>
<td>52345</td>
<td>0000</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Liability</td>
<td>InFusion Textiles</td>
<td>4000</td>
<td>500</td>
<td>1300</td>
<td>40118</td>
<td>0000</td>
<td>650</td>
<td></td>
</tr>
</tbody>
</table>
• Journal Balancing

  o Journal after Balancing as shown in the following table.

<table>
<thead>
<tr>
<th>Uses Rule</th>
<th>Line</th>
<th>Line Type</th>
<th>Legal Entity</th>
<th>CO</th>
<th>CC</th>
<th>DIV</th>
<th>ACCT</th>
<th>IC</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Expense</td>
<td>InFusion Farms</td>
<td>3100 100 1200</td>
<td>52330 0000</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Expense</td>
<td>InFusion Products (East)</td>
<td>5000 100 1200</td>
<td>52340 0000</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Expense</td>
<td>InFusion Products (West)</td>
<td>6000 200 1300</td>
<td>52345 0000</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Liability</td>
<td>InFusion Textiles</td>
<td>4000 500 1300</td>
<td>40118 0000</td>
<td>650</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>IC AR</td>
<td>InFusion Textiles</td>
<td>4000 500 1300</td>
<td>13050 3100</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>IC AP</td>
<td>InFusion Farms</td>
<td>3100 100 1200</td>
<td>21050 4000</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>IC AR</td>
<td>InFusion Textiles</td>
<td>4000 500 1300</td>
<td>13030 5000</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>IC AP</td>
<td>InFusion Products (East)</td>
<td>5000 100 1200</td>
<td>21050 4000</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>IC AR</td>
<td>InFusion Textiles</td>
<td>4000 500 1300</td>
<td>13020 6000</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>IC AP</td>
<td>InFusion Products (West)</td>
<td>6000 200 1300</td>
<td>21050 4000</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example of Additional Intercompany Balancing and Clearing Options

This topic provides examples of additional intercompany balancing and clearing options, the setup required, and the journal before and after balancing.
Additional Intercompany Balancing Segment Options

In this scenario the enterprise has the second balancing segment and the third balancing segment enabled for its chart of accounts. The journal is balanced by primary balancing segment but is out of balance by the second balancing segment and the third balancing segment.

Setup

- InFusion USA Chart of Accounts

The following table describes the structure of the InFusion USA chart of accounts.

<table>
<thead>
<tr>
<th>Segment Qualifier</th>
<th>Primary Balancing Segment</th>
<th>Second Balancing Segment</th>
<th>Third Balancing Segment</th>
<th>Product</th>
<th>Account</th>
<th>Intercompany Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment Name</td>
<td>Company (CO)</td>
<td>Cost Center (CC)</td>
<td>Division (DIV)</td>
<td>Product (PROD)</td>
<td>Account (ACCT)</td>
<td>Intercompany (IC)</td>
</tr>
</tbody>
</table>

- Ledger, Legal Entity, Primary Balancing Segment Value Assignments

The following table describes the defined ledger, legal entity, and primary balancing segment values.

<table>
<thead>
<tr>
<th>Ledger</th>
<th>Legal Entity</th>
<th>Primary Balancing Segment Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>InFusion USA</td>
<td>InFusion Farms</td>
<td>3100, 3200, 3300, 3400, 3500</td>
</tr>
<tr>
<td>InFusion USA</td>
<td>InFusion Textiles</td>
<td>4000</td>
</tr>
<tr>
<td>InFusion USA</td>
<td>InFusion Products (East)</td>
<td>5000</td>
</tr>
<tr>
<td>InFusion USA</td>
<td>InFusion Products (West)</td>
<td>6000</td>
</tr>
<tr>
<td>InFusion USA</td>
<td></td>
<td>1000, 9000</td>
</tr>
</tbody>
</table>

- Additional Intercompany Balancing and Clearing Options as shown in the following table.

<table>
<thead>
<tr>
<th>Rule Number</th>
<th>Ledger</th>
<th>Source</th>
<th>Category</th>
<th>Transaction Type</th>
<th>AR Account</th>
<th>AP Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>InFusion USA</td>
<td>Other</td>
<td>Other</td>
<td>None</td>
<td>1000-000 - 200 - 0000 - 13010 - 0000</td>
<td>1000-000 - 100-0000 - 21010 - 0000</td>
</tr>
</tbody>
</table>

- Journal Balancing
  - Journal Before Balancing as shown in the following table.
### Project Components for Internal Billing

To use the intercompany billing or interproject billing functionality, your implementation team must configure a number of distinct features within Oracle Fusion Projects. These features work in cohesion with contract and financial features to create internal invoices and revenue transfers between organizations.

#### Invoice Formats

Define internal invoice formats for invoices generated by intercompany or interproject billing contracts. The invoice formats control the grouping of transactions on invoice lines for intercompany contracts. Specify the grouping options to summarize expenditure items and events, and the fields that should be displayed on the invoice line. Create different invoice formats for intercompany labor, nonlabor, and event billing.

If you want the invoice format to be used for both customer and internal invoices, enable the invoice format for customer invoices and internal invoices.

**Note:** All internal invoices must have a fixed format. Enable the fixed format feature to prevent the rearranging or regrouping invoice line details on intercompany invoices.
Invoice Methods and Revenue Methods

Define invoice methods and revenue methods to determine the calculation method of invoice and revenue amounts for intercompany contracts during invoice generation and revenue recognition. Enable the invoice methods and revenue methods for intercompany billing.

Select from the following labor and nonlabor schedule types that are available for rate-based intercompany invoice generation and revenue recognition:

- Bill rate
- Burden rate
- Transfer price
- Cost reimbursable

Billing Resource Breakdown Structure

Enter resource formats and resource types for the intercompany billing resource structure that is shared by business units. This billing resource breakdown structure defines the types of resources that can be referenced on billing controls for intercompany and interproject contracts.

Receiver Project

Create a receiver project in the receiver business unit. The receiver project can be a project that is linked to both and external contract (for external billing) and intercompany contract (for creating internal cross-charge transactions). The receiver business unit receives the supplier invoices.

Each receiver project can receive invoices from multiple internal contracts or from multiple contract lines of the same contract.

Enable the tasks on the receiver project that can be used for interproject billing and to allow cross-charge transactions.

Provider Project

Create a provider project to use during interproject billing. Each receiver project can have one or more provider projects. The provider project can be in the same business unit or a different business unit as the receiver project.

Expenditures are charged to the provider project during interproject billing scenarios.

Related Topics

- Invoice Formats
- Contract Components for Internal Billing

Contract Components for Internal Billing

To use intercompany billing or interproject billing, your implementation team must configure a number of distinct features within Oracle Fusion Enterprise Contracts. These features work in cohesion with financial and project features to create internal invoices and transfer revenue between organizations.
Contract Type for Intercompany Billing
Select the intercompany billing option on a contract type to identify a contract as enabled for intercompany billing. This option permits editing of the internal billing options of contracts of that contract type. These internal billing options include the attributes required to create the intercompany payables invoice such as expenditure type, expenditure organization, receiver project, receiver task, and the provider business unit.

Contract Type for Interproject Billing
Select the interproject billing option on a contract type to identify a contract as enabled for interproject billing. This option permits editing of the internal billing options of contracts of that contract type. These internal billing options include the attributes required to create the interproject payables invoice such as expenditure type, expenditure organization, receiver project, and the receiver task.

Contract Business Unit Internal Billing Options
Review and update the customer contract management business function options to control the processing of interproject billing. The following table describes the internal billing options that you must define for the contract business unit.

<table>
<thead>
<tr>
<th>Feature Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| Invoice Numbering Method | • If you want to enter invoice numbers manually, select the manual option and either the alphanumeric or numeric invoice number type.  
• If you want the application to create invoice numbers automatically, select the automatic option, and enter a starting invoice number. |
| Invoice Batch Source   | Specify the invoice batch source for the interproject contract invoices that are transferred to Oracle Fusion Receivables.                                                                                     |

Contract Line and Receiver Project
After you create an internal contract, link a contract line to the receiver project and task. This allows for the cross-charge transactions that are charged to the project and task to be billed from the provider business unit to the receiver business unit.

By default, the receiver project is also the associated project for the contract line, and you can't add another associated project or change the associated project for that contract line. However, the associated task and receiver task can be different, so you can select another associated task for the project if necessary.

The receiver project must have the same legal entity as the internal customer.

Note: Only one receiver project can be linked to a contract line. The intercompany invoice generation process automatically groups invoice lines by the contract lines. Interproject invoices have a fixed format.

Accounts Receivable Transaction Type for Internal Billing
You can choose to set the Open Receivables or Post to GL indicators on the Accounts Receivable Transaction Type setup to Yes or No for intercompany and interproject contracts.
Deselect the Open Receivables indicator on the Receivables Transaction Type if you want to transfer funds to clear balances, rather than paying individual invoices. You can also choose to leave the Post to GL indicator unchecked to prevent accounting of these invoices in Oracle Receivables.

Related Topics
- Project Components for Internal Billing
- Example of an Intercompany Billing Contract
- Why can't I see the internal billing details on a contract

FAQs for Intercompany Project Billing

Why can't I see the internal billing details on a contract?

If you do not see the internal billing features on a contract, check the attributes on the contract type. The internal billing options of a contract are only visible if the contract type is designated as either intercompany or interproject.
31  Project Billing Configuration: Transfer Pricing

Transfer Price Rules

Create rules to determine how transfer prices are calculated for cross-charge transactions that require borrowed and lent processing or intercompany billing processing. Transfer price calculation can be based on the raw cost, burdened cost, or revenue of the cross-charged transaction.

To set up transfer price rules, you need to understand the following components:

- Transfer price rule attributes
- Transfer price determination logic

Transfer Price Rule Attributes

To create a transfer price rule, you specify the rule name and description, and define these attributes:

- **Type**: Valid transfer price rule types are **Labor** and **Nonlabor**.
- **Transfer Price Basis**: The basis for transfer price calculation. Transfer price basis options are:
  - Raw cost
  - Burdened cost
  - External recognized revenue
- **Calculation Method**: Transfer price calculation methods are:
  - Basis only: Use the transfer price with no further adjustments.
  - Apply burden schedule: Specify the name of an existing burden schedule to apply to the basis.
  - Apply rate schedule: Specify the name of an existing rate schedule to apply to the basis.
- **Burden Schedule**: The burden schedule to apply to the transfer price basis if the transfer price calculation method is to apply a burden schedule. You can select any burden schedule from any set.
- **Rate Schedule**: The rate schedule to apply to the transfer price basis if the transfer price calculation method is to apply a rate schedule. You can select any rate schedule from any set.
- **Markup or Discount Percentage**: A rate to apply to the transfer price amount that the rule calculates.

Transfer Price Determination Logic

The following table lists the valid combinations of transfer price basis and calculation methods, and the calculation logic used to determine transfer price amounts based on transfer price rules.
## Transfer Price Basis

<table>
<thead>
<tr>
<th>Transfer Price Basis</th>
<th>Calculation Method</th>
<th>Calculation Logic</th>
<th>Transfer Price Transaction Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw cost</td>
<td>Basis only</td>
<td>Raw cost with no multipliers applied</td>
<td>Same as transaction currency of expenditure item</td>
</tr>
<tr>
<td>Raw cost</td>
<td>Apply burden schedule</td>
<td>Burden multipliers are applied to raw cost</td>
<td>Same as transaction currency of expenditure item</td>
</tr>
<tr>
<td>Raw cost</td>
<td>Apply rate schedule</td>
<td>If the rate schedule has a markup, the markup is applied to raw cost&lt;br&gt;If the rate schedule has a multiplier, the multiplier is applied to the amount</td>
<td>Currency of the rate schedule</td>
</tr>
<tr>
<td>Burdened cost</td>
<td>Basis only</td>
<td>Burdened cost with no multipliers applied</td>
<td>Same as transaction currency of expenditure item</td>
</tr>
<tr>
<td>Burdened cost</td>
<td>Apply burden schedule</td>
<td>Burden multipliers are applied to burdened cost</td>
<td>Same as transaction currency of expenditure item</td>
</tr>
<tr>
<td>Burdened cost</td>
<td>Apply rate schedule</td>
<td>Rate multipliers are applied to burdened cost</td>
<td>Currency of the rate schedule</td>
</tr>
<tr>
<td>External recognized revenue</td>
<td>Basis only</td>
<td>External recognized revenue with no multipliers applied</td>
<td>Regular recognized revenue in ledger currency, which is an attribute of the expenditure item</td>
</tr>
</tbody>
</table>

### Related Topics
- Cross-Charge Options for Project Business Units

## Contract Components for Internal Billing

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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice Numbering Method</td>
<td>• If you want to enter invoice numbers manually, select the manual option and either the alphanumeric or numeric invoice number type.</td>
</tr>
<tr>
<td></td>
<td>• If you want the application to create invoice numbers automatically, select the automatic option, and enter a starting invoice number.</td>
</tr>
<tr>
<td>Invoice Batch Source</td>
<td>Specify the invoice batch source for the interproject contract invoices that are transferred to Oracle Fusion Receivables.</td>
</tr>
</tbody>
</table>

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**Related Topics**

- Project Components for Internal Billing
- Example of an Intercompany Billing Contract
- Why can't I see the internal billing details on a contract
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If you want the invoice format to be used for both customer and internal invoices, enable the invoice format for customer invoices and internal invoices.

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Create a provider project to use during interproject billing. Each receiver project can have one or more provider projects. The provider project can be in the same business unit or a different business unit as the receiver project.

Expenditures are charged to the provider project during interproject billing scenarios.

Related Topics
- Invoice Formats
- Contract Components for Internal Billing

Examples of Transfer Price Rates
Use these examples to understand how to configure cross-charge options on bill plans and revenue plans to achieve various interproject and intercompany billing scenarios.

One Cross-charge Rule or Rate, One Provider Business Unit, Any Receiver Business Unit, All Projects
The following table explains how to configure your contract billing information to share one cross-charge rule or rate between one provider business unit and any receiver business unit, and all projects associated with the contract.

<table>
<thead>
<tr>
<th>Bill Plan</th>
<th>Bill Rate Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill Plan 1</td>
<td>Assign the bill rate schedule you want to use for the contract (provider) business unit to this bill plan.</td>
</tr>
</tbody>
</table>

One Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, All Projects
The following table explains how to configure your contract billing information to share one cross-charge rule or rate between one provider and receiver business unit, and all projects associated with the contract.

<table>
<thead>
<tr>
<th>Bill Plan</th>
<th>Bill Rate Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill Plan 1</td>
<td>Assign the bill rate schedule you want to use for the provider business unit to this bill plan.</td>
</tr>
<tr>
<td>Bill Plan 2</td>
<td>Assign the bill rate schedule you want to use for the receiver business unit to this bill plan.</td>
</tr>
</tbody>
</table>

All contract lines associated with the receiver projects can use this bill plan.

Override a Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, One Project
The following table explains how to configure your contract billing information to override a cross-charge rule or rate between a provider and receiver business unit for one project.
Override a Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, Task

If a resource is assigned to multiple roles and has more than one rate on a project, you may need to create an override at the project task level. The following table explains how to configure your contract billing and contract line details to override a cross-charge rule or rate between a provider and receiver business unit, for the task on a specific project.

<table>
<thead>
<tr>
<th>Bill Plan</th>
<th>Schedules and Overrides</th>
<th>Associated Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill Plan 1</td>
<td>Create a job rate override for the contract line associated with the receiver project.</td>
<td>Task level</td>
</tr>
</tbody>
</table>

Override a Cross-charge Rule or Rate, One Provider Business Unit, One Receiver Business Unit, Resource

If you are invoicing for a contractor, you may want to create an override at the resource level. The following table explains how to configure your contract billing and contract line details to override a cross-charge rule or rate between a provider and receiver business unit, for a specific resource on a project.

<table>
<thead>
<tr>
<th>Bill Plan</th>
<th>Schedules and Overrides</th>
<th>Associated Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill Plan 1</td>
<td>Create a person rate override for the contract line associated with the receiver project.</td>
<td>Task level</td>
</tr>
</tbody>
</table>

Cross-Charge Options for Project Business Units

Oracle Fusion Projects provides two methods to process cross-charge transactions.

- **Borrowed and Lent Accounting**: Creates accounting entries that move an amount equal to the transfer price between the provider and receiver organizations within a legal entity. There is no formal internal invoice created with this method. Costs or revenue are shared based on transfer price rules.
  
  Use the Borrowed and Lent processing method to apply cross-charge transactions within a business unit or between business units.

- **Intercompany Billing**: Enables the provider organization to present a formal invoice based on the transfer price to the receiver organization and receive payment for services rendered and materials supplied. You can use this processing method between legal entities.
  
  You must set up the contract business unit to use the Intercompany Billing processing method.

This section describes the project business unit options for setting up cross-charge transactions for sharing costs and revenue within and between business units in the same legal entity.
Transfer Price Currency Conversion
Select the date type, either transaction date or project accounting date, and rate type that the application uses by default to determine the conversion rate to convert the transfer price amount from the transaction currency to the ledger currency.

Cross-Charge Transactions Within a Legal Entity
The method of creating cross-charge transactions can be different for transactions within a business unit than the method used across business units. You can choose either the Borrowed and Lent Processing method of creating cross-charge transactions, or specify that no cross-charge transactions will be created.

The processing method that you specify for cross-charge transactions between business units is the default method used between the provider business unit and any other receiver business unit. You can override the default processing method for specific receiver business units.

Note: If you delete the override of the default processing method for a specific receiver business unit, you must manually adjust transactions to reflect the deleted controls.

FAQs for Transfer Price Rules
What's a transfer price rule?
A rule to calculate the transfer price of cross-charge transactions. The key aspects when you define the rule are as follows:

- Type of transaction to which the rule applies: labor or nonlabor
- Basis for the cross-charge transaction: raw cost, burdened cost, or revenue amount
- Method used to calculate the transfer price: rate schedule, burden schedule, or no further adjustment
- Markup or discount percentage to apply to the transfer amount calculated by the rule
- Applicable date range for the rule

Can I select any burden schedule or bill rate schedule for a transfer price rule?
Yes. You can assign any rate schedule to a transfer price rule, regardless of the project rates set assigned to the bill rate schedule.

Transfer Price Schedules
Transfer price schedules contain the rules to determine the transfer price amount for transactions charged from a provider organization to a receiver organization. You create different transfer price schedules to use for various combinations of legal entities, business units, and organizations. You can create different schedules to use different rules for various projects and tasks between the same pairs of provider and receiver organizations. For example, you can define one schedule that contains the rules for capital projects and another for contract projects.

Before you set up transfer price schedules, you must set up organizations and transfer price rules.
Transfer Price Schedule Lines

Transfer price schedule lines contain details about the provider and receiver organization, labor transfer price rule and markup or discount percentage, nonlabor transfer price rule and markup or discount percentage, and amount type.

A transfer price schedule can contain provider and receiver organizations from any organization classification that’s relevant to projects. The available organization classifications are determined at implementation when setting up organization hierarchies and classifications. If you don’t select a receiver organization, the transfer price schedule applies to any receiver organization that receives transactions from the specified provider organization.

A labor rule is valid transfer price rule with a type of labor. A nonlabor rule is a valid transfer price rule with a type of nonlabor. A transfer price schedule must contain either a labor or nonlabor rule, or both. You can assign a markup or discount percentage to each transfer price rule to apply to the transfer price amount that the rule calculates.

You assign cost transfer or revenue transfer as the amount type for the transfer price calculation.

Transfer Price Schedule Hierarchy

A transfer price schedule should be determined based on whether the cross-charge transaction is processed using the borrowed and lent processing method or the intercompany billing method. If you use the borrowed and lent processing method, you should assign a transfer price schedule to the receiver task or the project. If you use the intercompany billing method, the bill and the revenue plan can have a transfer price schedule.

Note: The interproject billing method doesn’t use transfer price calculation logic. Only the billing methods based on the bill rate schedule or burden rate schedule are allowed for interproject billing.

You can define a transfer price schedule at any organization level and legal entity level. Project Financial Management applications use the following logic to identify the appropriate schedule line:

1. If a transfer price schedule line exists for the provider organization (the project expenditure organization) and the receiver organization (the project and task owning organization), then the application uses the corresponding rule to calculate the transfer price.

   Note: You define the project expenditure organization hierarchy in the implementation options for the provider business unit. You define the project and task owning organization hierarchy in the implementation options for the receiver business unit.

2. If it doesn’t find a schedule line in the previous step and an organization hierarchy is used, the application checks for a line with the provider organization and a receiver parent organization.

   If the receiver organization has multiple intermediate parents and you defined schedule lines for more than one of the parents, the schedule line defined for the lowest level parent takes precedence over schedule lines defined for parents higher in the organization hierarchy.

3. If it doesn’t find a schedule line in the previous step and an organization hierarchy is used, the application checks for a line with the provider parent organization and receiver parent organization.

   If the provider organization has multiple intermediate parents and you defined schedule lines for more than one of the parents, the schedule line defined for the lowest level parent takes precedence over schedule lines defined for parents higher in the organization hierarchy.

   Note: If there is a schedule line with only a provider organization, and another schedule line with both provider and receiver organizations, the application gives precedence to the schedule line with both provider and receiver organizations.
4. If it doesn’t find a schedule line in the previous step, the application checks for the default line for the transfer price schedule.

5. If it doesn’t find a schedule line in the previous step, the process results in an error.

Related Topics

- Cross-Charge Options for Project Business Units
- Set Up Organizations for Project Financial Management

FAQs for Transfer Price Schedules

What happens if I change a transfer price rule or transfer price schedule?
The revised transfer price rule and schedule is applicable to unprocessed transactions only. To change a previously processed transaction, you must adjust the expenditure item.
Project Billing Configuration: Customer Billing Configuration for Project Billing

Transaction Sources

Guidelines for Transaction Numbering

Use the various options on the transaction source assigned to a transaction to manage your transaction numbering requirements.

Refer to these guidelines when defining transaction numbering for transactions assigned to specific transaction sources:

- Document Sequences
- Automatic Transaction Numbering
- Copy Document Numbers to Transaction Numbers
- Allow Duplicate Transaction Numbers
- Credit Memo Transaction Source

Document Sequences

If necessary, define document sequences to assign unique numbers to each transaction, in addition to the transaction number assigned automatically.

Ensure that the necessary setups for document sequences are completed, according to your requirements.

Automatic Transaction Numbering

To automatically number new transactions you create using a transaction source, enable the Automatic transaction numbering option and enter a number in the Last Number field.

For example, to start numbering transactions with 1000, enter a last number of 999. Receivables automatically updates the Last Number fields on transaction sources, so you can review the transaction source later to see the last transaction number that was generated.

Note: The last transaction number on the transaction source is an approximation only, due to caching.

You can use automatic transaction numbering with both Imported and Manual transaction sources.

Copy Document Numbers to Transaction Numbers

If you are using document sequences and you want to use the same number as both the document number and the transaction number for transactions assigned to a transaction source, enable the Copy document number to transaction number option.

If you are using Gapless document sequences, you should enable this option if you require gapless transaction numbering. This ensures that transaction numbers are generated sequentially and that there are no missing numbers.
Allow Duplicate Transaction Numbers

Enable the **Allow duplicate transaction numbers** option to allow duplicate transaction numbers within a transaction source.

This option is for manual transaction numbering only.

Credit Memo Transaction Source

Assign a credit memo transaction source to an invoice transaction source, if you want to number credit memos differently from the invoices that they credit.

**Related Topics**

- Document Sequences

AutoInvoice and Sales Credit Information

During AutoInvoice processing, whether you must provide sales credit information on imported transaction lines depends on the settings of the **Allow sales credits** option on the transaction source and the **Require salesperson** Receivables system option.

These are the requirements for passing sales credit information on imported transaction lines:

- If the **Require salesperson** system option and the **Allow sales credits** option on the transaction source are both enabled, you must provide sales credit information.
- If the **Require salesperson** system option is not enabled and the **Allow sales credits** option on the transaction source is enabled, you can provide sales credit information, but it is not required.
- If the **Require salesperson** system option is enabled and the **Allow sales credits** option on the transaction source is not enabled, you must provide sales credit information.
- If neither the **Require salesperson** system option nor the **Allow sales credits** option on the transaction source are enabled, you cannot provide sales credit information. AutoInvoice ignores any values that you pass.

How AutoInvoice Validates Imported Transactions

Use the AutoInvoice Options and Import Information sections of an Imported transaction source to define how AutoInvoice validates imported transaction lines.

You don’t have to pass values for all of the fields that are referenced in the transaction source. If you don’t want AutoInvoice to pass certain data, then where available you can set the related option to **None**.

**Note:** Even if you set a transaction source data option to **None** in order to avoid importing this information into the interface tables, AutoInvoice can still validate and reject transaction lines with invalid data.
Settings That Affect the Validation of Imported Transactions

These settings affect the validation of imported transactions:

- **Invalid Line** field: Indicate how AutoInvoice handles imported transactions with invalid lines by selecting either Reject Invoice or Create Invoice.
  - If you select Reject Invoice, AutoInvoice doesn’t import this transaction or any of its lines into the interface tables.
  - If you select Create Invoice, AutoInvoice creates a transaction with valid lines only. For example, you import an invoice with three invoice lines and one of the lines is invalid. AutoInvoice creates the invoice with the two valid lines only and rejects the invalid line. You can use the Edit Transaction page to add the rejected line.

- **Accounting Date in a Closed Period** field: Indicate how AutoInvoice handles imported transactions that have lines in the interface lines table that are in a closed accounting period.
  - Select Adjust to have AutoInvoice automatically adjust the accounting dates to the first accounting date of the next open or future enterable period.
  - Select Reject to reject these transaction lines.

- In the Import Information sections, where applicable select Number, Value, Segment, or ID for each option to indicate how AutoInvoice validates information:
  - Select Number to import a record into the interface tables using its assigned number.
  - Select Value to import a record into the interface tables using its actual name.
  - Select Segment to use the flexfield segment.
  - Select ID to use the internal identifier of the record.

- Select Amount or Percent to indicate how AutoInvoice validates Sales Credits and Revenue Account Allocations on transaction lines.

How Imported Transactions Are Validated

AutoInvoice validates imported transactions based on the settings of the assigned Imported transaction source. Transactions that fail validation appear in the Import AutoInvoice Validation report.

AutoInvoice ensures that certain column values agree with each other. These values can be within an interface table or multiple interface tables. For example, if the transaction source indicates that a revenue scheduling rule can’t be used, AutoInvoice ignores any values passed for invoicing rule, revenue scheduling rule, and revenue scheduling rule duration.

AutoInvoice performs these validations on transaction lines with revenue scheduling rules:

- Requires that these transactions also include an invoicing rule, if you import transactions that use revenue scheduling rules.
- Rejects lines, if the revenue scheduling rule has overlapping periods.
- Rejects lines, if the designated accounting periods don’t exist for the duration of the revenue scheduling rule.

**Related Topics**

- Why did AutoInvoice reject transactions
FAQs for Transaction Sources

What do I create before creating transaction sources?

You may want to create certain records before creating your transaction sources.

You can optionally create these objects for Manual or Imported transaction sources:

- **Transaction types:** Define the transaction types that you want to appear by default on transactions assigned to your transaction sources.
- **Credit memo transaction source:** Define a transaction source for credit memos before you define a transaction source for invoices. Use this transaction source to number the credit memos created against invoices differently from the invoices they are crediting.

You can optionally create these objects for Imported transaction sources:

- **Invoice transaction flexfield:** Define the reference information that you want to capture in the invoice transaction flexfield and display on imported transactions, such as a purchase order number.
- **AutoInvoice grouping rule:** Define the grouping rule to appear by default on imported transaction lines.
- **AutoInvoice clearing account:** Define an AutoInvoice clearing account, if you intend to enable the **Create clearing** option. AutoInvoice puts any difference between the revenue amount and the selling price times the quantity for a transaction into this account.

How can I manage credit memos with transaction sources?

Special conditions may apply to the creation of transaction sources for credit memos.

Review these considerations for transaction sources assigned to credit memos:

- Define Manual transaction sources for credit memos created by the credit memo request approval process.
- Enable the **Copy transaction information flexfield to credit memo** option on Manual transaction sources used for credit memos, to copy the invoice transaction flexfield reference information to the credit memo that is crediting the invoice.
- Define and assign transaction sources for credit memos to transaction sources for invoices, if you want to number the credit memos created against invoices differently from the invoices they are crediting.

What happens if I don’t enter an AutoInvoice grouping rule?

Assign the AutoInvoice grouping rule to Imported transaction sources that AutoInvoice uses to group imported transaction lines.

If you don’t assign a grouping rule to an Imported transaction source, AutoInvoice uses the following hierarchy to determine which rule to use:

1. Grouping rule assigned to the transaction source of the transaction line.
2. Grouping rule assigned to the bill-to customer site profile of the transaction line.
3. Grouping rule assigned to the bill-to customer profile of the transaction line.
4. Grouping rule assigned to Receivables system options.

What happens if I don’t create a clearing account?

If you don’t use an AutoInvoice clearing account and enable the **Create clearing** option on the transaction source, AutoInvoice requires that the revenue amount be equal to the selling price times the quantity for all of the transactions it processes. AutoInvoice rejects any transaction line that does not meet this requirement.
## Overview of Project Performance Reporting Setup

In the Define Project Performance Reporting Configuration activity, you configure reporting components for monitoring project performance.

The following table lists the setup tasks for Project Performance Reporting:

<table>
<thead>
<tr>
<th>Task List or Task Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define Project Performance Reporting Configuration</td>
<td>Configure Project Performance Reporting to collect and review project data against defined performance areas.</td>
</tr>
<tr>
<td>Manage Project Unit Options: Performance Reporting Options</td>
<td>Specify settings and default values for project performance reporting and analytics within a project unit.</td>
</tr>
<tr>
<td>Define Key Performance Indicators</td>
<td>Manage project performance measures, key performance indicators, KPI categories, and status and trend indicators to track and view project performance.</td>
</tr>
<tr>
<td>Manage Status Indicators</td>
<td>Create indicators to convey the status and severity of performance for a measure and a performance category.</td>
</tr>
<tr>
<td>Manage Trend Indicators</td>
<td>Update the description and sort order of the status trend indicators.</td>
</tr>
<tr>
<td>Manage KPI Categories</td>
<td>Create additional categories to group key performance indicators and to track and view the overall performance of a project.</td>
</tr>
<tr>
<td>Manage Performance Measures</td>
<td>Enable predefined performance measures for summarization. Create custom measures to evaluate project performance using base measures or retrieve from third-party or legacy sources. Specify the related measures that are displayed with the performance measure in the KPI analysis region.</td>
</tr>
<tr>
<td>Manage Key Performance Indicators</td>
<td>Specify thresholds of possible values for a measure and associate them to status indicators.</td>
</tr>
<tr>
<td>Define Region Personalization</td>
<td>Configure region layouts and graph types on the project performance reporting dashboard.</td>
</tr>
<tr>
<td>Manage Region Layouts</td>
<td>Configure rows and measures within the region layouts.</td>
</tr>
<tr>
<td>Manage Cross Project Comparison Graph Types</td>
<td>Create and update graph types to control the display name, sort order, and contents of the cross-project comparison graph region.</td>
</tr>
<tr>
<td>Define Summarization Options</td>
<td>Configure options for the summarization process.</td>
</tr>
</tbody>
</table>
Task List or Task Name | Description
--- | ---
Specify Number of Parallel Summarization Extraction Programs | Specify the maximum number of helper programs that can exist at one time. Data summarization programs can launch helper programs to manage the load on system resources.
Specify Global Start Date for Summarization | Specify the date that periodic analysis of summarized data starts. You can't analyze project performance data by period before this date.
Define Project Performance Reporting Configuration | Configure Oracle Fusion Project Performance Reporting to collect and review project data against defined performance areas.
Manage Project Performance Reporting Messages | Review and manage messages for Oracle Fusion Project Performance Reporting.

This chapter provides detailed setup steps for the task Manage Key Performance Indicators.

**Project Performance Data Summarization**

Run the Update Project Performance Data process to summarize performance data for a project unit, business unit, a range of projects, or projects managed by a project manager. This process:

- Summarizes data for different data sources, such as actual costs, commitments, contract revenue, invoice amounts, budgets, control budgets, allocations, forecasts, and awards.
  - Summarizes data in the project currency, project ledger currency, and transaction currency.
  - Summarizes data in the accounting and project accounting calendars.
  - Summarizes only those contracts that are associated with the project.
- Generates KPI values and determines the overall project health status.
- Updates the financial project plan with summarized amounts from actual cost transactions.
- Updates Oracle Essbase cubes so that you can view the summarized data using Oracle Smart View for Office.

**Summarized Data**

Once the Update Project Performance Data process completes, summarized data is displayed on several pages in the application for project analysis. Use the summarized data to analyze the health of projects and drill down to the causes of any deviation from set thresholds.

You can complete the following tasks using summarized data:

- Analyze project performance data.
- Analyze KPI categories and KPIs.
- Track project health and progress across different periods.
- View summaries for revenues, invoices, actual costs, budgets, allocations, forecasts, and commitments.
• Build dashboards and analyses to review project performance using the Projects - Performance Reporting Real Time subject area.

When to Run the Update Project Performance Data Process

You can run the Update Project Performance Data process for different situations. For example, run it when:

• The summarized data is out of date and you want to update it. For example, you don’t see the latest summarized data in the Project Management infolets, in the Project Performance Dashboard regions, or in the My Projects page.
• The summarized data is inaccurate and you want to delete the existing data and re-summarize.
• Large volume of data is not summarized yet, and you want to summarize the entire bulk of data in one run.

Note: If you have large volumes of data, run the Update Project Performance Data Without Producing Report process when the workload on systems is low. For example, you can run the process on a nightly basis.

You don’t need to run the following processes if you run the Update Project Performance Data process as it summarizes all the data:

• Distribute Project Resource and Task Effort by Day
• Update Project Contract Performance Data or Update Project Contract Performance Data Without Producing Report

Note: The Update Project Performance Data process summarizes only those contracts that are associated with the project. To summarize the contracts that that are not associated with any project, run the Update Project Contract Performance Data process explicitly for those contracts.

• Generate KPI Values or Generate KPI Values Without Producing Report
• Update Award Project Performance Data Without Producing Report
• Update Project Plan Data or Update Project Plan Data Without Producing Report

Note: If the Enable automatic pushing actual to project plan after every online cost summarization profile option is enabled, the Update Project Plan Data process runs as part of the Update Project Performance Data process. Else, navigate to the Manage Financial Project Plan page, click Update Amounts > Update Actual Amounts from the Actions menu, and submit the Update Project Plan Data process.

Setting That Affect Performance Data Summarization

Before you run the Update Project Performance Data process from the Scheduled Processes page, select one of the following summarization methods:

<table>
<thead>
<tr>
<th>Summarization Method</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental</td>
<td>Summarizes new transactions that are yet to be summarized.</td>
</tr>
</tbody>
</table>
### Summarization Method

<table>
<thead>
<tr>
<th>Summarization Method</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delete and resummarize</td>
<td>Corrects summary data when the source system data changes outside the regular transaction flow. This option is disabled by default. But, if you want to delete and resummarize performance data, ask your application administrator to set the Enable Maintain Project Performance Data job profile option to Yes. The profile option is in the Setup and Maintenance work area.</td>
</tr>
<tr>
<td>Resource breakdown structure</td>
<td>Migrates all summary data from one resource breakdown structure version to the next. If you select this option, you must also specify the resource breakdown structure header.</td>
</tr>
</tbody>
</table>

You must also specify the summarization parameters each time you run the summarization process manually and whether to summarize the following transactions:

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Data Summarized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget and forecast</td>
<td>Approved current and previous forecasts, and current and original budgets that have a baseline version. This includes approved budgets and primary forecasts.</td>
</tr>
<tr>
<td>Commitment</td>
<td>Commitments such as supplier invoices, purchase orders, and requisitions from other Oracle Cloud applications.</td>
</tr>
<tr>
<td>Actual Costs</td>
<td>The actual costs incurred for your projects.</td>
</tr>
</tbody>
</table>

### Run the Update Project Performance Data Process

Project application administrators can schedule the Update Project Performance Data process to run periodically by clicking Schedule New Process on the Scheduled Processes page.

Project managers can submit these processes from the Project Financial Management work area, the Project Performance Dashboard, or the Project Management work area.

Once you run the Update Project Performance Data process, you can track its progress on the Scheduled Processes page.

**Related Topics**

- How KPI Values Are Generated
- How can I view projects on the Project Performance Dashboard

### Considerations for Selecting Planning Amount Allocation

When you set up summarization options, you’re required to specify the planning amount allocation basis. You can select a planning amount allocation basis only if you have selected the budgets and forecast data source for summarization. The following are the methods of allocating planning amounts:

- Period start date
Assume that a project includes a task for team members to undergo some product and soft skills training. A budget of $5900 is allocated to this task between 1 January 2011 and 28 February 2011. While summarizing using a monthly accounting calendar, the application can allocate the planned amount in three ways.

### Period Start Date Basis Method

Allocate the entire budget of $5900 to the first period of January 2011 regardless of when the training takes place. This allocation method could impact period to date cost variance measures for January and February if the actual training costs occur in February. The period start date basis method is the default option.

### Period End Date Basis Method

Allocate the entire budget of $5900 to the last period of February 2011 regardless of when the training takes place. This allocation method could impact period to date cost variance measures for January and February if the actual training costs occur in January.

### Daily Proration Basis Method

Distribute the budget of $5900 equally over the entire period so that $3100 is spent in January 2011 and $2800 is spent in February 2011. The following shows how the budget is distributed:

- Allocate the total amount of $5900 and dividing it by the total number of days to arrive at the daily amount.
  
  \[
  \text{Total Number of Days} = 31 + 28 = 59
  \]
  
  \[
  \text{Daily Amount} = \frac{5900}{59} = 100
  \]

- Multiply daily amount by the number of days the task is active.

  \[
  \text{Amount for January 2011} = 100 \times 31 = 3100
  \]

  \[
  \text{Amount for February 2011} = 100 \times 28 = 2800
  \]

Summarizing project performance data using daily proration requires more system resources than summarizing project performance data using the period start or end date basis. To distribute plan amounts evenly across plan duration, the application creates a summarized record for each day for the affected projects and tasks in the project unit.

Using the daily proration basis method reduces the chances of impacting period to date cost variance measures for January and February.

### FAQs for Project Units: Performance Reporting Options
What budgets and forecasts are included in the summarization?

Certain financial plan types are included in summarization by default, while you must manually select others. Approved forecast and baseline budget versions of the following financial plan types are automatically included in summarization of project performance data:

- Approved Revenue Budget
- Approved Cost Budget
- Primary Revenue Forecast
- Primary Cost Forecast

Apart from the default financial plan types, you can include up to four others in summarization of project performance data.

How can I update project performance data and generate KPI values?

Project managers, project application administrators, and project administrators can run the Update Project Performance Data and Generate KPI Values processes from the Project Performance Dashboard. Alternatively, they can run both processes for the projects that they manage from the Scheduled Processes page. To update performance data for all projects in a project owning organization or business unit, project administrators must run the Update Project Performance Data process from the Scheduled Processes page.

Project managers must ensure that they run the Update Project Performance Data process so that all the infolets on the Project Management dashboard are up-to-date.

Related Topics

- Project Performance Data Summarization
- Considerations When Analyzing Project Performance Using the Project Management Dashboard

What actions trigger performance data summarization?

The following actions can trigger performance data summarization:

- Running the Update Project Performance Data process from the Project Performance Dashboard or the Project Financial Management work area.
- Running or scheduling the Update Project Performance Data process from the process scheduler.
- Creating revenue and invoice transactions.
- Creating actual cost transactions.
- Setting a baseline for an approved cost budget.
What happens when I select a planning amount allocation basis for the project unit?

The **Period Start Date** and **Period End Date** options allocate amounts based on the period start and end dates. The **Daily Proration** option spreads plan amounts evenly across the plan.
Project Performance Reporting Configuration: Key Performance Indicators

Trend Indicators

How KPI Trends Are Calculated

Trend indicators show whether the trend of a key performance indicator (KPI) is favorable or unfavorable for a project. When you define KPIs you specify a value for tolerance percentage. The tolerance percentage is taken into account while calculating trend indicators for a KPI.

Note: KPI trends may not be useful if KPI values are generated often. The reason is, if the tolerance percentage is 10 percent and KPI values are generated every day, the values decrease by 1 percent each day. In this scenario, no change is observed in the trend as the decrease is well within the tolerance. However, if you generate KPI values at the start and end of the month, a significant change is observed in the trend.

Settings That Affect KPI Trends

The trend indicator that appears for a KPI is based on the default set in the performance trend indicator setup. The different trend indicators available are:

- Up, favorable: The project performance trend is increasing in value and is desirable.
- Up, unfavorable: The project performance trend is increasing in value and is undesirable.
- Down, favorable: The project performance trend is decreasing in value and is desirable.
- Down, unfavorable: The project performance trend is decreasing in value and is undesirable.
- Unchanged: The project performance trend is unchanged.

You can change the sort order of the trend indicators based on how you want to sequence KPIs in a table based on the performance of KPIs in a project.

How KPI Trends Are Calculated

Trend indicators are calculated based on the percentage increase or decrease in a KPI value, while taking into consideration the tolerance percentage specified while creating the KPI. The following example illustrates how trend indicators are calculated for a KPI.

Consider a scenario where KPI values are generated for the first time on January 15, 2011, and again on February 15 and April 15. KPI trends are calculated when there are at least two values that exist for a KPI.

KPI Values Generated on January 15, 2011

This table displays the trend when KPI values are generated the first time on January 15, 2011. All values in the following tables are percentages unless specified otherwise.
## KPI Values Generated on January 15, 2011

After generating KPI values on January 15, 2011, the most critical KPI is PTD Actual Invoice Amount. The overall project health status is Warning, because the most critical KPI, PTD Actual Invoice Amount, has a status of Warning.

<table>
<thead>
<tr>
<th>KPI</th>
<th>Tolerance Percentage and Trend Indicator Setting</th>
<th>Current KPI Value and Status Indicator</th>
<th>Previous KPI Value and Status Indicator</th>
<th>Trend Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTD Actual Spent Labor Effort Percentage</td>
<td>5</td>
<td>70</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>PTD Actual Spent Equipment Effort Percentage</td>
<td>5</td>
<td>30</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>PTD Actual Invoice Amount</td>
<td>5</td>
<td>$5000</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Actual Billable Cost Percentage</td>
<td>2</td>
<td>90</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>PTD Actual Margin Percentage</td>
<td>2</td>
<td>30</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

## KPI Values Generated on February 15, 2011

This table displays the trend when KPI values are generated on February 15, 2011.

<table>
<thead>
<tr>
<th>KPI</th>
<th>Tolerance Percentage and Trend Indicator Setting</th>
<th>Current Period KPI Value and Status Indicator</th>
<th>Previous Period KPI Value and Status Indicator</th>
<th>Trend Indicator based on Previous Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTD Actual Spent Labor Effort Percentage</td>
<td>5</td>
<td>71</td>
<td>70</td>
<td>Unchanged</td>
</tr>
<tr>
<td>PTD Actual Spent Equipment Effort Percentage</td>
<td>5</td>
<td>29</td>
<td>30</td>
<td>Unchanged</td>
</tr>
<tr>
<td>PTD Actual Invoice Amount</td>
<td>5</td>
<td>$4800</td>
<td>$5000</td>
<td>Unchanged</td>
</tr>
<tr>
<td>Actual Billable Cost Percentage</td>
<td>2</td>
<td>91</td>
<td>90</td>
<td>Unchanged</td>
</tr>
<tr>
<td>PTD Actual Margin Percentage</td>
<td>2</td>
<td>30.2</td>
<td>30</td>
<td>Unchanged</td>
</tr>
</tbody>
</table>
This table shows how the trend indicator is calculated based on the previous period. Although the KPI values for the current period are different from the previous period, the difference in the values isn’t significant enough to change the trend indicator, based on the tolerance percentage defined for each KPI. For example, the PTD Actual Spent Labor Effort Percentage is 71 percent, compared to the previous period KPI value of 70 percent. If the current period KPI value is more than 73.5 percent, which is more than 5 percent higher than the previous period, then the trend indicator is Up, Favorable. If the current period KPI value is less than 66.5 percent, which is more than 5 percent lower than the previous period, then the trend indicator is Down, Unfavorable.

The overall project health status is Warning, based on the most critical of all KPI statuses. After generating KPI values on February 15, 2011, the most critical KPI is PTD Actual Invoice Amount.

**KPI Values Generated on April 15, 2011**

This table displays the trend when KPI values are generated on April 15, 2011.

<table>
<thead>
<tr>
<th>KPI</th>
<th>Tolerance Percentage and Trend Indicator Setting</th>
<th>Current Quarter KPI Value and Status Indicator</th>
<th>Previous Quarter KPI Value and Status Indicator</th>
<th>Trend Indicator Based on Previous Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTD Actual Spent Labor Effort Percentage</td>
<td>5</td>
<td>75</td>
<td>71</td>
<td>Up, Favorable</td>
</tr>
<tr>
<td></td>
<td>Up is Favorable</td>
<td>On Track</td>
<td>On Track</td>
<td></td>
</tr>
<tr>
<td>PTD Actual Spent Equipment Effort Percentage</td>
<td>5</td>
<td>25</td>
<td>29</td>
<td>Down, Favorable</td>
</tr>
<tr>
<td></td>
<td>Up is Unfavorable</td>
<td>On Track</td>
<td>On Track</td>
<td></td>
</tr>
<tr>
<td>PTD Actual Invoice Amount</td>
<td>5</td>
<td>$3500</td>
<td>$4800</td>
<td>Down, Unfavorable</td>
</tr>
<tr>
<td></td>
<td>Up is Favorable</td>
<td>Critical</td>
<td>Warning</td>
<td></td>
</tr>
<tr>
<td>Actual Billable Cost Percentage</td>
<td>2</td>
<td>91</td>
<td>91</td>
<td>Unchanged</td>
</tr>
<tr>
<td></td>
<td>Up is Favorable</td>
<td>On Track</td>
<td>On Track</td>
<td></td>
</tr>
<tr>
<td>PTD Actual Margin Percentage</td>
<td>2</td>
<td>28.5</td>
<td>30.2</td>
<td>Down, Unfavorable</td>
</tr>
<tr>
<td></td>
<td>Up is Favorable</td>
<td>Warning</td>
<td>On Track</td>
<td></td>
</tr>
</tbody>
</table>

This table shows how the trend indicator is calculated based on the previous quarter. The current KPI values are compared to the latest generation date of KPIs for the previous quarter. It is possible that the previous period trend and the previous quarter trend are calculated based on KPI values from the same generation date. This occurs when the previous period generation date is the same as the latest generation date in the previous quarter.

The first three KPI values changed enough since the previous quarter to change the trend calculator. For example, the current quarter value of PTD Actual Invoice Amount is $3,500, which exceeds the threshold tolerance of 5 percent from the previous quarter KPI value of $4,800. Therefore the KPI is in a Critical status, and the trend indicator is Down, Unfavorable.
current quarter value is greater than $5,040, which is more than 5 percent higher than the previous quarter, then the trend
indicator is Up, Favorable.

A project manager might review the KPI values, statuses, and trends shown in this table and determine that a transaction was
not billed, because the KPIs that are based on revenue and invoice amounts have both dropped.

The overall project health is critical because of the status of the PTD Actual Invoice Amount.

Related Topics
• Performance Trend Indicators

FAQs for Trend Indicators

Why did the trend indicator show a downward trend when KPI performance is improving?
While defining key performance indicators (KPIs), you can determine if a positive increase between the current and previous
KPI value is a favorable or unfavorable trend. Therefore, an upward trend may not necessarily indicate that KPI performance is
improving.

For example, for a KPI based on a non-billable percentage of total costs, a low value for non-billable costs is preferred.
Hence, a downward trend is favorable.

What’s the difference between effort-based, amount-based, and percentage-based
performance measures?
Performance measures that are based on effort hours are effort-based. Examples are, actual spent labor effort and actual
spent equipment effort.
Performance measures that are based on currency values are amount-based. Examples are, actual revenue and actual raw
cost.
Performance measures that are based on percentages are percentage-based. Examples are, actual margin percentage and
actual nonbillable cost percentage.

Note: KPIs that are percentage-based can be tracked at the task, resource, and project levels.

What happens if I use period-to-date amount-based measures for large projects?
Period-to-date amount-based measures use the same threshold values for all phases of the project. This may result in a
spike in the key performance indicator (KPI) values if the amounts used to calculate the KPI values vary widely throughout the
project. To avoid this problem, consider using different sets of threshold values for amount-based KPIs defined in small and
large projects.

Key Performance Indicators

KPI Components

A key performance indicator (KPI) enables you to define thresholds of possible values for a performance measure for any
project in a project unit. During KPI definition, you associate a performance status indicator with each threshold level.
you generate KPI values, the application compares the value against the thresholds defined for the KPI. If the value falls within any of the defined threshold levels, then the application associates the status indicator of that threshold with the performance measure. The following are the KPI components we will discuss:

- Performance Measure
- Performance Status Indicator
- Threshold Level
- Trend Indicator
- Tolerance Percentage
- Project Performance Data
- Project Unit

### Performance Measure

Oracle Fusion Project Performance Reporting provides both fundamental and derived measures that present an objective insight into the performance of the project. In addition, you can create custom measures to meet the unique needs of your organization. Use any delivered or custom performance measure to create a KPI.

Performance measures are available in the areas of budgets and forecasts, billing and revenue, costs, effort, margin, capitalization, and more. Following are examples of predefined performance measures:

- EAC Budget Cost (the estimate at completion burdened cost from the current baseline budget)
- ITD Forecast Revenue Variance (the inception-to-date current baseline budget revenue - current approved forecast revenue)
- Prior Period Margin Percentage Variance (the prior period current baseline budget margin percentage - actual margin percentage)

A performance measure is associated with a time dimension. The following time dimensions are available:

- Estimate-at-completion (EAC)
- Inception-to-date (ITD)
- Prior Period
- Period-to-date (PTD)
- Quarter-to-date (QTD)
- Year-to-date (YTD)

A particular performance measure set, such as Budget Cost, can have as many as six performance measures: one for each time dimension.

A performance measure can be expressed as a currency amount, as a percentage, or in time units such as hours when effort is measured. If the KPI is used on projects that use different currencies, you can enter different thresholds levels for each currency you need.

### Performance Status Indicator

Performance status indicators give an immediate picture of the status of a project, such as critical, at risk, and on track. Each distinct icon indicates the status and severity of performance. During KPI definition, you first associate status indicators with performance statuses:

- Critical
You then associate these statuses with threshold levels. When KPI values are generated for a project, each value is compared to the defined thresholds and the corresponding status indicator for the KPI appears on project performance reports.

A status can identify negative performance so that you can take the appropriate actions to prevent or quickly resolve problems. Conversely, a status can identify positive performance to help you track expected or excellent performance.

**Threshold Level**
During KPI definition, you define threshold levels to cover all possible values for a KPI. If a KPI value exceeds the range of values defined for the KPI threshold levels, the closest threshold is used to determine the KPI status. For example, if a KPI value falls lower than the lowest threshold level, the application assigns the status of the lowest threshold level to the KPI.

A status indicator can be associated with more than one threshold level. For example, both underutilization and overutilization of resources can indicate a critical performance status.

**Trend Indicator**
Performance trend indicators give an immediate picture of improving or worsening KPI value trends on the project. Each distinct icon indicates whether an increasing performance trend has a positive or negative impact. For example, an increase in nonbillable costs is considered unfavorable to organizations that are able to bill costs to their clients. In this example, the performance trend indicator will show a negative impact.

**Tolerance Percentage**
A tolerance percentage is used to compare the previous KPI value to the current value to show if the performance trend is increasing, decreasing, or staying the same. For example, if the tolerance percentage is 10 percent for a KPI, and the difference between the previous KPI value and current value is greater than 10 percent, then the trend is increasing. If the difference is greater than -10 percent, then the trend is decreasing. If the difference is between -10 percent and 10 percent, then the trend shows no change. A single tolerance percentage value, such as 10 percent in this example, represents both negative and positive tolerances.

**Project Performance Data**
The application provides programs that extract and update transaction data and maintain project performance data. The process of generating KPI values uses this project performance data. Before you generate new KPI values, check the date that the project performance data was last generated to make sure that the data includes all transactions that may impact project performance results. Then decide if you must update project performance data before you generate KPI values. After you run these programs you will have a true picture of project performance.

When you generate KPI values, the period for which KPI values are being generated is determined by the KPI Period Determination Date. The data from that period is used to generate project performance data that will be populated on the project performance dashboard.

**Note:** KPIs that are enabled for use in the KPI definition are included when KPI values are generated.

**Project Unit**
KPIs are created for specific project units.
Related Topics

• How KPI Trends Are Calculated

How KPI Values Are Generated

Generate KPI values after updating project performance data to analyze the project performance. You can assign a threshold for the KPI values. The application first generates the KPI values and then assigns a status indicator to the KPI based on the threshold you define.

Settings That Affect KPI Values

You can specify the values for the parameters as listed in the following table when running the Generate KPI Values process from the Scheduled Processes page.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPI Period Determination Date</td>
<td>Set the date used to derive the project calendar and accounting calendar periods for performance measure calculations when KPI values are generated.</td>
</tr>
<tr>
<td>Replace Current KPI Values</td>
<td>Replace the existing KPI values with the values that you are generating now.</td>
</tr>
<tr>
<td>Delete Previous KPI Values</td>
<td>Delete the KPI values that were generated by prior runs of the Generate KPI Values process.</td>
</tr>
<tr>
<td>Number of Days to Retain KPI Values</td>
<td>Retain KPI values for the specified number of days starting from the current date before deleting previous KPI values.</td>
</tr>
</tbody>
</table>

This table provides examples of KPI period determination date and generation date.

<table>
<thead>
<tr>
<th>KPI Period Determination Date</th>
<th>Generation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 29, 2010</td>
<td>November 12, 2010</td>
</tr>
<tr>
<td>September 30, 2010</td>
<td>October 15, 2010</td>
</tr>
</tbody>
</table>

If you generate KPI values on November 18, 2010 and select to replace the current KPI values, the application deletes the KPI values generated on November 12, 2010 and replaces the data with KPI values generated on November 18, 2010. You must select to replace the current KPI values for a given period if you want to retain one set of KPI values and review KPI values during the period.

You can also delete KPI values that are not required for reporting. The options, Delete Previous KPI Values and Number of Days to Retain KPI Values, enable you to delete KPI values that were generated prior to a specific number of days. For example, if today is November 18, 2010 and you want to remove all KPI values generated in the previous year, you must select to delete previous KPI values, and set Number of Days to Retain KPI Values to 322. All KPI values created since January 1, 2010 are retained and KPI values generated before that period are deleted.
Note: Don’t delete previous KPI values when you're generating KPI values for the first time in a period, or if you want to see trending information for the KPIs over the life of the project.

How KPI Values are Generated

KPI values are calculated based on the value of the performance measure associated with the project. When you generate KPI values, the KPI period determination date is used to determine the period. KPI values are generated for the period based on the options in the KPI definition. Only one set of KPIs are kept for a single KPI period determination date.

For example, KPI values are generated for a KPI period determination date of August 24 at 8:15 a.m. for Projects A and B. Then KPI values are generated for a KPI period determination date of August 24 at 10:45 a.m. just for Project B. The KPI values for Project B generated at 8:15 a.m. are deleted, but KPIs belonging to Project A are retained.

Note: To keep historical information, use a unique KPI period determination date.

Generating KPI Notifications

Enable the Notify project manager option in the KPI Notifications section on the Reporting tab of the Manage Financial Project Settings page to automatically notify project managers after you generate KPI values.

Related Topics

- Examples of KPI Value Calculations

How Performance Status For Tasks And Resources Is Calculated

The application calculates performance status for individual tasks and resources for percentage-based key performance indicator (KPI) values.

Settings That Affect Performance Status for Tasks and Resources

When you enable the Track by Task and Track by Resource options on the project definition, a status indicator appears for the task and resource on project performance reports when the individual KPI value is not on track. Enabling this option helps you easily identify the troubled tasks and resources in a hierarchical task and resource structure in a project.

Note: You can track performance by task and resource only for KPI values that are expressed as a percentage.

How Performance Status for Tasks and Resources Are Calculated

Performance status is individually calculated for all levels of the task and resource hierarchy based on the KPI threshold definition. KPI threshold values are defined when KPIs are created. Based on the threshold values defined, the status for tasks and resources are calculated for the KPI values that are based on a percentage.

This table shows how the application calculates the status of tasks and resources. Also assume that the KPI named ITD Nonbillable Cost as a Percentage of Total Cost has the threshold definition as listed in the table.

<table>
<thead>
<tr>
<th>Threshold Level</th>
<th>Threshold Range From</th>
<th>Threshold Range To</th>
<th>Status Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-99.00%</td>
<td>-12.00%</td>
<td>Critical</td>
</tr>
</tbody>
</table>
Example of System Implementation Task

This table demonstrates a System Implementation task that contains six subtasks and the corresponding costs for each subtask. The ITD nonbillable cost is represented as a percentage of total cost. The sum of the cost of each subtask rolls up to the main task.

<table>
<thead>
<tr>
<th>Task Hierarchy</th>
<th>Task</th>
<th>ITD Nonbillable Cost</th>
<th>ITD Billable Cost</th>
<th>ITD Total Cost</th>
<th>ITD Nonbillable Cost as a Percentage of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>System Implementation</td>
<td>21,000</td>
<td>105,000</td>
<td>126,000</td>
<td>16.66%</td>
</tr>
<tr>
<td>1.1</td>
<td>Planning</td>
<td>0</td>
<td>21,000</td>
<td>21,000</td>
<td>0%</td>
</tr>
<tr>
<td>1.2</td>
<td>Definition</td>
<td>6,000</td>
<td>51,000</td>
<td>57,000</td>
<td>10.53%</td>
</tr>
<tr>
<td>1.3</td>
<td>Build</td>
<td>15,000</td>
<td>33,000</td>
<td>48,000</td>
<td>31.25%</td>
</tr>
<tr>
<td>1.4</td>
<td>Test</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>1.5</td>
<td>Release</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>1.6</td>
<td>Support</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

The ITD Nonbillable Cost as a Percentage of Total Cost KPI value for the Definition task is 10.53% (6,000/57,000). Based on the threshold levels defined for this KPI, the Definition task shows the At Risk status indicator.

Example of a Consulting Resource Breakdown Structure

In another example, the Consulting resource breakdown structure contains a Labor resource. Labor is a parent to the Project Manager resource, which is a parent to resources Maxwell Martin, Robert Altima, and Fred Jones. The ITD Nonbillable Cost as a Percentage of Total Cost KPI value for Labor is 12.97% (15,700.00/121,015.00). The ITD Nonbillable Cost as a Percentage of Total Cost KPI value for Fred Jones is 0%. Because the KPI value for each row in the hierarchical structure is calculated separately, Labor has a status indicator of Critical and Fred Jones does not have a status indicator.

This table lists the ITD nonbillable cost as a percentage of total cost for labor resources in the Consulting resource breakdown structure.
If you track tasks and resources for a project, each task and resource with a KPI value that is not on track is designated as an exception. The KPI value for the project does not impact the exception designation for individual tasks and resources. For example, if a task has a Critical status indicator based on the KPI value and threshold definition, it is designated as an exception even if the project has an On Track status indicator.

Note: Task and resource performance status is based on the latest summarized data, which may not be the same as the summarized data used to generate the latest KPI values.

Tolerance Percentage

Use tolerance percentages to compare the previous key performance indicator (KPI) value with the current value. The application calculates trend indicators based on the percentage increase or decrease in a KPI value and the tolerance percentage in the KPI definition.

Example of Tolerance Percentage

When you create a KPI, you must enter a tolerance percentage that is used to determine the trend indicator for a KPI. The percentage change in KPI value is calculated using the following formula:

\[
\text{Percentage Change in KPI Value} = \frac{\text{absolute value of } [(\text{Current Value} - \text{Previous Value}) \times 100]}{\text{Previous Value}}
\]

This table describes how the application uses tolerance percentage to calculate the trend indicator.
Example of KPI Thresholds with Different Currencies

You can set up different threshold ranges for each currency for currency-based KPIs to ensure that the thresholds apply for a particular currency amount.

Example of Threshold Levels with Different Currencies

The following example describes setting up of different threshold levels for each currency.

Vision Corporation sells and installs human resource software. A standard KPI used for installation projects is Period-to-Date (PTD) Invoice Amount. Projects are executed in different countries having different project and ledger currencies, such as United States dollars (USD), Japanese yen (JPY), and Indian rupees (INR).

The PTD invoice amount for projects with a ledger currency of USD is critical if the value is between 0 and 3,000 USD. The PTD invoice amount for projects with a ledger currency of INR is critical if the value is between 0 and 50,000 INR. The currency thresholds are independent of currency conversion.

FAQs for Key Performance Indicators

What's the difference between key performance indicator and performance measure?

Key performance indicators (KPIs) measure how well an organization or individual performs an operational, tactical, or strategic activity that is critical for the current and future success of the organization. Examples are: Period-to-Date (PTD) Actual Spent Labor Effort Percentage, PTD Actual Spent Equipment Effort Percentage, and PTD Actual Margin Percentage. Performance measures are singular data elements defined by a specific account, scenario, and time dimension combination. For example, the performance measure, Quarter-to-Date (QTD) Forecast Labor Effort, references the account of labor hours, in the scenario of primary forecast, and the quarter-to-date time dimension.

A KPI is created based on a performance measure, and specifies how a performance measure value is interpreted using threshold levels. For example, the KPI PTD Actual Spent Equipment Effort is based on the measure actual spent equipment effort.
What's the difference between key performance indicator and KPI category?

Key performance indicators (KPIs) measure how well an organization or individual performs an operational, tactical, or strategic activity that is critical for the current and future success of the organization. Examples are: Period-to-Date (PTD) Actual Spent Labor Effort Percentage, PTD Actual Spent Equipment Effort Percentage, and PTD Actual Margin Percentage. A KPI category is a group of KPIs that belong to a specific performance area. Examples are: cost, profitability, financial, and schedule.

As the examples suggest, PTD Actual Margin Percentage must be in the KPI category of profitability.

What's a KPI period determination date?

Date used to determine the accounting calendar and project accounting calendar periods for performance measure calculations during key performance indicator (KPI) value generation.

For example, assume that your project uses a monthly accounting calendar and a weekly project accounting calendar. You generate KPI values on December 8, 2010 with a KPI period determination date of November 30, 2010. The current period for KPI generation is determined based on the type of calendar used. In the accounting calendar, the date November 30, 2010 falls into the November 2010 period. In the project accounting calendar, November 30, 2010 falls in the first week of December 2010.

Note: The KPI period determination date must be a date in the past.

Why can't I create or edit a key performance indicator for a project unit?

Since the project unit is not enabled to track key performance indicators.

What happens if I attach different KPIs to a project for the same measure?

Overall project health is based on the most severe KPI status even if you have more than one KPI using the same performance measure.

For example, a Financial category contains three KPIs, and two of those KPIs use the same performance measure with two different threshold definitions. The overall project health is critical in both of these scenarios:

- The KPI status is critical and on track for the two KPIs that use the same performance measure, and the KPI status is on track for the third KPI.
- The KPI status is on track for the two KPIs that use the same performance measure, and is critical for the third KPI.

Can I track KPI values at the task and resource level?

Yes, you can track key performance indicators that have a percentage measure format at task and resource levels for a project.

What happens if a KPI value exceeds the threshold limits defined for the KPI?

An up or down arrow appears in the Exceeds Threshold column of the KPI History table, and the closest threshold is used to determine the key performance indicators (KPIs) status. If KPI values fall outside the threshold ranges, consider increasing the upper and lower threshold ranges.

How can I evaluate project performance if KPIs are not tracked?

You must use the Review Project Performance page to perform more detailed financial performance analysis for a project than is possible on the Project Performance Dashboard. You can review amounts at the task or resource level, and drill down to individual expenditure items.
Can I choose the regions to appear on Project Performance Reporting dashboard?

Yes. Select the **Edit Current Page** link in the **Personalization** menu to show or hide regions. You can also modify the arrangement of the region layouts using the **Change Layout** option.
How Expenditure Item Chargeable Status is Determined

Oracle Fusion Project Costing checks all levels of chargeable controls when you try to charge a transaction to a project. The application checks the chargeable status when you enter a new cost transaction or transfer expenditure items to another project or task, and you save the record.

Settings That Affect Chargeable Status

Use the exclusive and inclusive transaction control options to set the chargeable status for all expenditures charged to the project.

Inclusive transaction controls prevent all charges to a project or task except the charges you specifically allow. Specify the types of expenditures that you want to allow, and enable the Chargeable option.

By default, exclusive transaction controls allow all charges to a project or task. Specify the types of expenditures that you don’t want charged to the project or task.
How Chargeable Status Is Determined

The following figure shows the steps that Oracle Fusion Project Costing uses to determine the chargeable status of an expenditure item.

If the inclusive option is selected and applicable transaction controls don’t exist, then the transaction isn’t chargeable. If applicable controls exist, then the application checks whether the transaction controls allow charges.
If the exclusive option is selected and there are no applicable controls, then the transaction is chargeable. If applicable controls exist, then the application checks whether the transaction controls allow charges.

For both inclusive and exclusive transaction controls, a transaction is chargeable if the Chargeable check box is enabled for an applicable control. If the Chargeable check box isn’t enabled, then the transaction isn’t chargeable.

### Project Spaces

Spaces provide an online location and collection of tools for teams to work together more effectively on documents.

If project spaces are enabled, project team members copied from the source project template or source project are added to the project and project space. New project team members are automatically added to the project space. Optionally, you can change project space roles or remove members from the space.

### Role Mappings

The project manager is assigned to the Moderator role in the project space. All other project team members are assigned to the project space as Participants.

### Project Quick Entry

You can configure quick entry fields while defining a project template. Oracle Fusion Project Portfolio Management prompts you to enter information in quick entry fields when you create new projects from the template.

### Quick Entry Fields

Select quick entry fields for project information that you want to enter (instead of accepting the template default) each time you create a project. The following table describes the quick entry fields on a project template.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Name</td>
<td>The field to display in the Project Details when creating a new project.</td>
</tr>
<tr>
<td>Specification</td>
<td>Enter a specification for the following fields:</td>
</tr>
<tr>
<td></td>
<td>• Classification</td>
</tr>
<tr>
<td></td>
<td>◦ Select the class category to use for the classification.</td>
</tr>
<tr>
<td></td>
<td>• Team Member</td>
</tr>
<tr>
<td></td>
<td>◦ Select the project role to use for the team member.</td>
</tr>
<tr>
<td>Prompt</td>
<td>Text for a field that appears only in the Project Details while you’re creating a new project. The prompt field name isn’t displayed after you create the project.</td>
</tr>
</tbody>
</table>
For example, if you want to add a quick entry field for the project start date, update the prompt that appears during project creation to **Enter the project start date**. However the field in the project for all other pages will remain as Project Start Date.

Required

Choose whether you want to require entry for the field.

**Note:** The **Legal Entity, Organization, Project Name, and Project Number** fields are required on all projects, and can’t be optional quick entry fields.

The following table describes limitations for quick entry fields.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Quick Entry Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification</td>
<td>20</td>
</tr>
<tr>
<td>Partner organization</td>
<td>5</td>
</tr>
<tr>
<td>Project customer</td>
<td>5</td>
</tr>
<tr>
<td>Supplier organization</td>
<td>5</td>
</tr>
<tr>
<td>Team member</td>
<td>15</td>
</tr>
</tbody>
</table>

You can allow entry of more than one team member per role for all roles except Project Manager. You can enter only one project manager for a project.

After creating the project, you can add further values to the fields in the project.

**Summarized Financial Plan Types**

Summarized financial plan types are financial plan types whose previous and current approved versions (for forecasts) or original and current baseline versions (for budgets) are used in summarization of project performance data. Particular financial plan types are included in summarization by default, while you must manually select others.

**Default Financial Plan Types**

Approved forecast and baseline budget versions of the following financial plan types are automatically included in summarization of project performance data:

- Approved Revenue Budget
- Approved Cost Budget
- Primary Revenue Forecast
Primary Cost Forecast

A budget or forecast financial plan type may support both cost and revenue in one version.

User-Selected Financial Plan Types

Apart from the default financial plan types, you can include up to four others in summarization of project performance data.

Tip: You can include a financial plan type before it’s used on a project for creating a version.

You can replace a user-selected financial plan type until project performance data is summarized for reporting. After that, you can only disable the financial plan type to exclude it from further summarization.

Related Topics

• Project Performance Data Summarization

Transaction Controls

Define transaction controls to specify the types of transactions that are chargeable or nonchargeable for projects and tasks. Use transaction controls to configure your projects and tasks to allow only charges that you expect or plan. You can also define which items are billable and nonbillable on your projects that are enabled for billing. For capital projects, you can define which items are capitalizable and noncapitalizable.

You create transaction controls by configuring the following components:

• Expenditure category
• Expenditure type
• Nonlabor resource
• Person
• Job and organization for the person
• Person type
• Chargeable status
• Billable or Capitalizable status
• From and To dates

You can create any combination of transaction controls that you want. For example, you can create a transaction control for a specific person and expenditure type, or you can create a combination for a person, expenditure type, and nonlabor resource. You also specify the date range to which each transaction control applies. If you don’t enter transaction controls, you can charge expenditure items from any person, expenditure category, expenditure type, and nonlabor resource to all lowest tasks on the project.

Chargeable Status

You can further control charges for each transaction control record by specifying whether to allow charges. The default value is to allow charges.
You usually select Chargeable when you’re using inclusive transaction controls. For example, if you want to allow people to charge only labor to your project, you define a transaction control with the Labor expenditure category, and allow charges to the project or task.

You usually don’t select Chargeable when you’re using exclusive transaction controls because exclusive transaction controls list the exceptions to chargeable transactions.

System Person Type

You can use this control to specify whether transactions incurred by employees, contingent workers (contractors), or both are chargeable.

The following table describes the validation rules for system person type controls.

<table>
<thead>
<tr>
<th>Transaction Control Type</th>
<th>System Person Type</th>
<th>Validation Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inclusive</td>
<td>No value</td>
<td>Transactions incurred by employees and contingent workers aren’t chargeable.</td>
</tr>
<tr>
<td>Inclusive</td>
<td>Employee</td>
<td>Only transactions incurred by employees are chargeable.</td>
</tr>
<tr>
<td>Inclusive</td>
<td>Contingent worker</td>
<td>Only transactions incurred by contingent workers are chargeable.</td>
</tr>
<tr>
<td>Exclusive</td>
<td>No value</td>
<td>Transactions incurred by employees and contingent workers aren’t chargeable.</td>
</tr>
<tr>
<td>Exclusive</td>
<td>Employee</td>
<td>Transactions incurred by employees aren’t chargeable.</td>
</tr>
<tr>
<td>Exclusive</td>
<td>Contingent worker</td>
<td>Transactions incurred by contingent workers aren’t chargeable.</td>
</tr>
</tbody>
</table>

Billable and Capitalizable Status

You can define billable transactions for billable projects and capitalizable transactions for capital projects by selecting the billable or capitalizable option. You can choose between the options of No and Task Level. Select No if you want the charges to be nonbillable or noncapitalizable. Select Task Level if you want the billable or capitalizable status to use the value from the task to which the item is charged.

You define the billable or capitalizable status for a task in the Task Details section.

> Note: The billable or capitalizable status of an individual transaction takes precedence over the billable or capitalizable status of a task.
From and To Dates
You can define transactions as chargeable for a date range by entering a From Date and To Date for each transaction control record.

Examples for Using Class Categories
Class categories and class codes enable you to classify projects. The following example illustrates how you can use project classifications.

Scenario
InFusion Corporation designs and implements heavy engineering projects for government and private customers. Because InFusion Corporation maintains a diverse portfolio of contracts, the ability to track sector and funding is very important to corporate management.

Therefore, the organization classifies projects by market sector and funding source. The following table describes the two class categories used.

<table>
<thead>
<tr>
<th>Class Category</th>
<th>Assign to All Projects</th>
<th>One Class Code per Project</th>
<th>Enter Percentage for Class Codes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Sector</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Market sector in which project work takes place. A single class code must be provided on the project for the class category.</td>
</tr>
<tr>
<td>Funding Source</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Source of funding for project. At least one class code must be provided on the project for the class category. Percentages must be provided to indicate contribution for each source.</td>
</tr>
</tbody>
</table>

The following table describes the class codes available for the categories specified in the previous table.

<table>
<thead>
<tr>
<th>Class Category</th>
<th>Class Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Source</td>
<td>Private</td>
<td>Project funded by private organizations</td>
</tr>
<tr>
<td>Funding Source</td>
<td>Federal</td>
<td>Project funded by the federal government</td>
</tr>
</tbody>
</table>
InFusion management can easily assess projects based on the class categories and codes listed in the previous table.

For example, you specify a class category Funding Source on your project. With this category, you select two class codes: Private and Federal. If you assign 30 percent to Private and 70 percent to Federal, then you indicate the proportion of funding received for your project from the two sources.

On the other hand, because you must select a single market sector, you indicate whether project work involves utilities, waste, mechanical, or structural activities.

### FAQs for Project Templates

**Can I override the billable status of an expenditure item?**

Yes. You can override the billable status of an expenditure item in the Edit Invoice page or in the Manage Project Costs page.

**How are project space roles mapped to project resources?**

The application automatically assigns each project resource to a project space role on the associated project space. The project manager is assigned the role of project space moderator. All other project resources are project space participants. Project space moderators can manually add additional participants or modify participant access, if required.
Grants Management Configuration

Overview of Grants Management Configuration

Configure Oracle Fusion Grants Management to create and maintain awards, award funding, and award projects. Define the following award objects and use them when you create and manage awards:

<table>
<thead>
<tr>
<th>Award Objects</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Types</td>
<td>Types of audit performed on the award, for example financial audit. Define audit types and use them when you create and define an institution, so that you can perform the audit of programs.</td>
</tr>
<tr>
<td>Award Purpose Codes</td>
<td>Purposes or reasons for which the award is created, for example research or clinical trial.</td>
</tr>
<tr>
<td>Award Types</td>
<td>Awards are classified into the following award types:</td>
</tr>
<tr>
<td></td>
<td>• Federal</td>
</tr>
<tr>
<td></td>
<td>• Grants</td>
</tr>
<tr>
<td></td>
<td>• Private grants</td>
</tr>
<tr>
<td></td>
<td>When you create an award, you specify the award type.</td>
</tr>
<tr>
<td>Institution Contact Official Types</td>
<td>Create and use official types to classify institution contacts as per their role in the institution or organization, for example Dean or Provost.</td>
</tr>
<tr>
<td>Keywords</td>
<td>Track an award by subject category. Create keywords and associate them with awards or award projects or personnel.</td>
</tr>
<tr>
<td>Reference Types</td>
<td>Used to create references for an award or award project for identification purposes. For example, proposal numbers serve as a reference to the award or award project.</td>
</tr>
<tr>
<td>Certifications</td>
<td>Required for awards and award projects to comply with regulatory requirements, such as the use of nonhazardous equipment or provision of a smoke-free environment, to receive federal funding.</td>
</tr>
<tr>
<td>Terms and Conditions</td>
<td>The grantor specifies terms and conditions as written stipulations in an agreement or contract that the grantee is obligated to conform.</td>
</tr>
<tr>
<td>CFDA Programs</td>
<td>A database of all federal programs that are made available to organizations in USA. Import or create CFDA programs and associate with awards.</td>
</tr>
<tr>
<td>Grants Personnel</td>
<td>Add HCM persons to grants personnel and allocate them to manage awards. Review personnel details such as primary job and organization, and contact details. Indicate if the person has completed the conflict of interest review and the certified date.</td>
</tr>
<tr>
<td>Sponsors</td>
<td>Customer organizations which grant funding to the award and award projects.</td>
</tr>
</tbody>
</table>
Institutions

An institution is a higher-level internal body that receives grants or awards to conduct research or studies. For example, a university or a hospital receives funding from an agency to conduct research and studies.

Provide the name of the parent institution to which the current institution reports. The institution follows a one-directional hierarchy.

Specify the Data Universal Numbering System Number, NIH IPF number, DHHS Entity number.

When you define an institution, you must specify the following aspects:

- General Details
- Contacts
- Compliance
- Audits and Alerts

General Details

You must define locations and references to an institution. Some of the key attributes are explained in the following table:

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Specify one or more locations for an institution. Indicate if the location is:</td>
</tr>
<tr>
<td></td>
<td>• An award location that issues invoices to sponsors.</td>
</tr>
<tr>
<td></td>
<td>• A billing location that receives awards.</td>
</tr>
<tr>
<td>References</td>
<td>Provide a reference for the institution for identification purposes, for example, Research Center or Hospital.</td>
</tr>
</tbody>
</table>

Note: You can’t delete any of the award objects when used by an award, award project, sponsor, or award template.

Award templates have features common in the awards you want to create. You can define award templates and configure various objects of an award and use the template when you create awards.

You must provide grants management and award contract attributes at the business unit level. Specify the attributes for processing financial transactions of an award and award project in the business unit. The default billing attributes are sent to the contract bill plan for billing purposes. Provide burn rate indicator percentage ranges to indicate the spending limits for award projects.
Contacts

A contact can have multiple official type roles. For example, Dean, Department administrator, Department head are a few roles for official type. Evaluate processes when requested by sponsors and issue certifications. You can carry out various audits for the institution and resolve audit alerts.

Compliance

Capture and manage compliance information of an institution. Provide certification details such as the name, certification period, validity, sponsor who’s requiring certification, and relevant external reference number that a compliance committee supplies.

Audits and Alerts

An institution performs an audit of the programs. Capture and manage audit information. Add audit type programs and specify the program details such as program name, program period, validity, sponsor, auditor, and audit report number.

Grants Sponsors

Customer organizations from Oracle Fusion Trade Community Architecture are added as sponsors for grants management. The grants sponsor funds research projects. When you add a sponsor, a funding source record is created indicating that the sponsor is an external funding source.

Note: Ensure that customers exist in the environment before you add sponsors in grants management.

Internal sponsors can fund an award internally as internal funding sources, for example, university departments. They fund the research work, if an award is enabled for cost sharing.

General Details

You can specify a burden schedule when you define the general details of the sponsor. The burden schedule specified at the sponsor level becomes the default burden schedule of the award, provided the award created from an award template, which hasn’t specified a burden schedule.

You can add references to the sponsor for identification purpose, for example, Industry Type, such as State Government or Local Government.
Billing Details

You must specify the billing details for sponsor. Provide the sponsor account number, which identifies sponsor bill-to and ship-to information. Specify if the sponsor is a federal sponsor and if funding is through a letter of credit.

When the sponsor uses a letter of credit, you must specify the billing sponsor and LOC number. You can use the current sponsor as the bill-to sponsor, or you can specify a related sponsor as the bill-to sponsor. Ensure that the related sponsor is associated with a sponsor in Oracle Fusion Receivables, and that a customer relationship exists between the two sponsors.

When you specify the related sponsor name and account number, the LOC number of the parent or related sponsor is displayed in the Create Sponsor page.

Use the Manage Customers page to specify a relationship between the bill-to customer accounts. You must ensure that the relationship is valid, active, and the bill-to indicator is enabled.

For example, for the NIH customer account, the related customer account is DHHS with a bill-to relationship.

Import Grant Keywords

Import keywords from any external source to Grants Management through the open interface tables. Enter the keyword data in the specified template and generate the CSV files and upload them to the open interface tables. The Import Keywords process validates and processes the keyword data in open interface tables, and any exceptions are tracked in the process output report.

You can load data to interface tables using predefined templates and the Load Interface File for Import scheduled process. For more information, see the Documentation tab for the Load Interface File for Import process in Oracle Enterprise Repository for Oracle Fusion Applications.

The following table describes keyword related objects and the corresponding interface table names.

<table>
<thead>
<tr>
<th>Keyword-Related Objects</th>
<th>Interface Table Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyword</td>
<td>GMS_KEYWORDS_INT</td>
</tr>
</tbody>
</table>

Import Keywords Output

After the Import Keywords process is complete, review the Import Keywords Report.pdf for successful and failed records. You can review the errors and warnings, if any, in the Import Keywords Rejections.xls sheet. After you review and correct the errors, generate CSV files, load them into the interface table, and resubmit the Import Keywords process. Repeat until you import all the required keyword data.

Related Topics

- Load Interface File for Import Process
- Overview of External Data Integration Services for Oracle Cloud
Import Grant Personnel

Import Grants personnel from any external source to Grants Management through the open interface tables. Enter the personnel data in the specified template and generate the CSV files and upload them to the open interface tables. The Import Grants personnel process validates and processes personnel data in open interface tables, and any exceptions are tracked in the process output report.

You can load data to interface tables using predefined templates and the Load Interface File for Import scheduled process. For more information, see the Documentation tab for the Load Interface File for Import process in Oracle Enterprise Repository for Oracle Fusion Applications.

The following table describes personnel related objects and the corresponding interface table names.

<table>
<thead>
<tr>
<th>Grants Personnel-Related Objects</th>
<th>Interface Table Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants Personnel</td>
<td>GMS_PERSONNEL_INT</td>
</tr>
<tr>
<td>Grants Personnel Keywords</td>
<td>GMS_PERSONNEL_KEYWORDS_INT</td>
</tr>
</tbody>
</table>

Import Grants Personnel Output

After the Import Grants Personnel process is complete, review the Import Grants Personnel Report.pdf for successful and failed records. You can review the errors and warnings, if any, in the Import Grant Personnel Rejections.xls sheet. After you review and correct the errors, generate CSV files, load them into the interface table, and resubmit the Import Grants Personnel process. Repeat until you import all the required personnel data.

Related Topics

- Load Interface File for Import Process
- Overview of External Data Integration Services for Oracle Cloud

Import Funding Sources

Import sponsors and funding sources from any external source to Grants Management through the open interface tables. Enter the funding source data in the specified template and generate the CSV files and upload them to the open interface tables. The Import Funding Sources process validates and processes the sponsor and funding source data in open interface tables, and any exceptions are tracked in the process output report.

You can load data to interface tables using predefined templates and the Load Interface File for Import scheduled process. For more information, see the Documentation tab for the Load Interface File for Import process in Oracle Enterprise Repository for Oracle Fusion Applications.

The following table describes sponsor and internal funding source related objects and the corresponding interface table names.
### Import Funding Sources Output

After the Import Funding Sources process is complete, review the Import Funding Sources Report.pdf for successful and failed records. You can review the errors and warnings, if any, in the Import Funding Sources Rejections.xls sheet. After you review and correct the errors, generate CSV files, load them into the interface table, and resubmit the Import Funding Sources process. Repeat until you import all the required funding source data.

**Related Topics**
- Load Interface File for Import Process
- Overview of External Data Integration Services for Oracle Cloud

### Create a Grant Customer

Create a Grants customer to enable a sponsor in the Awards work area.

**Create a Customer**

Complete the following steps to create a customer:

1. Navigate to the Setup and Maintenance work area.
2. Search for and select the Manage Customers task.
3. On the Manage Customers page, click the Create icon.
4. On the Create Organization Customer page, enter the required information in the Account Address section.
   
   **Note:** The information in the Account Address section must match the information defined for Customer Account Site in the Manage Set Assignments for the Business Unit section.

5. In the Address Purposes section, click the Add Row icon to enter the bill-to contact details in the Bill-to Site column.
6. Click Save and Close.

   **Note:** If you want to enter additional accounts for a customer, click the Create icon in the Accounts section of the Manage Customers page.
7. To add a bill-to contact to the account, on the Manage Customers page, click the Account Number of the customer that you created.

8. On the Edit Account page, click the Communication tab, then click Edit Contacts.

9. On the Edit Contacts page, click the Create Contact icon.

10. In the Create Contact window, enter the details of the contact, select Role Type as Contact, then click OK.

11. Click the Set Primary Contact icon to set this contact as a primary contact.

12. In the Account Contact Responsibilities section, click the Add Row icon.

13. Select Bill to in the Responsibility Type field, then click the Set Primary Responsibility icon to mark this as the primary responsibility type.

14. Click Save and Close.

15. To add a profile at the Account level, on the Edit Account page, click the Profile History tab.

16. Ensure that the effective start and end dates are valid for the default profile class. In this example, the date "12/31/12" refers to "December 31, 4712".

17. From the Actions menu in the Profile History section, click Correct Record.

18. In the Payment Terms field in the Terms section, select the required payment term.

19. Click Save and Close.

20. To add a profile at the Site level, in the Sites section on the Manage Customers page, click the first Site Number.

21. Click the Profile History tab, then click Create Site Profile.

22. Ensure that the required Payment Terms is selected, then click Save and Close.

Define Customer Account Relationships

Complete the following steps to define customer account relationships:

1. To add a relationship between the customer accounts, in the Accounts section on the Manage Customers page, click the Account Number of the customer.

   Note: This relationship will be used through the Manage Sponsors task for creating the related sponsors.

2. Click the Relationships tab, then click the Create icon.

3. In the Create Customer Account Relationship window, enter the Related Account number. This should be the Account Number of another customer, so that a relationship is created between the two customers.

4. Set Bill to as the intended relationship, then click Account Relationship Set, then click OK.

5. Click Save and Close.

Verify the Set Assignment

Complete the following steps to verify the set assignment:

1. Navigate to the Setup and Maintenance work area.

2. Search for and select the Manage Business Unit task.

3. On the Manage Business Units page, search for and select the business unit in the search results.

4. From the Actions menu, click Manage Set Assignments to view the set assignments for the selected business unit.

5. On the Manage Set Assignments page, ensure that the reference data sets are provided for the Customer Account Relationship and Customer Account Site.

6. Click Save and Close.

7. Click Done.
Grants Management Business Unit Implementation Options

Define default award and billing attributes and set the burn rate indicators for a grants management business unit on the Manage Grants Business Unit Implementation Options page in the Setup and Maintenance work area.

Default Award Attributes
The default award attributes are used to process the financial transactions for awards and award projects within the business unit.

<table>
<thead>
<tr>
<th>Default Award Attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution</td>
<td>Institution that receives grants or awards to conduct research or studies.</td>
</tr>
<tr>
<td>Contract Type</td>
<td>Contract types of the Grant contract class are available for award creation.</td>
</tr>
<tr>
<td>Burden Schedule</td>
<td>The default burden schedule for the award, if the sponsor didn’t specify a burden schedule. However, you can change the burden schedule when you define the award.</td>
</tr>
<tr>
<td>Days to Close</td>
<td>Number of days after the award end date. Use this time to manage award expenses incurred until the close date.</td>
</tr>
</tbody>
</table>

Default Billing Attributes
The billing attributes you specify are sent to the contract bill plan for billing purposes. Some of the key attributes are explained in the following table:

<table>
<thead>
<tr>
<th>Default Billing Attributes</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice Method</td>
<td>A set of rules, based on rates and cost reimbursable schedule types, that calculate invoice amounts for the bill plan that’s associated with the contract line on the associated project.</td>
</tr>
<tr>
<td>Revenue Method</td>
<td>A set of rules, based on rates and cost reimbursable schedule types, that calculate revenue amounts for the revenue plan that’s associated with the contract line on the associated project.</td>
</tr>
<tr>
<td>Billing Cycle</td>
<td>Represents the frequency at which invoices are created for this bill plan.</td>
</tr>
<tr>
<td>Labor Format</td>
<td>Labor format to group labor items on an invoice line. Labor format includes the source of columns, text, and layout.</td>
</tr>
<tr>
<td>Nonlabor Format</td>
<td>Nonlabor format to group nonlabor items on an invoice line. It includes the source of columns, text, and layout.</td>
</tr>
<tr>
<td>Event Format</td>
<td>Format to group events on an invoice line. It includes columns, text, and layout.</td>
</tr>
</tbody>
</table>
Burn Rate Indicators
The burn rate indicator percentage ranges indicate the spending limits for award projects. You can use the default values specified in the application or set the required threshold limits.

<table>
<thead>
<tr>
<th>Burn Rate Indicators</th>
<th>Details</th>
<th>Default Value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underspending</td>
<td>A value to indicate the budget amount assigned to the award project is below the minimum threshold.</td>
<td>-999.00 to 50</td>
</tr>
<tr>
<td>Overspending</td>
<td>A value to indicate the budget amount assigned to the award project has reached a maximum threshold.</td>
<td>101 to 999</td>
</tr>
<tr>
<td>On Track</td>
<td>A value to indicate the budget amount assigned to the award project is within threshold limits.</td>
<td>51 to 100</td>
</tr>
</tbody>
</table>

Related Topics
• How do I determine the overspending and underspending limits

FAQs for Grants Management Configuration

How can I get access to a business unit to create an award and contract?
When you create an award, you automatically create a contract. To create contracts, you must be defined as a resource with the Contract Administrator role in the same business unit as the contract.
Your implementation administrator adds you as a resource for contracts in the Setup and Maintenance work area. Open the Manage Resources task and create a resource. Search for the person, then add the person as a resource. Select the Contract Administrator role and add an organization that’s mapped to the contracts business unit.

How can I define the grants personnel?
Add HCM personnel to grants personnel and review details such as primary job and organization, and contact details. You can define the person as a principal investigator. If a conflict of interest exists, then indicate if the person has completed the review and the certified date. You can track the persons by associating keywords to them.
Use the Award Personnel flexfield to capture and track personnel attributes that are specific to your organization in the Additional Information region of the Manage Grants Personnel page.
How can I define the budget periods in an award template?

Define budget periods in award templates so that when you create an award from an award template, budget periods are created based on the award template budget period definition.

Open the Manage Award Templates task in the Setup and Maintenance work area, and create award templates from Manage Award Templates page.

Specify the following attributes to define the budget periods in award templates:

- Number of budget periods (The frequency of a budget period is yearly)
- Provide a prefix to the budget period name; for example: FY
- Select a hyphen or slash to separate the prefix and budget period name. Select None if you don’t want a separator.
- Indicate the year in YYYY or YY format.

What's an institution audit?

A rigorous, organization-wide examination carried out by an institution for expending federal funds and grants. The audit is typically performed by an independent body encompassing the financial and compliance aspects. The audit’s objective is to provide assurance to federal government about the using the grants.

In the Setup and Maintenance work area, open the Manage Institutions task. When you create an institution, select the Audit tab, and specify the audit type, coverage details such as the sponsor, auditor, date range, and the report. You can’t add an audit type that’s already associated to the institution for a specified date range.

An auditor issues alerts if any gaps are found. The resolution official works through the alerts and resolves them.

Why can't I delete this institution?

You can’t delete an institution if it’s used by a business unit or an award. Additionally, if contacts or certifications or audits exist for an institution, then you can’t delete an institution.

How do I define the financial plan type to create an award project budget?

Define the financial plan type to create approved cost budgets for award projects by selecting the following options:

- Set the financial plan type as the default award financial plan type
- Enable the financial plan type for budgetary controls

Don’t enable workflow approval for the financial plan type.
Public Business Events

A public event, also known as business event, is a definable logical occurrence in a business scenario. It can be a high-level occurrence such as project creation or a specialized event such as status change.

If you want to perform operations in other systems based on public events in Oracle Project Portfolio Management cloud, then you can use public event features. Project application administrators must enable public event features if they aren’t enabled by default.

After you enable these features, Oracle PPM Cloud sends a signal, along with a payload containing information about the public event, whenever an event occurs. The public event signal is also known as public event.

**Note:** Oracle PPM Cloud sends signals irrespective of the source or cause of the event. For example, the application sends a project creation signal when a project is created using file-based data import, REST service, SOAP service, or user interface.

Integration developers and administrators can subscribe to public events from the Oracle Integration Cloud using the Oracle ERP Cloud Adapter. Then, they can use the information in the payload to configure event handlers that perform business operations. For more information, refer to Oracle ERP Cloud Adapter Capabilities and Developing Integrations with Oracle Integration Cloud Service.

Public event payload contains specific information pertaining to the event. You can use callback services to retrieve additional information from Oracle PPM cloud.

### Related Topics
- Getting Started with Oracle Integration Cloud Service
- Oracle ERP Cloud Adapter Capabilities

Public Events for Project Financial Management

This table describes the public events supported by Project Financial Management.

<table>
<thead>
<tr>
<th>Cloud Product</th>
<th>Supported Public Event</th>
<th>Description</th>
<th>Enabled by Default</th>
<th>First Release Available</th>
<th>Callback Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Financial Management</td>
<td>Publishing Financial Project Progress</td>
<td>Signals whenever financial project progress is published.</td>
<td>No</td>
<td>18C</td>
<td>REST Service: Project Plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Operation: Publish Project Progress</td>
</tr>
<tr>
<td>Project Financial Management</td>
<td>Financial Project Plan Changes</td>
<td>Signals whenever financial project plan changes.</td>
<td>No</td>
<td>18C</td>
<td>REST Service: Project Plans</td>
</tr>
</tbody>
</table>
Public Events for Financial Project Plan Changes

If you want Oracle PPM Cloud to signal whenever task assignments are created or modified in a financial project plan, then you must opt in for the **Generate Public Events on Change in Financial Project Plan** feature. You can enable it from the Edit Features: Project Control page.

For example, if you want to generate revenue whenever financial project progress is published, then:

1. You, as a project application administrator, must enable this feature. Oracle PPM Cloud signals when financial project progress is published.
2. Integration developers must create event handlers that subscribe to these signals and generate revenue whenever financial project progress is published.

Attributes in the Payload for Financial Project Plan Changes Event

This table lists and describes the attributes in the payload.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>planVersionId</td>
<td>The unique identifier of the financial project plan version.</td>
</tr>
<tr>
<td>projectId</td>
<td>The identifier of the project.</td>
</tr>
<tr>
<td>projectNumber</td>
<td>The number of the project.</td>
</tr>
<tr>
<td>eventType</td>
<td>The type of public event.</td>
</tr>
<tr>
<td>taskId</td>
<td>Identifier of the project task that’s modified as part of the financial project plan changes.</td>
</tr>
<tr>
<td>taskNumber</td>
<td>Number of the task.</td>
</tr>
<tr>
<td>resourceName</td>
<td>Name of the resource assigned to the task in the financial project plan.</td>
</tr>
<tr>
<td>rbsElementId</td>
<td>Identifier of the resource included in the financial project plan.</td>
</tr>
<tr>
<td>Attribute</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>resourceClass</td>
<td>Resource class of the resource. For example, LABOR for Labor resources and, EQUIPMENT for equipment type resources.</td>
</tr>
<tr>
<td>planningCurrency</td>
<td>The currency in which the resource is planned.</td>
</tr>
<tr>
<td>unitOfMeasure</td>
<td>Unit of measure for the planned amounts. For example, HOURS for a Labor resource assignment.</td>
</tr>
<tr>
<td>planningStartDate</td>
<td>Planned start date of the resource assignment. This element contains both old and new values.</td>
</tr>
<tr>
<td>planningEndDate</td>
<td>Planned end date of the resource assignment. This element contains both old and new values. A new resource assignment to the task has the same value for oldValue and newValue attributes.</td>
</tr>
<tr>
<td>totalQuantity</td>
<td>Total planned quantity for the resource assignment. This element contains both old and new values. A new resource assignment to the task has the same value for oldValue and newValue attributes..</td>
</tr>
<tr>
<td>totalTcRawCost</td>
<td>Total transaction currency raw cost value of the resource assignment. This element contains both old and new values. A new resource assignment to the task has the same value for oldValue and newValue attributes.</td>
</tr>
<tr>
<td>totalTcBrdndCost</td>
<td>Total transaction currency burdened cost value of the resource assignment. This element contains both old and new values. A new resource assignment to the task has the same value for oldValue and newValue attributes.</td>
</tr>
<tr>
<td>tcRawCostRate</td>
<td>Total transaction currency raw cost rate value of the resource assignment. A new resource assignment to the task has the same value for oldValue and newValue attributes.</td>
</tr>
<tr>
<td>tcBrdndCostRate</td>
<td>Total transaction currency burdened cost rate value of the resource assignment. A new resource assignment to the task has the same value for oldValue and newValue attributes.</td>
</tr>
<tr>
<td>totalPcRawCost</td>
<td>Total project currency raw cost value of the resource assignment. A new resource assignment to the task has the same value for oldValue and newValue attributes.</td>
</tr>
<tr>
<td>totalPcBrdndCost</td>
<td>Total project currency burdened cost value of the resource assignment. A new resource assignment to the task has the same value for oldValue and newValue attributes.</td>
</tr>
<tr>
<td>totalPfcRawCost</td>
<td>Total project functional currency raw cost value of the resource assignment. A new resource assignment to the task has the same value for oldValue and newValue attributes.</td>
</tr>
<tr>
<td>totalPfcBrdndCost</td>
<td>Total project functional currency burdened cost value of the resource assignment. A new resource assignment to the task has the same value for oldValue and newValue attributes.</td>
</tr>
</tbody>
</table>

Let's look at a sample payload that's generated when a new resource is added to a task.

```xml
  <eb:name>ob:PlanChangeEvent<eb:name>
  <eb:content>
```

339
<ns0:PlanChangeEventInfo>
  <planVersionId>100100075548718100100075548718</planVersionId>
  <projectId>300100152392374</projectId>
  <projectNumber>sk_pub_event</projectNumber>
  <eventType>PLAN_UPDATE</eventType>
  <planningResource>
    <taskId>100100075548714</taskId>
    <taskNumber>1</taskNumber>
    <resourceName>Labor</resourceName>
    <rbsElementId>100000011550441</rbsElementId>
    <resourceClass>PEOPLE</resourceClass>
    <planningCurrency>USD</planningCurrency>
    <unitOfMeasure>HOURS</unitOfMeasure>
    <planningStartDate>
      <newValue>2018-09-04</newValue>
      <oldValue>2018-09-04</oldValue>
    </planningStartDate>
    <planningEndDate>
      <newValue>2018-12-02</newValue>
      <oldValue>2018-12-02</oldValue>
    </planningEndDate>
    <totalQuantity>
      <newValue>234.00000000</newValue>
      <oldValue>234.00000000</oldValue>
    </totalQuantity>
    <totalTcRawCost>
      <newValue>2340.00000000</newValue>
      <oldValue>2340.00000000</oldValue>
    </totalTcRawCost>
    <totalTcBrdndCost>
      <newValue>3346.20000000</newValue>
      <oldValue>3346.20000000</oldValue>
    </totalTcBrdndCost>
  </planningResource>
</ns0:PlanChangeEventInfo>
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Public Business Events

<tcRawCostRate>
<newValue>10.00000000</newValue>
<oldValue>10.00000000</oldValue>
</tcRawCostRate>

<tcBrndCostRate>
<newValue>14.30000000</newValue>
<oldValue>14.30000000</oldValue>
</tcBrndCostRate>

<totalPcRawCost>
<newValue>2340.00000000</newValue>
<oldValue>2340.00000000</oldValue>
</totalPcRawCost>

<totalPcBrndCost>
<newValue>3346.20000001</newValue>
<oldValue>3346.20000001</oldValue>
</totalPcBrndCost>

<totalPfcRawCost>
<newValue>2340.00000000</newValue>
<oldValue>2340.00000000</oldValue>
</totalPfcRawCost>

<totalPfcBrndCost>
<newValue>3346.20000001</newValue>
<oldValue>3346.20000001</oldValue>
</totalPfcBrndCost>

<planningResource>
<nso:PlanChangeEventInfo>
</eb:content>
</eb:business-event>

Related Topics
- Oracle Integration Cloud Service
Public Events for Publishing Financial Project Progress

If you want Oracle PPM Cloud to signal whenever financial project progress is published, then you must opt in for the Generate Public Events When Publishing Financial Project Progress feature. You can enable it from the Edit Features: Project Control page.

For example, if you want to generate revenue whenever financial project progress is published, then:

1. You, as a project application administrator, must enable this feature. Oracle PPM Cloud signals when financial project progress is published.
2. Integration developers must create event handlers that subscribe to these signals and generate revenue whenever financial project progress is published.

Attributes in the Payload for Publishing Financial Project Progress Event

This table lists and describes the attributes in the payload.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>projectID</td>
<td>Unique identifier of the project.</td>
</tr>
<tr>
<td>projectNumber</td>
<td>Number of the project.</td>
</tr>
<tr>
<td>asOfDate</td>
<td>The project progress as of the system date.</td>
</tr>
<tr>
<td>physicalPercentComplete</td>
<td>The physical work completion percentage.</td>
</tr>
<tr>
<td>previousPhysicalPercentComplete</td>
<td>The physical work completion percentage of previous instance.</td>
</tr>
<tr>
<td>primaryPhysicalPercentCompleteBasis</td>
<td>The basis of the physical percent complete for primary resource.</td>
</tr>
<tr>
<td>etcCost</td>
<td>The estimate-to-complete cost.</td>
</tr>
<tr>
<td>eacCost</td>
<td>The estimate-at-complete cost.</td>
</tr>
<tr>
<td>baselinedPlannedCost</td>
<td>The value of the planned cost at baseline.</td>
</tr>
<tr>
<td>etcEffort</td>
<td>The estimate-to-complete effort.</td>
</tr>
<tr>
<td>eacEffort</td>
<td>The estimate-at-complete effort.</td>
</tr>
<tr>
<td>baselinedPlannedEffort</td>
<td>The value of the baseline planned effort.</td>
</tr>
</tbody>
</table>
Let’s look at a sample payload that’s generated when financial project progress is published.

```xml
  <eb:name>ob:PublishProgressEvent</eb:name>
  <eb:content>
    <ns0:PublishProgressEventInfo>
      <ns0:projectId>300100005141135</ns0:projectId>
      <ns0:projectNumber>0001 PJO CDRM AM</ns0:projectNumber>
      <ns0:projectName>0001 PJS CDRM AM</ns0:projectName>
      <ns0:asOfDate>2018-06-26</ns0:asOfDate>
      <ns0:physicalPercentComplete>21.3306265828</ns0:physicalPercentComplete>
      <ns0:previousPhysicalPercentComplete>0</ns0:previousPhysicalPercentComplete>
      <ns0:primaryPhysicalPercentCompleteBasis>COST</ns0:primaryPhysicalPercentCompleteBasis>
      <ns0:etcCost>59199.75</ns0:etcCost>
      <ns0:eacCost>1492099.75</ns0:eacCost>
      <ns0:baselinedPlannedCost>63849.7500000699875</ns0:baselinedPlannedCost>
      <ns0:etcEffort>1373</ns0:etcEffort>
      <ns0:eacEffort>51373</ns0:eacEffort>
      <ns0:baselinedPlannedEffort>1683</ns0:baselinedPlannedEffort>
      <ns0:earnedValueCost>13619.5517465487276026185568</ns0:earnedValueCost>
      <ns0:earnedValueEffort>739.5762330717</ns0:earnedValueEffort>
      <ns0:currencyCode>USD</ns0:currencyCode>
      <ns0:publishedDate>2018-06-26</ns0:publishedDate>
      <ns0:publishedBy>ABRAHAM.MASON</ns0:publishedBy>
    </ns0:PublishProgressEventInfo>
  </eb:content>
</eb:business-event>
```
Public Events for Project Status

If you want Oracle PPM Cloud to signal whenever a project is created or a project status is changed, then you must opt in for the **Publish Public Events on Project Status Change** feature. You can enable it from the Edit Features: Project Financial Management page in the **Project Financial Management** offering.

For example, if you want to create a contract whenever project status changes to Approved, then:

1. You, as a project application administrator, must enable this feature. Oracle PPM Cloud signals when a project status changes to Approved.
2. Integration developers must create event handlers that subscribe to these signals and create a contract whenever project status changes to Approved.

Attributes in the Payload for Public Events on Project Status Change

This table lists and describes the attributes in the payload.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>projectID</td>
<td>Unique identifier of the project.</td>
</tr>
<tr>
<td>projectName</td>
<td>Name of the project.</td>
</tr>
<tr>
<td>projectNumber</td>
<td>Number of the project.</td>
</tr>
<tr>
<td>projectDescription</td>
<td>Description of the project.</td>
</tr>
<tr>
<td>projectStatus</td>
<td>System code of the project status. Typical project status codes are ACTIVE and CLOSED.</td>
</tr>
<tr>
<td>projectStatusName</td>
<td>Name of the project status. Typical project statuses are Active and Closed.</td>
</tr>
<tr>
<td>projectOrganization</td>
<td>Name of the project owning organization.</td>
</tr>
<tr>
<td>projectType</td>
<td>Name of the project type associated to the project.</td>
</tr>
<tr>
<td>projectManagerName</td>
<td>Name of the project manager.</td>
</tr>
<tr>
<td>projectManagerUserName</td>
<td>User name of the project manager.</td>
</tr>
</tbody>
</table>
Let's look at a sample payload that's generated when project status is changed.

```xml
<ns0:ProjectStatusEventInfo>
  <ns0:projectId>300100005141135</ns0:projectId>
  <ns0:projectName>0001 PJS CDRM AM</ns0:projectName>
  <ns0:projectNumber>0001 PJS CDRM AM</ns0:projectNumber>
  <ns0:projectDescription>Template to be Employed for PMEA RRF Flow.</ns0:projectDescription>
  <ns0:projectStatus>APPROVED</ns0:projectStatus>
  <ns0:projectStatusName>Approved</ns0:projectStatusName>
  <ns0:projectOrganization>Vision Operations</ns0:projectOrganization>
  <ns0:projectType>PJS CPBF Billable</ns0:projectType>
  <ns0:projectManagerName>Abraham Mason</ns0:projectManagerName>
  <ns0:projectManagerUserName>ABRAHAM.MASON</ns0:projectManagerUserName>
  <ns0:statusComment/>
  <ns0:startDate>2010-10-01</ns0:startDate>
  <ns0:finishDate>2012-10-31</ns0:finishDate>
  <ns0:projectUnit>Project Operations</ns0:projectUnit>
  <ns0:businessUnit>Vision Operations</ns0:businessUnit>
</ns0:ProjectStatusEventInfo>
```

**Related Topics**

- Oracle Integration Cloud Service
38 Import and Export Setup Data

Offering Based Export and Import: Explained

Oracle recommends that you use this method for data export and import to ensure migration of all relevant setup data to the offering or functional area. This method is especially useful when doing your initial implementation or moving your implementation or configuration across instances for the first time.

Oracle recommends that you export the setup data for the entire offering at least once before exporting setup data for individual functional areas. This ensures that all the basic implementation setup data is migrated.

This method is advantageous over others because you don’t need to choose the tasks or understand data relationships to ensure only setup data relevant to the selected offering or functional area is exported. At the same time, it gives you flexibility to filter the setup data for the offering or functional area, where applicable.

Export and import offering setup data processes are initiated from the Setup and Maintenance work area.

Export
During export, appropriate setup data is identified as follows:

- When you export setup data for an offering, the export definition includes setup data for all enabled functional areas and relevant features in the offering.
- When you export setup data for a single functional area within an offering, the export definition only includes setup data for that functional area and relevant features.

Import
During import, a configuration package created by the export process is uploaded. All setup data contained in the configuration package is imported into the environment you initiate the setup data import from.

Similarly to the export process, you can import setup data for an entire offering or a specific functional area. The offering and functional area must already be enabled for implementation before you can import setup data for it. However, the feature selection may or may not be selected. To ensure enabling of all the same functionality that existed in the environment where the setup data was exported from for the corresponding offering or functional area, use the option to Import the Feature Selection at the time of importing the setup data. You must use a configuration package file that contains the setup data for the appropriate offering or functional area. You also have the option to compare the setup data prior to import to identify what setup data modifications happen if the setup data is imported. You can also compare the setup data after it has been imported (rather than prior to import) to ensure that no differences exist. Once you initiate the import process, you can monitor its progress and check its status from the Export Offering page. Once the process is complete you can review the reports. Similarly, use the Import Offering Setup Data page to upload and import previously exported setup data.

Related Topics

- Overview of Setup Data Export and Import
Implementation Project Based Export and Import: Explained

Export and import setup data for an implementation projects using the Setup and Maintenance work area.

You must explicitly create a configuration package from the Setup and Maintenance work area to export setup data for an implementation project. You generate the setup export and import definition by selecting an implementation project and creating a configuration package. The tasks and their associated business objects in the selected implementation project define the setup export and import definition for the configuration package. Depending on your needs, when you create a configuration package based on an implementation project, you can also modify some additional aspects, as explained here.

- Exclude some of the business objects from the configuration you selected to export setup data for.
  
  If you limit this action to setup data already available in the target instance, no data dependencies occur.

- Change the default import sequence of the business objects

  Oracle recommends that you limit using this option when you must correct a data dependency issue and you fully understand the data relationships between the business objects of your configuration.

- Filter the setup data to export

Oracle recommends that you migrate the implementation using the Offering based export and import functionality. Limit the use of implementation projects as the source for exporting setup when you are required to modify the list of tasks or of objects you want export setup data for.

Export

During export, appropriate setup data is identified based on the tasks in the implementation project used as source for the configuration package. The setup data in the configuration package is a snapshot of the data in the source application instance at the time of export. Once export completes, you can download the configuration package file as a zipped archive of multiple XML files, move it to the target application instance, and upload and import it. After exporting the setup data you may continue entering new or modifying existing setup data for your configuration. Since the configuration package is a snapshot of the setup data taken at the time export is initiated, you may need to take another snapshot of the same configuration or set of data later. Although you can always create a different configuration package, Functional Setup Manager provides you the ability to take another snapshot of the setup data using the same modified export and import definition by exporting the configuration package multiple times and creating multiple versions. While the export definition remains the same in each version, the setup data can be different if you modified the data in the time period between the different runs of the export process. Since each version of the configuration package has a snapshot of the data in the source instance, you can compare and analyze various versions of the configuration package to see how the setup data changed.

Import

During import, you first upload a configuration package created by the export process and then import the setup data. All setup data contained in the configuration package is imported into the environment you initiate the setup data import from. In the target application instance, the setup import process inserts all new data from the source configuration package that does not already exist, and update any existing data with changes from the source. Setup data that exists in the target instance but not in source remains unchanged.
Configuration Packages: Explained

A configuration package contains the setup import and export definition. The setup import and export definition is the list of setup tasks and their associated business objects that identifies the setup data for export as well as the data itself. When you create a configuration package only the setup export and import definition exists. Once you submit export, a snapshot of the appropriate setup data is added to the configuration package using the definition. You can continue making modifications to the setup data in the environment and create a new configuration package any time you need it.

You can generate the setup export and import definition implicitly or explicitly:

- A configuration package is created implicitly when you export setup data for an entire offering or any functional area.
- A configuration package is created explicitly when you export setup data based on an implementation project. This method enables further modification of the configuration packages.

You generate the setup export and import definition by selecting an implementation project and creating a configuration package. The tasks and their associated business objects in the selected implementation project define the setup export and import definition for the configuration package. In addition, the sequence of the tasks in the implementation project determines the export and import sequence.

The tasks and their associated business objects in the selected configuration (offering, functional area or implementation project) define the setup export and import definition for the configuration package. In addition, the sequence of the tasks in the implementation project determines the export and import sequence.

Once a configuration package is exported, the setup export and import definition is locked and cannot be changed. You cannot add or remove tasks and their associated business objects, change their export and import sequence, or change the scope value selection. However, you can create a new configuration package with such modifications at any time.

Move Common Reference Objects

Overview of Moving Common Reference Objects

The common reference objects are used by several setup tasks in the Setup and Maintenance work area. The common reference objects become a part of the configuration package that is created for an implementation project. While moving the application content, for example, moving from test to the production phase of an implementation, attend to the nuances of these common reference objects.

Parameters

The common reference objects are represented as business objects. A single object can be referenced in multiple setup tasks with different parameters. In the configuration package created for the implementation project, parameters passed to a setup task are also passed to the business objects being moved. As a result, the scope of the setup tasks is maintained intact during the movement.
Dependencies
Common reference objects may have internal references or dependencies among other common reference objects. Therefore, you must note all the dependencies before moving the objects so that there are no broken references among them.

Related Topics
- Overview of Setup Data Export and Import
- Setup Data Export and Import Using an Offering or a Functional Area

Business Objects for Moving Common Reference Objects
Common reference objects in Oracle Fusion Functional Setup Manager are used to move application setup content from one environment to another. For example, from a test environment to a production environment.

Choice of Parameters
The following table lists the business objects, the movement details, and the effect of the setup task parameter on the scope of the movement.

Note:
- You can move only the translations in the current user language.
- You can move the Oracle Social Network business objects and the changes to the Navigator using the configuration sets on the Configuration Set Migration page.

<table>
<thead>
<tr>
<th>Business Object Name</th>
<th>Moved Functional Item</th>
<th>Effect on the Scope of Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Message</td>
<td>Messages and associated tokens</td>
<td>No parameters: All messages are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only messages belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter messageName/ applicationId Only the specified message is moved.</td>
</tr>
<tr>
<td>Application Taxonomy</td>
<td>Application taxonomy modules and components</td>
<td>No parameters: All taxonomy modules and components are moved.</td>
</tr>
<tr>
<td>Application Attachment Entity</td>
<td>Attachment entities</td>
<td>No parameters: All attachment entities are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only attachment entities belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td>Application Attachment Category</td>
<td>Attachment categories and category-to-entity mappings</td>
<td>No parameters: All attachment categories and category-to-entity mappings are moved.</td>
</tr>
<tr>
<td>Business Object Name</td>
<td>Moved Functional Item</td>
<td>Effect on the Scope of Movement</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Application Document Sequence</td>
<td>Document sequence categories</td>
<td>No parameters: All categories are moved.</td>
</tr>
<tr>
<td></td>
<td>Document sequences and their assignments</td>
<td>Parameter moduleType/ moduleKey Only document sequences belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter code/ applicationId Only the specified document sequence category code is moved.</td>
</tr>
<tr>
<td>Application Descriptive Flexfield</td>
<td>Descriptive flexfield registration data and setup data</td>
<td>No parameters: All descriptive flexfields are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only descriptive flexfields belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter descriptiveFlexfieldCode/ applicationId Only the specified descriptive flexfield is moved. Importing the metadata of a flexfield can change its deployment status. Therefore, you must redeploy if there are any affected flexfields. The import process automatically submits affected flexfields for redeployment. Also only flexfields with a deployment status of Deployed or Deployed to Sandbox are eligible to be moved.</td>
</tr>
<tr>
<td>Application Extensible Flexfield</td>
<td>Extensible flexfield registration data and setup data</td>
<td>No parameters: All extensible flexfields are moved.</td>
</tr>
<tr>
<td></td>
<td>Extensible flexfield registration data, including categories</td>
<td>Parameter moduleType/ moduleKey Only extensible flexfields belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter extensibleFlexfieldCode/ applicationId Only the specified extensible flexfield is moved.</td>
</tr>
<tr>
<td>Business Object Name</td>
<td>Moved Functional Item</td>
<td>Effect on the Scope of Movement</td>
</tr>
<tr>
<td>--------------------------------------</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>flexfield is moved. Importing the metadata of a flexfield can change its deployment status and therefore, the affected flexfields must be redeployed. The import process automatically submits affected flexfields for redeployment. Also, only flexfields with a deployment status of Deployed or Deployed to Sandbox are eligible to be moved.</td>
</tr>
<tr>
<td>Application Key Flexfield</td>
<td>Key flexfield registration data and setup data</td>
<td>No parameters: All key flexfields are moved. Parameter moduleType/ moduleKey Only key flexfields belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. Parameter keyFlexfieldCode/ applicationId Only the specified key flexfield is moved. Importing the metadata of a flexfield can change its deployment status and therefore, the affected flexfields must be redeployed. The import process automatically submits affected flexfields for redeployment. Only flexfields with a deployment status of Deployed or Deployed to Sandbox are eligible to be moved.</td>
</tr>
<tr>
<td>Application Flexfield Value Set</td>
<td>Value set setup data</td>
<td>No parameters: All value sets are moved. Parameter moduleType/ moduleKey Only value sets belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved. Parameter valueSetCode: Only the specified value set is moved. Importing the metadata of a value set can change the deployment status of flexfields that use the value set. Therefore, you must redeploy if there are any affected flexfields. The import process automatically submits affected flexfields for redeployment.</td>
</tr>
<tr>
<td>Application Reference Currency</td>
<td>Currency data</td>
<td>No parameters: All currencies are moved.</td>
</tr>
<tr>
<td>Application Reference ISO Language</td>
<td>ISO language data</td>
<td>No parameters: All ISO languages are moved.</td>
</tr>
<tr>
<td>Application Reference Industry</td>
<td>Industry data including industries in territories data</td>
<td>No parameters: All industries are moved.</td>
</tr>
<tr>
<td>Application Reference Language</td>
<td>Language data</td>
<td>No parameters: All languages are moved.</td>
</tr>
<tr>
<td>Application Reference Natural Language</td>
<td>Natural language data</td>
<td>No parameters: All natural languages are moved.</td>
</tr>
<tr>
<td>Business Object Name</td>
<td>Moved Functional Item</td>
<td>Effect on the Scope of Movement</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Application Reference Territory</td>
<td>Territory data</td>
<td>No parameters: All territories are moved.</td>
</tr>
<tr>
<td>Application Reference Time zone</td>
<td>Time zone data</td>
<td>No parameters: All time zones are moved.</td>
</tr>
<tr>
<td>Application Standard Lookup</td>
<td>Standard lookup types and their lookup codes</td>
<td>No parameters: All standard lookups are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only standard lookups belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter lookupType: Only the specified common lookup is moved.</td>
</tr>
<tr>
<td>Application Common Lookup</td>
<td>Common lookup types and their lookup codes</td>
<td>No parameters: All common lookups are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only common lookups belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter lookupType: Only the specified common lookup is moved.</td>
</tr>
<tr>
<td>Application Set-Enabled Lookup</td>
<td>Set-enabled lookup types and their lookup codes</td>
<td>No parameters: All set-enabled lookups are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only set-enabled lookups belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter lookupType: Only the specified set-enabled lookup is moved.</td>
</tr>
<tr>
<td>Application Profile Category</td>
<td>Profile categories</td>
<td>No parameters: All profile categories are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only categories belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>name/applicationId Only the specified category is moved.</td>
</tr>
<tr>
<td>Application Profile Option</td>
<td>Profile options and their values</td>
<td>No parameters: All profile options and their values are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only profile options and their values belonging to the specified module are moved.</td>
</tr>
<tr>
<td>Business Object Name</td>
<td>Moved Functional Item</td>
<td>Effect on the Scope of Movement</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Application Profile Value</td>
<td>Profile options and their values</td>
<td>No parameters: All profiles and their values are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only profiles and their values belonging to the specified module are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter categoryName/ categoryApplicationId Only profiles and their values belonging to the specified category are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter profileOptionName: Only the specified profile and its values are moved.</td>
</tr>
<tr>
<td>Application Reference Data Set</td>
<td>Reference data sets</td>
<td>No parameters: All sets are moved.</td>
</tr>
<tr>
<td>Application Reference Data Set Assignment</td>
<td>Reference data set assignments</td>
<td>Parameter determinantType: Only assignments for the specified determinant type are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter determinantType/ referenceGroupName Only assignments for the specified determinant type and reference group are moved.</td>
</tr>
<tr>
<td>Application Tree Structure</td>
<td>Tree structures and any labels assigned to the tree structure</td>
<td>No parameters: All tree structures (and their labels) are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only tree structures (and their labels) belonging to the specified module are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter treeStructureCode: Only the specified tree structure (with its labels) is moved.</td>
</tr>
<tr>
<td>Application Tree</td>
<td>Tree codes and versions</td>
<td>No parameters: All trees are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter moduleType/ moduleKey Only trees belonging to the specified module are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter treeStructureCode: Only trees belonging to the specified tree structure are moved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parameter TreeStructureCode/ TreeCode Only trees belonging to the specified tree structure and tree code are moved.</td>
</tr>
<tr>
<td>Application Tree Label</td>
<td>Tree structures and any labels assigned to the tree structure</td>
<td>No parameters: All tree structures (and their labels) are moved.</td>
</tr>
</tbody>
</table>
### Application Data Security Policy

- **Database resources, actions, conditions, and data security policies**
  - **No parameters:** All database resources/ actions/ conditions/ policies are moved.
  - **Parameter moduleType/ moduleKey Only**
    - Database resources/ actions/ conditions/ policies belonging to the specified module and its descendant modules in the taxonomy hierarchy are moved.
  - **Parameter objName:** Only the specified database resource along with its actions/ conditions/ policies is moved.

If the policies being moved contain reference to newly created roles, move the roles before moving the policies. If the source and target systems use different LDAPs, manually perform the GUID reconciliation after moving the data security policies.

### Guidelines for Moving Related Common Reference Objects

Certain common reference objects may use other common reference objects creating dependencies among the objects. During the movement of common reference objects, ensure that these dependencies or references aren’t broken or lost.

#### Dependencies

The dependencies among the common reference objects may be caused by any of the following conditions.

- Flexfield segments use value sets
- Value sets may make use of standard, common, or set-enabled lookups
- Key flexfields may have an associated tree structure and key flexfield segments may have an associated tree code
- Tree codes and versions may be defined over values of a value set
- Data security policies may be defined for value sets that have been enabled for data security

You may decide to move one, some, or all of the business objects by including the ones you want to move in your configuration package. For example, you may decide to move only value sets, or move both value sets and their lookups as part of the same package. Whatever be the combination, Oracle recommends that during the movement of objects, you follow an order that maintains the dependencies among the objects.

While moving the business objects, adhere to the following order:

1. Move created taxonomy modules before moving any objects that reference them, such as flexfields, lookups, profiles, messages, and so on.
2. Move created currencies before moving any objects that reference them, such as territories.
3. Move created territories before moving any objects that reference them, such as languages and natural languages.
4. Move created ISO languages before moving any objects that reference them, such as languages, natural languages, and industries.
5. Move created tree structures before moving any objects that reference them, such as trees or tree labels.
6. Move created profile options before moving any objects that reference them, such as profile categories or profile values.
7. Move created attachment entities before moving any objects that reference them, such as attachment categories that reference them.

**Note:** In scenarios where there may be dependencies on other objects, you must move the dependencies before moving the referencing object. For example, if data security policies have dependencies on newly created security roles, you must move the security roles before moving the security policies.

Guidelines for Moving Common Reference Objects Using the Seed Data Framework

To move the common reference objects, you can use the Seed Data Framework. You can also use the command line interface of the Seed Data Framework to move the object setup data. For more information about seed data loaders including common reference object loaders, see Oracle Fusion Applications Developer’s Guide.

Movement Dependencies

The seed data interface moves only the setup metadata. For example, if you use Seed Data Framework to import flexfield metadata, the flexfield setup metadata is imported into your database. However, you must initiate the flexfield deployment process separately after seed data import to regenerate the runtime flexfield artifacts in the target environment. Similarly, if you use Seed Data Framework to import data security metadata, you must first move any new referenced roles and then manually run the GUID reconciliation where required.

To ensure that the reference data isn’t lost during the movement, certain guidelines are prescribed. It’s recommended that you perform the movement of object data exactly in the following order:

**Note:** Only the translation in the current user language is moved.

1. Move created taxonomy modules before moving any objects that reference them, such as flexfields, lookups, profiles, attachments, reference data sets, document sequences, messages, and data security.
2. Move created currencies before moving any objects that reference them, such as territories.
3. Move created territories before moving any objects that reference them, such as languages and natural languages.
4. Move created ISO languages before moving any objects that reference them, such as languages, natural languages, and industries.
5. Move created tree structures before moving any objects that reference them, such as trees or tree labels.
6. Move created profile options before moving any objects that reference them, such as profile categories or profile values.
7. Move created attachment entities before moving any objects that reference them, such as attachment categories that reference them.
8. Move created reference data sets before moving any objects that reference them, such as reference data set assignments and set-enabled lookups.
9. Move created document sequence categories before moving any objects that reference them, such as document sequences.
10. Move created tree labels before moving any objects that reference them, such as trees.
11. Move created data security objects and policies before moving any objects that reference them, such as value sets.
12. Move created value sets before moving any objects that reference them, such as flexfields.
13. Move created trees before moving any objects that reference them, such as key flexfields.
Glossary

accounting attribute
Predefined fields that map to components of subledger journal entries. Sources are assigned to accounting attributes.

accounting period
The fiscal period used to report financial results, such as a calendar month or fiscal period.

action
The kind of access, such as view or edit, named in a security policy.

ADFdi
Abbreviation for Application Desktop Framework Desktop Integration. A tool that lets you export data from spreadsheet application into Oracle Fusion applications.

approved budget
Financial plan type designated as an approved cost budget, approved revenue budget, or both, whose versions are used for specific purposes (for example, as default budget versions for project performance reporting).

ASN
Abbreviation for advance shipment notice. Electronic data interchange (EDI) or Extensible Markup Language (XML) from a supplier that informs the receiving organization that a shipment is in transit. ASNs speed the receiving process by enabling the receiver to check in entire shipments without entering individual line information. The ASN may contain details including shipment date, time, and identification number; packing slip data; freight information; item detail including cumulative received quantities; country of origin; purchase order number; and returnable packing unit information.

balancing segment
A chart of accounts segment used to automatically balance all journal entries for each value of this segment.

balancing segment value
The value of a balancing segment used to automatically balance journal entries.

baseline financial project plan
Key planned information for tasks and task assignments, including dates, costs, quantity, effort, and rates, that you can save from current project plan values. Setting a baseline for a financial project plan doesn’t create a new plan version. Rather, current plan information is saved in baseline columns of the current project plan.

bill plan
A set of instructions on a contract that define how to invoice a customer. Multiple contract lines on a contract can use the same or different bill plans.
billing control
Contract feature that controls the types of transactions, dates, and amounts a customer may be invoiced for and revenue can be recognized for a contract or contract line. Define billing controls at the contract or contract line level.

borrowed and lent processing method
A method of processing cross-charge transactions that generates accounting entries to transfer costs or share revenue from the provider organization to the receiver organization within a legal entity.

budgetary control
Set of options and validation processes that determine which transactions are subject to validation against budgets to prevent overspending.

burden cost
Burden costs are legitimate costs of doing business that support raw costs and cannot be directly attributed to work performed.

burden cost base
The grouping of raw costs to which burden costs are applied.

burden cost code
A classification of overhead costs. A burden cost code represents the type of burden cost that you want to apply to raw cost. For each burden cost code in the burden structure, you specify what cost base it is applied to, the expenditure types it is associated with, and the order in which it is applied to raw costs within the cost base.

burden structure
Determines how expenditure types are grouped into burden cost bases and what types of burden costs are applied to the cost bases. A burden structure defines relationships between burden cost bases and burden cost codes, and between burden cost bases and expenditure types.

burdened cost
Cost of an expenditure item, including the raw cost and burden costs.

business function
A business process or an activity that can be performed by people working within a business unit. Describes how a business unit is used.

business unit
A unit of an enterprise that performs one or many business functions that can be rolled up in a management hierarchy.
**chart of accounts**
The account structure your organization uses to record transactions and maintain account balances.

**class category**
Method of classifying projects. For example, use class categories to define project funding sources, investment strategies, or industry sectors. Class categories are associated with a set of values called class codes.

**class code**
Implementation-defined value within a class category that is used to classify projects. For example, a class category called Industry Sector can have class codes such as Construction, Banking, and Health Care.

**clause adoption**
Reusing a clause from the global business unit in local business units either by adopting the clause without change or by localizing it.

**clause localization**
A type of clause adoption where the adopted clause is edited to suit the local business unit needs.

**clause numbering level**
Specifies the determinant type of the document sequence for automatic clause numbering.

**clearing company**
The intercompany clearing entity used to balance the journal.

**condition**
The part of a data security policy that specifies what portions of a database resource are secured.

**context**
A grouping of flexfield segments to store related information.

**context segment**
The flexfield segment used to store the context value. Each context value can be associated with a different set of context-sensitive segments.

**context-sensitive segment**
A flexfield segment that may or may not appear depending upon a context. Context-sensitive segments are attributes that apply to certain entity rows based on the value of the context segment.

**contract deviations**
Differences between the contract terms in a contract and those in the contract terms template applied to that contract and any deviations from company policies as determined by Contract Expert feature rules.
Contract Expert
A feature that lets you create and evaluate business rules in the terms library such that the contract terms meet your business standards, by suggesting contract changes or additional clauses.

Contract Terms Library
A repository of standard clauses, contract terms templates, and business rules built using Contract Expert.

cost sharing
When an award is funded by a federal agency, a percentage of costs are picked internally and usually aren’t eligible for billing or overhead recovery.

current planning period
The current project accounting period or accounting period (depending on the selected calendar type) for the purposes of financial planning.

data security
The control of access and action a user can take against which data.

data security policy
A grant of entitlement to a role on an object or attribute group for a given condition.

database resource
An applications data object at the instance, instance set, or global level, which is secured by data security policies.

denormalization
Groups hierarchical data in a single row for each lowest-level node in the hierarchy for performance improvement while querying the hierarchy.

descriptive flexfield
Expandable fields used for capturing additional descriptive information or attributes about an entity, such as a customer case. You may configure information collection and storage based on the context.

determinant
A value that specifies the use of a reference data set in a particular business context.

determinant type
An optional value that affects document sequencing in a transaction. The available determinant types are Business Unit, Ledger, Legal Entity, and Tax Registration.
determinant value
A value specific to the selected determinant type of a document sequence. If Ledger is the determinant type for a document sequence, the determinant value is the specific ledger number whose documents are numbered by the document sequence. It is relevant in a document sequence assignment only if the document sequence has a determinant type.

DHHS Entity Number
An identification number issued to the institution by the Department of Health and Human Services agency, United States.

distribution factor
Numeric value that determines the budget, forecast, or project plan amounts distributed to financial periods corresponding to each of the ten spread points that make up a spread curve.

document
Business objects for which you import transactions from source applications. Examples of documents are time cards, expense reports, usages, or miscellaneous transactions.

document entry
Represents distinct type of transactions for a document that need to be processed in different ways.

document sequence
A unique number that is automatically or manually assigned to a created and saved document.

encumbrance accounting
An accounting practice that creates journal entries for requisitions and purchase orders that will become expenditures when goods and services are invoiced or received. The recording of estimated costs before the actual expenditures allows managers to plan for the future impact of previous financial decisions.

enterprise
An organization having common control over one or more legal entities.

enterprise role
Enterprise roles provide users with access both to the application functions they need to perform their jobs as well as the permissions to access the data where they need to perform those functions. There are two types of enterprise roles: job roles and abstract roles. Job roles permit users to perform activities specific to their job. Abstract roles permit users to perform functions that span the different jobs in the enterprise.

entitlement
Grant of access to functions and data. Oracle Fusion Middleware term for privilege.

expenditure item
The smallest logical unit of expenditure you can charge to a project and task. For example, a time card item or an expense report item.
expenditure type
Classification of cost that you assign to each expenditure item in Project Financial Management applications.

expenditure type class
Specifies how an expenditure item is processed. For example, if you assign the Straight Time expenditure type class to an expenditure type, Project Financial Management uses labor cost schedules to calculate the cost of an expenditure item with that expenditure type and expenditure type class.

financial plan type
Category or collection of either project budgets or project forecasts.

financial resource
A resource that uses currency as its unit of measure.

firm burden schedule
A burden schedule of burden multipliers that will not change over time. This is compared to provisional schedules in which actual multipliers are mapped to provisional multipliers after an audit.

flexfield
A flexible data field that you can configure such that it contains one or more segments or stores additional information. Each segment has a value and a meaning.

flexfield segment
An extensible data field that represents an attribute and captures a value corresponding to a predefined, single extension column in the database. A segment appears globally or based on a context of other captured information.

incident
A collection of diagnostic information about a critical error, providing details about the state of the application when the issue occurred.

intercompany billing
Feature that enables you to bill an internal customer for work done on a receiver project and transfer internal revenue or costs between provider and receiver organizations.

interproject billing
Feature that enables you to bill an internal customer for work done on a provider project. The cost of work performed is not reflected on the receiver project until the project receives an invoice for the work.

invoice method
Rule defined by the implementation team that determines the calculation method of invoice amounts for contracts during invoice generation.
invoice method classification
Predefined classification for an invoice method that determines the basis for calculating invoice amounts.

IPF Number
Abbreviation for Institutional Profile File Number. An identification number issued by National Institute of Health to the institution.

item categories
Term used to refer to the categories maintained in Product Information Management (PIM) under the purchasing catalog. Within procurement, this category is referred to as a purchasing category. Item categories are used to group items for various reports and programs. For Procurement, every item must belong to an item category.

job
A generic role that is independent of any single department or location. For example, the jobs Manager and Consultant can occur in many departments.

journal
An element of a journal entry consisting of the name, accounting date, category, ledger, and currency for single currency journal entries. Used to group journal lines.

key flexfield
Configurable flexfield comprising multiple parts or segments, each of which has a meaning either individually or in combination with other segments. Examples of key flexfields are part numbers, asset category, and accounts in the chart of accounts.

KPI
Abbreviation for key performance indicator. Key performance indicators (KPIs) measure how well an organization or individual project meets an operational, tactical, or strategic objective that is critical for the current and future success of the organization. Examples are: Period-to-Date (PTD) Actual Spent Labor Effort Percentage, PTD Actual Spent Equipment Effort Percentage, and PTD Actual Margin Percentage.

KPI period determination date
Date used to determine the accounting calendar and project accounting calendar periods for performance measure calculations during key performance indicator (KPI) value generation.

labor costing rule
Determines the rule to process payment for labor resources, such as exempt, nonexempt, or hourly. It is also used for planning, budgeting and forecasting transactions when the plan type is configured to use actual rates.

legal entity
An entity identified and given rights and responsibilities by commercial law through the registration with country’s appropriate authority.
LOC
Acronym for Letter of Credit. A mechanism to request cash from various federal agencies based upon disbursements. Grantees are provided a single letter of credit with each of the sponsoring agencies.

nonlabor resource
An asset or pool of assets. For example, you can define a nonlabor resource with a name PC to represent multiple personal computers that your business owns.

organization
A unit of an enterprise that provides a framework for performing legal, managerial, and financial control and reporting. Organizations can be classified to define their purpose, for example, as departments, divisions, legal entities, and can own projects and tasks, or incur project expenses.

organization classification
Controls the information that you can set up at the organization level. You can assign multiple classifications to one organization, or define separate organizations to represent different types of entities. For example, you can classify an organization as both a legal entity and a department.

organization costing rule
Maps labor costing rules and rate schedules to organizations for labor costing. Also maps rate schedules to organizations for costing nonlabor items.

organization hierarchy
A tree structure that determines the relationship between organizations.

panel tab
A tab that provides supplemental information or functionality for the page. Each panel tab is on the right side of the page, has an icon as the tab label, and slides out when you open the tab.

performance measure
Performance measures are system-defined criterion for performance or schedule that are used to determine if a project is on track.

planning amount allocation basis
Represents the method of distributing financial plan amounts to calendar periods for performance data summarization.

planning options
User-definable options, including plan settings, rate settings, currency settings, and generation options, used to control planning scenarios. Budget or forecast versions inherit planning options defined for financial plan types. Similarly, project plans at the project template or project level inherit planning options defined for project plan types.
**primary balancing segment value**
A segment value used to represent a legal entity in the chart of accounts and automatically balance all intercompany and intracompany transactions and journal entries.

**primary forecast**
Financial plan type designated as a primary cost forecast, primary revenue forecast, or both. The versions are used for specific purposes, for example, as default forecast versions for project performance reporting.

**project accounting period**
Periods that are maintained by business unit and used to track budgets and forecasts, summarize project amounts for reporting, and track project status.

**project and task owning organization**
An organization that can own projects and tasks for the purpose of reporting, security, and accounting.

**project expenditure organization**
An organization that can incur expenditures and hold financial plans for projects.

**project type**
Controls basic project configuration options, such as burdening, billing, and capitalization options, and class categories that are inherited by each project associated with the project type.

**project unit**
An operational subset of an enterprise, such as a line of business, that conducts business operations using projects, and needs to enforce consistent project planning, management, analysis, and reporting.

**provider business unit**
Business unit with resources that provide services to another project (provider project) or business unit. For cross-charge transactions, the provider business unit is the expenditure business unit; the project business unit owns the intercompany billing project.

**provider organization**
Organization that provides services to a project owned by another organization.

**provider project**
Contract project that performs work on behalf of another (receiver) project. In interproject billing, the provider project bills the receiver project through an Oracle Fusion Payables invoice generated by the Update Invoices from Oracle Fusion Receivables process.

**provisional burden schedule**
A burden schedule of estimated burden multipliers that are later audited to determine actual rates. You apply actual rates to provisional burden schedules by replacing the provisional burden multipliers with actual burden multipliers. The application processes adjustments that account for the difference between the provisional and actual calculations.
**rapid implementation**
Use rapid implementation task lists to streamline your setup configuration by focusing only on the critical setup steps. Use the macro-enabled Microsoft Excel templates to configure your applications. For example, implement the Project Financial Management offering by using a single Microsoft Excel workbook. Also, you can use the Microsoft Excel templates in the Define Financials Configuration for Rapid Implementation task list to implement applications within the Financials offering.

**rate-based planning resource**
Resource for which cost and revenue are calculated, based on a rate applied to the quantity that’s entered in a unit of measure other than currency.

**raw cost**
Costs that are directly attributable to work performed. Examples of raw costs are salaries and travel expenses.

**receiver business unit**
Business unit whose projects receive services from another project or business unit. For cross-charge transactions, the receiver business unit is the business unit that owns the receiver project.

**receiver organization**
Organization that receives services provided by the provider organization.

**receiver project**
Project for which work is performed by another (provider) project. In interproject billing, the receiver project incurs costs from an Oracle Fusion Payables invoice generated by the Update Invoice from Oracle Fusion Receivables process performed for the provider project.

**recognized revenue**
Sum of all revenue distributions created for a billing transaction.

**reference data object**
Business objects such as project types, rates schedules, and financial plan types that can be shared across organizations. Define reference data sets if you want to group the values you define for these objects and share them with certain or all organizations.

**reference data set**
Contains reference data that can be shared across a number of business units or other determinant types. A set supports common administration of that reference data.

**reference data sharing**
Facilitates sharing and reuse of common transactional data entities within the parts of a business flow or across organizations.
resource breakdown structure
One or more hierarchies of resources, resource types, resource formats, or other resource groupings that are used for financial and project planning and for viewing planned and actual amounts for a project.

revenue category
Source of revenue for an organization. Revenue categories group expenditure types and event types for revenue and invoices. Also used to define accounting rules.

revenue method
Rule defined by the implementation team that determines the calculation method of revenue amounts for contracts during revenue generation.

revenue method classification
Predefined classification for a revenue method that determines the basis for calculating revenue amounts.

role
Controls access to application functions and data.

scheduled process
A program that you run to process data and, in some cases, generate output as a report.

segment
A segment is a single field within a flexfield and maps to a single table column in your database. When configuring a flexfield, you define the appearance and meaning of individual segments.

set
Classified and grouped reference data that organizational entities share.

source
The application from which a transaction originates.

space
A collaboration feature that supports people working on a common area of interest or goal. Space members can share content, send messages to one another, track group events and tasks, and more.
**sponsor**
Organization which grants funding to the award.

**third-party application source**
Non-Oracle application source of transactions.

**tree**
Information or data organized into a hierarchy with one or more root nodes connected to branches of nodes. A tree must have a structure where each node corresponds to data from one or more data sources.

**tree version**
An instance of a tree that includes life cycle elements such as start and end dates, and indicates whether the tree is active. If a tree is associated with a reference data set, all tree versions belong to one set.

**value set**
A predefined set to validate the values that a user enters in the application. The set may be hierarchical.