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Business Processes User Guide

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Oracle Primavera Unifier Business Processes User Guide

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Working with Business Processes

The following explains how to work with Unifier business processes.

Within the documentation, some content might be specific for cloud deployments while other content is relevant for on-premises deployments. Any content that applies to only one of these deployments is labeled accordingly.

> **Note**: The instructions and information presented in the Unifier documentation is based on an out-of-the-box (OOTB) setup and before being customized by the user.

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Best Practices for Working with Business Processes

To assist you with producing results that are superior to those achieved by other means, Oracle recommends the following methods as the most effective.

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Auto-creation Conditions

If you are using a condition-based auto-creation process, ensure that you allow enough time (depending on the number of running background jobs) for routing of the workflow.

When designing business processes, especially when you are designing the relation between the business processes, note that there can be only one auto-creation job per record.

When the workflow advances, the system schedules an auto-creation job and executes it with high priority. If the workflow advances again before the auto-creation job is executed, the application will not schedule a new auto-creation job.

Notes:

- The manual auto-creation is transactional. The condition-based auto-creation is not transactional.
- If the option **Do not evaluate condition based autocreation** is selected for the workflow, the BP creator's conditions will not be evaluated irrespective of the conditions added in the auto-creation setup. This helps to reduce processing time when there are no BP creators on that step.

Because of the general way that processes are organized and relate to each other, when you create a job, several factors come to play to determine the job processing time.

Regardless of the job prioritization (high priority or low priority), the system will hold, or delay, processing the succeeding job when a record is being updated concurrently (for example, through web service, RAP, or manual updates), until the current job, or auto-creation, is complete. In other words, if a record is updated manually and the record auto-creation is in progress, the next request that is submitted by way of “UpdateRecord” will not trigger an auto-creation procedure because the previous job must finish first.

Example:

When a workflow advances from step 2 to step 3, the auto-creation initiates and is in progress. When the workflow advances from step 3 to step 4, if the system detects that the first job was not completed, the system will prevent the second job from completing (auto-creation will not take place for the subsequent job).

Additional Information about Auto-creation Conditions

- Only manual auto-creation is form based.

- The auto-creation process does not depend on a business process form.
- Reverse Auto-population (RAP) process begins when the workflow advances. RAP uses the auto-creation process; therefore, RAP does not depend on a business process form.
- When a line item is auto-created (by using the line item auto-creation logic), the values in the fields on the line item that are based on a data picker in that line item will not be auto-populated.

Business Processes

Transactions and collaboration are driven by business processes (BPs). Information is entered and stored using electronic Business Process (BP) forms. Each time you fill out a BP form, you are creating a new record. These forms may be routed to project/shell team members or other users by way of workflows. The information that you enter into BP form fields may be used throughout the system. Each field corresponds to a Data Element (DE) that can be identified, reported upon, and tracked; some data element values may be rolled up to sheets such as a cost sheet or resource sheet.

The look and feel of a field (Data Element) is determined by the Data Definition (DD) on which the Data Element is based. The Data Definition determines whether the field is a text-entry field, a drop-down list of options, a check box that you can select, a picker that is used to select an existing record, and so forth.

The BPs can be associated with a specific project/shell (Project/Shell-level BP), or they can be applicable for the entire Company (company-level BP) and not to be specific to a Project/Shell. The Administrator (Project/Shell or Company) determines which forms are to be used and how the workflows operate.

In the Upper Form or Detail form of any BP, for a field with DD set as Integer data type with input-type pull-down menu (option value for DE of type Integer), the field (and the field label) will be displayed in the BP record:

a) If you do not select a value for the field (space), and
b) If the Administrator has set the value of zero for that DD set (Integer data type with input-type pull-down menu).

Note: The above conditions apply to Attribute Forms and Reports.

Additional information about Unifier business processes

- BP records are stored in logs, which are accessible in the left Navigator. You can think of these logs as filing cabinets, with each drawer storing a different type of BP. Single-Record BPs are excluded from the **Logs** list in the left Navigator for projects/shells. However, they are included in the **General** section listed under **Information** in the left Navigator. Your company administrator can also configure the **User Mode Navigator** to list Single-Record BPs under the **Home** workspace in the **Location** bar.
- The non-workflow business processes will simply be stored as records.
- Business Process forms are designed in uDesigner.

For information about internationalization and CSV files, refer to the *Unifier General User Guide*.

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Workflow and Non-workflow BPs

Business processes (BPs) can be designed with or without workflows. A workflow specifies how a business process should proceed, from start to finish. Workflows define how records are routed and govern the behavior of each step in the business process. Each step uses the forms that were designed for it in uDesigner.

Most business processes will include a workflow or workflows; however, some business processes have a single purpose of storing data. These business processes are called non-workflow BPs. An example of a non-workflow BP is a form that records a Warranty or Estimate. The log for a non-workflow BP includes an **Edit Record** column that indicates whether the record is in an editable state by displaying an **Edit Record** icon . If the record has a status such as submitted, terminal, or initiated, no icon is displayed. A user can use the **Create New View** option and the **Show Edit Records** parameter to filter the log to display only those records that are in an editable state. For more information on setting up filtering, see ***Business Processes in Company Logs and Logs Nodes***.

After a workflow BP record is created by using any workflow schema (unique combination of Setup Name + Workflow Name), the workflow record continues to reference the workflow schema even if the status of the workflow schema has been set to **Inactive**.

This condition includes workflow records that are in the following statuses:

- Draft
- Initiation Step (I-Step)
- Also, this condition includes any workflow record at any other step in the workflow.

If there is an Active BP Template, the template continues to create records referencing the **Inactive** workflow schema. For instructions on creating a template, see ***Creating BP Templates and Scheduling BP Creation*** (on page 110).

Behavior of the Due Date (due_date) Field

In the **Workflow Settings** field in the **Workflow Setup** of a BP, if the **Override Workflow Due Date** field is set as **Yes**, you *can* edit the due date in the creation step. If the **Override Workflow Due Date** field is set as **No**, you *cannot* edit the due date in the creation step. Also, you cannot edit the Due Date if the work has started or the work has moved to the next step (is in-flight) in the workflow process.

When you create workflow BP records through file imports (CSV or Microsoft Excel), the system currently sets the Due Date automatically based on the **Workflow Settings**; the Due Date provided in the input file is ignored. Also, when you update workflow BP records through file imports (CSV or Microsoft Excel), the system uses the Due Date that was based on the **Workflow Settings** and ignores the Due Date provided in the input file.

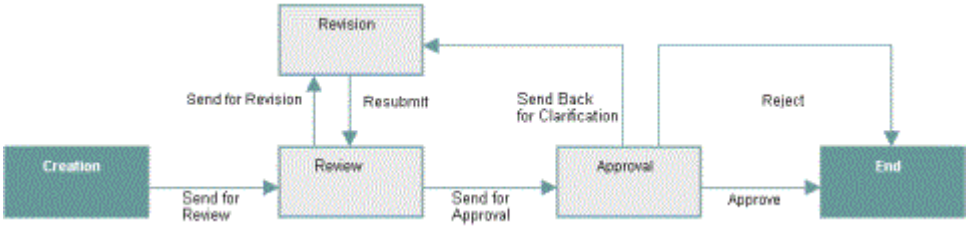
About Workflows

The Unifier workflow engine routes a business process form through your company's business protocols.

When you participate in a business process workflow, you are taking action on the form. For example:

- Reviewing and approving an invoice
- Responding to a request for information.

Depending upon the workflow setup, you may choose the next recipient of the business process in the workflow, or this may be automatically selected for you. When you send the business process to the next step, it proceeds along the workflow and records each action taken at each step.



In the above example, the workflow proceeds as follows:

1) Creation: The form is created and filled out and sent for review.
2) Review: During the review, a reviewer has the following options:
   - Return the form for revision (step 3)
   - Send it forward for approval (step 4)
3) Revision: Upon review, if the form is returned to incorporate suggested changes, you will have to resubmit it for review.
4) Approval: In this step of the workflow, an approver can:
   - Return the form for further clarification or revisions
   - Reject the form or
   - Approve the form

   A rejection or approval status essentially ends the workflow. When a business process is approved or rejected, it is considered to be in a "Terminal" status, and this status cannot be changed. However, you can add comments and certain edits to the record.
5) End: After a business process reaches a terminal status, it proceeds to the End step.

> **Note**: A "terminal" status differs from a "terminated" status. A business process is at a terminal status when it reaches the final step in the workflow. A business process with a terminated status was stopped at some point before it reached the final step in the process.

Using Business Processes with Oracle Integration

You can use one or more integrations from Oracle Integration in workflow and non-workflow business processes (BPs).

Prerequisites

- Ensure that you have the necessary integration permissions.

- The business process is set up with one or more integrations from Oracle Integration which will be invoked based on the status of the business process record.
- Go to the **Company Workspace** tab and switch to **Admin** mode. In the left Navigator, select **Integrations**, and then select **Oracle Integration Cloud**. On the **Connect** tab, ensure that **Enable Integration** is set to **Yes**.

Procedure

To use integrations from Oracle Integration in business processes (BPs):

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Logs**, and then select a non-workflow or workflow BP.
3) In the **Business Processes log**, select a BP record in the right pane, and click **Open**.

   For non-workflow BPs, proceed to next step.

   For workflow BPs, proceed to step 5.
4) For non-workflow BPs:
   a. Enter information in the BP record and click **Submit**.
   b. Edit the record as necessary, update the **Status** field of the business process, and click **Submit**.
   c. Depending on the BP setup, if the **Status** is associated with an Oracle Integration endpoint, a call is made to Oracle Integration.
   d. Review the job status in the BP log of the non-workflow record.

      For information captured in **Integration Log** tab, see ***Business Processes in Company Logs and Logs Nodes***.
5) For workflow BPs:
   a. Enter information in the BP record and click **Send**.
   b. In the **Workflow Action Details** form, select the next action in a workflow step and click **Send**.
   c. Depending on the workflow setup for this BP, the relevant Oracle Integration endpoint, if applicable, is invoked for the selected action.
   d. Review the workflow status in the BP log of the record.

      For information captured in **Integration Log** tab, see ***Business Processes in Company Logs and Logs Nodes***.

> **Note**: If you have access to the **Company Workspace**, in the left Navigator, select **System Information**, and then select **OIC Integration Log** to view details of the integration job associated with the BP.

Business Process Types

Different business needs require different types of business processes (BPs). In uDesigner, many types of business processes are available that perform various functions within Unifier.

BP forms can be of the following types:

- **Cost**
- **Document**
- **Line Item**
- **Project/Shell Creation**
- **Request for Bid (RFB)**
- **Resource**
- **Simple**
- **Text**

The following explains each type.

Cost Type BP

The Cost type business process form enables you to track and manage cost information and interact with the Project/Shell cost sheet. Examples include base contracts or purchase orders, change orders, budget change requests, invoices, fund appropriations, and leases.

> **Note:** With version 23 and later, a Total row on a non-standard tab of a line item grid is not displayed. For version 22 and earlier, the Total row displays a 0.

Additional cost-related functionality includes schedule of values (SOV) and payment applications.

In any change order (including change orders with Unit Cost-type Contract when the Unit Cost Contract option is selected), when you select a reference SOV, for selecting an SOV line item, the system uses the value of the Item Unit Cost field from the referenced SOV and makes the field read-only.

Cost type Business Process Form Sub-types

The Cost type BP form has several sub-types that are used to perform specific cost-type functions. The cost business process sub-types are:

- **Commit at company level** (also known as **Blanket Purchase Order [BPO]**)

  This sub-type allows tracking and control of costs at the company level above the CBS level.

  It is independent of a budget or cost sheet, and it is used for tracking non-CBS expenses across projects/shells.

  Project/Shell level *Commit at company level sub-type* can be set up to reference a company commit.

  Example of **Blanket Purchase Order**

  A Blanket Purchase Order is a type of purchase order that the customer makes with its supplier. A Blanket Purchase Order contains multiple delivery dates over a period of time (often negotiated) to take advantage of predetermined pricing. It is usually used when there is a recurring need for expendable goods.
- **Line items with CBS code**

  This sub-type relates directly to the Project/Shell cost sheet.

The business processes that use a CBS picker to reference CBS codes must use the *Line items with CBS code* sub-type.

These business process transactions can directly affect the budget. Examples include Base Commits, Change Commits, General Spends, and Payment Applications.

- **Line items with fund code**

  This sub-type is used for fund appropriation at the Project/Shell level.

  Business processes can be created to automatically allocate or consume funding source funds, which are chosen using a Fund picker. These transactions are for fund management and do not necessarily affect the budget. Transactions on *Line items with fund code* sub-type roll up to the **Fund Manager**.

- **Line items with both CBS and fund code**

  This sub-type is used during fund appropriation at the CBS level. These transactions are for fund management and do not necessarily affect the budget. Transactions on *Line items with both CBS and fund code* sub-type roll up to the **Fund Manager** and **Cost Manager**.

- **Line Items with Both CBS and WBS Codes**

  This sub-type is used to roll up transaction data to the **EVM-WBS Sheet** and **Cost Manager**.

- **Line items with company accounts code**

  This is a company-level business process that can be used to roll up transaction data to the company accounts sheet.

- **Line items with multiple codes**

  This sub-type is for business processes that can be used with a generic (non-CBS) cost manager.

Cost-type BP Form and Picker Values

The picker field is used for selecting CBS codes, and the picker can be found on:

- Cost-type BPs
- Shell or project
- Shell cost sheets
- Schedule activity forms
- Company-level and Shell-level business processes in form view and grid view when records and line items are created or updated

The following information applies to the following pickers:

- CBS Picker
- CM0 Picker
- CMx Picker
- Funding Picker

When you create or update a BP record:

- The picker field enables you to select only relevant codes or data.
- You can search for a code in picker, in the **Line Item Details** tab of your BP record **Line Items** tab. This is so you can see a list of codes from the filtered list that matches your search criteria.

- By defining the query condition on pickers in BP Configuration, you can narrow down the list of codes in picker, in the **Line Item Details** tab of your BP record Line Items tab. This is so you can see a list of codes from the filtered list that matches your defined query conditions.
- The picker has an auto-completion feature. If you know the code, begin typing in the picker DE field, and the picker will show the top 10 matches. If you continue to type, the picker will narrow the list as it matches more of the characters you type.

You can also auto-create a BP record with the picker value that matches a previously-defined query condition, at the source BP. This so you can automatically create records or line items by ignoring the filter conditions that are set for the destination BP. The query condition is defined in the BP Configuration.

For flat-structured cost sheet, the filters are applied to all nodes, and for the tree-structured cost sheet the filters are applied to the leaf nodes, and the summaries are displayed based on the rollups.

> **Note:** Auto-population and Reverse Auto-population processes will work in same way if the query conditions are defined in the picker.

When you create a new BP record by way of a CSV or Excel file import, or when you add a new line item through the line-item CSV or Excel file import, the system will use the defined query conditions in the picker. For BP record level import, if the CBS code does not match the query conditions, the validation happens during the record creation process, and the system sends an email to the user that it has failed. For line item level import, the system displays a message and shows the error in the CSV.

You cannot create a BP record if the picker DE is a required field, and the data that you have entered does not match the available defined query conditions in the picker.

When you create a new BP record with line item by way of REST V1 and V2 web services, or when you add a new line item through the REST V1 and V2 web services, the system will use the defined query conditions in the picker. If the CBS code provided in the RESTful web services does not match the query conditions, the record or line item creation will fail with an error.

Document Type BP

The Document type business process form can be used as an "envelope" to package a set of files, such as spreadsheets, drawings, and design documentation that flow from one group to another.

The **Advanced** functionality allows documents to be attached to the form as line items, with line item status control. This allows the ability to change the status (for example, approve or reject) for each attached document. Examples are submittals and transmittals.

The following are the sub-types of Document type business process form:

- **With folder structure**

  Both documents and folders can be uploaded to the business process. The folder navigator in the lower left of the form displays the folder structure.
- **Without folder structure**

  The folder structure will be ignored, and documents are attached in a flat list. The contents of selected folders and sub-folders are attached.

Line Item Type BP

The Line Item type business process form can:

- Lend itself well to business processes that involve miscellaneous information that you want to document for a company or project, for example, a vendor contact list.
- Be useful for project-specific information that only needs to be documented on a single form, such as the overall project scope, or meeting minutes.

The Line Item type business process form is also useful for collecting data that other (more restricted) types of business processes cannot collect. For example, while a Simple type business process form can be used to collect basic vendor information, a company-level Line Item type business process form can collect additional vendor information, such as multiple business addresses.

At the project level, you can use a Line Item type business process form to filter large numbers of company records into smaller lists of records that are more appropriate for a specific project.

The Line Item type business process form uses a separate detail form to enter line items, which then appear on a line item list at the bottom of the form.

For short line items, users can enter information directly into the line item list using a "grid view" of the list.

You can design the Line Item type business process form to accommodate line item status, so you can control modifications to individual line items based on their status.

The following are the sub-types of the Line Item type business process form:

- **Generic**

  Use the *Generic* sub-type for all Line Item type business process forms unless you want to filter the business process records.

  To filter BP records, use the sub-type explained below.

- **Line items to filter business process records**

  Use the *Line items to filter business process records* sub-type to filter company records into smaller lists of records for your projects.

  This sub-type is particularly suited for selecting specific vendors from a company's master vendor list (vendor master list) to create a subset of the master list that contains vendors who are appropriate for a particular project.

  Used for this purpose, this sub-type can be linked (as a reference process) to an RFB to supply a project-specific vendor list for bid invitations.

  The system allows your company to only designate one "Vendors" business process as the RFB master vendor list.

- **Preventive Maintenance** (If the module is available)

  Use the Preventive Maintenance sub-type to maintain assets proactively and on a regular basis, even when no issue has been reported on the asset.

  The Preventive sub-type has the following classifications:

  - Asset
  - Asset Template

- PM Book (Preventive Maintenance Book)
- PM Book Template
- Meter Reading

These classifications are available for selection from the **Classification** drop-down list, after you select Preventive Maintenance.

> **Note:** A Company can have more than one business of a particular sub-type, for example, two or more Asset BPs, two or more Asset Template BPs, and so forth).

Preventive Maintenance BP

Preventive Maintenance Business Process toolbar options:

- **Form View (default view)**
- **Grid View**
- **Add**
- **Actions**
  - **Import**
  - **Consolidate Line Items**
- **Reload**
- **Print**
  - **Print**
  - **Export To CSV**
  - **Export To Excel**
- **Search**
- **Find on Page**

You can click the *gear menu* (⚙) to the left of each row in the grid or **right-click** rows to see the following options:

- Copy
- Remove
- Group line items

Additionally, you can select multiple rows and **right-click** to see the following options:

- Add line item below
- Copy
- Paste below
- Remove
- Group line items

Adding and Modifying Line Items

To add a line item to the grid, click Add. A blank row will be inserted and the following toolbar options will be visible:

- **Create**
  To add a new line item.
- **Search**
- **Find on Page**

> **Note:** Any fields that have default values will display them.

After a line item is created, you can double-click the cell to modify its content (if the form properties permit modifications).

Error Reporting

If any rows have an error, the red **Error icon** appears in the first column. You can click the **Error icon** to see an error message. Columns with required fields display red triangles in the upper-right corner.

Hyperlink Fields and Image Fields

When you double-click a hyperlink field, the **Hyperlink icon** appears in the cell. When you click the **Hyperlink icon**, a box appears. Here, you can enter the **Name** and **URL** that appear in the cell.

When you double-click an image field, the Upload icon appears in the cell. Clicking the Upload icon gives you the options of **Browse** and **Document Manager**. When you click **Browse**, the File browser will open. When you click **Document Manager**, the image field from Document Manager will appear.

Project/Shell Creation Type BP

The Project/Shell Creation type business process form enables you to create projects/shells from the upper form of the business process or from line items.

The data necessary to create projects/shells is provided by this business process.

In addition to creating a new shell, this type of business process form can also be designed so that you can choose the managers and employees who should be automatically assigned to the shell when it is created.

This type of business process form enables you to create projects/shells using the designed templates. You can use the Record Properties tab to define restrictions on who can view specific tabs, such as, Linked Mail, Attachments, Reference Records, and so on. The system copies the restrictions defined on the Record Properties tab of the Business Process setup from the selected shell template to the new project.

Project/Shell Creation type business process form can also work with the **Planning Manager** by automatically linking new projects/shells with planning items. That is, instead of linking a planning item to a project in the **Planning Manager**, the Project/Shell Creation type business process form can be designed to automatically create the link (when the project/shell is created) and roll up data to the **Planning Sheet** from the business processes in that project/shell.

If integration was defined in the business process, the system can export/import a CSV template for the Simple type business process form.

Request for Bid (RFB) Type BP

The Request for Bid (RFB) type business process form allows companies to invite project/shell-related bids from different vendors.

- There is a business process form for requestors.

  User requesting the bids.
- There is a business process form for bidders.

  Bidders do not need to be existing users and are provided with a simple interface that does not require special training to use.

See ***Request for Bid (RFB) Business Processes*** (on page 364) for more information.

Resource Type BP

If you have access to the Resource Manager feature, the Resource type business process form works with the **Resource Manager**.

There are two subtypes of the Resource type business process form:

- **Resource booking**

  This is a project-level business process.

  In the upper form, you pick a date range to book resources.

  The line item list displays a summary of booking rows.

  You can create one resource booking BP per project.
- **Time sheet**

  The time sheet business process can be designed to roll up hours and costs from the time sheet to cost sheets.

  There is one per company, but there can be multiple schemas.

Simple Type BP

The Simple type business process form consists of an upper form only (like a line-item-type BP without the line items). It is used to add company or project/shell information that does not require line items.

The Simple type business process form can be a:

- Company-level, non-workflow, single record.
- Company-level, non-workflow, multi record.
- Project-level, non-workflow or workflow, multi record.
- Shell-level, non-workflow or workflow, multi record.

An example of the Simple type business process form is a project information form to capture basic reference information.

Text Type BP

The content of the Text type business process form is typically a text comment in the lower portion of the form.

Examples of text type BPs include:

- RFIs (Request for Information).
- Action items, which track issue resolution.

You can view responses from other users who may have acted on the record at a given step while working on the record.

> **Note:** The functions of the options presented below have been explained in the preceding sections. This section explains new functions and procedural differences.

A Text-type BP has the following tabs:

- Upper Forms (main form)
- Text Entry Form
- Response List form

In edit mode, you can see the:

- Upper Forms (main form) tab name: **General**
- Text Entry Form tab name: **Collaboration**

When you click the **Collaboration** tab, you can enter the response in the input box.

When you are viewing the form, the application displays the **General** tab and the **Response** tab. You can filter the responses, based on user, by clicking the **Posted By** drop-down list. Each of the responses received will be placed in a separate block, and no actions are permitted on these blocks.

When you want to update a record, the following tabs are displayed:

- Upper Forms (main form): **General**
- Text Entry Form: **Collaboration**
- Response List form: **Response**

> **Note:** In edit mode, the Response List form: **Response** looks the same as the one seen in view mode.

Business Process Step Editor

The **Step Editor** designation allows someone other than the assignee to edit the business process record. Step Editors can be added to the following workflow, or non-workflow, business process types:

- Line Item
- Cost (all types, including Lease and Line Item with Multiple Codes)
- Document
- Simple
- RFB
- Text

If you are designated as a **Step Editor** on a business process, it means that you are a user, or member of a group, who can open and edit a business process record without being granted explicit record-level permission.

If you are a **Step Editor** on a business process, you can open and edit any record that you can see listed in the business processes log, per your view access permission (View User Records, View Company Records, or View All Records).

> **Note:** You must have at least one of the above permissions to be able to view the record in the log to access it to edit.

The Step Editors *cannot* edit a Workflow Business Process record until the task assignee accepts the task and saves the draft.

Edits performed by Step Editors are not audited.

Edits performed on the end step of a Workflow Business Process affect the record directly because no draft exists.

If there are multiple Step Editors, the last **Step Editor**, who saves changes/edits, overwrites all other changes/edits.

If multiple Step Editors and the assignee are editing the business process record at the same time, the data saved by the last edit overwrites all previous edits.

Example

If User 1 changes an amount field from 15,000 to 23,000 and saves the change, and User 2 changes an address field, but does not change the amount field on her copy of the form, when User 2 saves her change, the system will commit User 2's edits and overwrite User 1's changes. In this scenario, the amount field value will be 15,000.

For information about responding to your tasks, see ***Working with Tasks*** (on page 211) and ***Completing Tasks via Email*** (on page 224).

Business Process Dates and Calendars

The system supports multiple calendars, enabling the Administrator to create a library of calendars that can be selected for use at the Company or project/shell levels. The multiple calendars let you have calendars to support varying work schedules (depending on locality) and to account for holidays and other non-working days. For example, some countries in the Middle East have weekends that are other than Saturday and Sunday.

Calendars affect the calculation of both business process workflow due dates and task due dates, and formula calculations. When the calendar changes for the Company, or for the project/shell, any subsequent computation of dates will use the new or changed calendar. Dates are not affected for records that are in process. The Date Picker and the Date Only Picker will show the changed calendar.

Behavior of the Due Date (due_date) Field

In the **Workflow Settings** field in the **Workflow Setup** of a BP, if the **Override Workflow Due Date** field is set as **Yes**, you *can* edit the due date in the creation step. If the **Override Workflow Due Date** field is set as **No**, you *cannot* edit the due date in the creation step. Also, you cannot edit the Due Date if the work has started or the work has moved to the next step (is in-flight) in the workflow process.

- When you create workflow BP records through file imports (CSV or Microsoft Excel), the system currently sets the Due Date automatically based on the **Workflow Settings**; the Due Date provided in the input file is ignored. Also, when you update workflow BP records through file imports (CSV or Microsoft Excel), the system uses the Due Date that was based on the **Workflow Settings** and ignores the Due Date provided in the input file.

Working with Quick Calendar Entry

The Quick Calendar is available in the following business process types that were designed to be "calendar-enabled."

- Document
- Line Item or Simple

The Quick Calendar is available for **Space Manager**.

> **Note:** The functions of the options presented below have been explained in the preceding sections (Reservation Business Process). This section explains new functions and procedural differences.

The following scenarios describe the details when you click the **Calendar** option.

Viewing a Calendar in View only mode from log for Month: Viewing details of an existing event

The default view of the Calendar is set to Month.

When you hover over a date, on which an event or reservation has been created, the tooltip (Details) displays all event details such as:

- Name (Event)
- From (time)
- To (time)
- Status
- Creator

When clicking the Event, a Detail overlay is displayed with Name (time), From (time), To (Date), Status, and Creator.

The Tentative events are marked with a gray bullet, and the Confirmed events are marked with a green bullet.

Create event in month view

When you click a date, for which an event has not created, an overlay is displayed. In the Details overlay, you can enter values for:

- Name (Event)
- From (time)
- To (time)

- Status

> **Note:** You must have permission to make Quick Calendar entries.

When you click the calendar symbol (next to From and To fields), the calendar opens and you can pick a date.

The Creator field is auto-populated with the name of the signed-in user.

When you click Done, the event details are saved, the overlay screen closes, and the saved event is displayed on the Calendar.

When you click Cancel, the event details will not be saved and the overlay screen closes.

Edit event in month view

When you double-click a date cell, for an existing event, the Details overlay screen is displayed.

Click Delete to remove the event.

Click Edit to open an overlay screen and edit the event details.

Viewing a calendar in View only mode from log for Week (Viewing details of an existing event)

Upon hovering over a date, on which an event/reservation has been created, the date will be highlighted by encircling it in Red color.

When you hover over an Event, the date of the event is highlighted by encircling it in Red color.

A tooltip, Details, opens and displays the event details such as:

- Name (Event)
- From (time)
- To (time)
- Status
- Creator

The Tentative events are highlighted in gray, and the Confirmed events are highlighted in green.

Create event in week view

When you click a date, for which an event has not created, an overlay is displayed. In the Details overlay, you can enter values for:

- Name (Event)
- From (time)
- To (time)
- Status

> **Note:** You must have permission to make Quick Calendar entries.

When you click the calendar symbol (next to the From and To fields), the calendar opens and enables you to pick a date.

The Creator field is auto-populated with the name of the user who has signed in.

The To and From fields are auto-populated based on the time displayed.

When you click Done, the event details will be saved, and the saved event is displayed on the calendar.

When you click Cancel, the event details will not be saved.

Edit event in Week view

When you double-click a date cell, for an existing event, the Details overlay screen is displayed.

Click Delete to remove the event.

Click Edit to open an overlay screen and edit the event details.

View mode for Day view

The events displayed for the day are marked with green highlight, in case the event is confirmed.

The events displayed for the day are marked with grey highlight, in case the event is tentative.

As a result, when you click an event, if the event status is confirmed, the event is marked with green highlight, and if the event status is tentative, the event is marked with grey highlight.

The event details for both cases above are displayed.

Create event in day view

When you click a time cell in Day view, an overlay is displayed. In the Details overlay, you can enter values for:

- Name (Event)
- From (time)
- To (time)
- Status

> **Note:** You must have permission to make Quick Calendar entries.

When you click the calendar symbol (next to the From and To fields), the calendar opens and enables you to pick a date.

The Creator field is auto-populated with the name of the user who has signed in.

The To and From fields are auto-populated based on the time displayed.

When you click Done, the event details will be saved, and the saved event is displayed on the calendar.

When you click Cancel, the event details will not be saved.

Edit event in Day view

When you double-click an event, for an existing event, the Details overlay screen is displayed.

Click Delete to remove the event.

Click Edit to open an overlay screen and edit the event details.

Other Calendar Features

> **Note**: Other events, scheduled within the extended events, are displayed accordingly.

Display of Mini-Calendar

A mini-calendar is displayed besides the Quick Entry Calendar, to enable you to go through years and months irrespective of the selected view.

Display of Upcoming Events

A mini-calendar is displayed besides the Quick Entry Calendar, to enable you to go through years and months irrespective of the selected view. A list of 10 future upcoming events are displayed on calendar. For the current day, according to the current time, the future events are displayed.

Example

If the event "Lunch Meeting" is scheduled for 2:00 PM to 3:00 PM, today, and the current time is 3:30 PM, the "Lunch Meeting" even is not displayed in the upcoming event list.

Business Process Forms

The forms are consistent throughout the system, with a similar look and feel. When you send a workflow business process form to the next step, the assignee receives a task.

When you first open a task, it appears in "view" mode. Depending on your BP setup, the "view" version of this form might let you:

- Accept the task
- Decline the task
- Print the form
- Terminate the record
- Send Mailbox
- Transfer ownership of the record
- Add an assignee to the current step
- Copy users to the current step
- Audit the progress of the record
- Add a comment, if you have permission

If you accept the task, the form becomes editable. Depending on your BP setup, the editable, or "action," version of this form might let you:

- Undo task acceptance, which allows someone else to accept the task.
- Decline the task, which takes you out of the list of assignees.
- Select the step's next action.
- Add or edit form content
- Save a draft of the record
- Terminate the record
- Transfer ownership of the record

- Display the view form of the business process
- Audit the progress of the record
- Add attachments, line items, and so on
- Send the form to the next step

The form appears similar to a paper form—you complete the form by typing information directly into the form fields or choosing options through drop-down lists, pickers, or check boxes.

> **Note:** The section labels are determined by the design and may vary. The basic form functionality remains the same.

Parts of the Form

In general, most workflow business process forms consist of three major sections:

- Upper form
- Action (or Task) Details

  Non-workflow business processes do not have an Action Details section.
- Line Item Details, unless otherwise noted.

You can minimize and later expand a business process form. For example, you might want to minimize the General and workflow portions of the form to avoid scrolling through many line items.

Toolbar: The workflow business process form has a toolbar at the top of the form. This allows you to access all parts of the business process form, such as the Upper form and Line Item Details, and has the following buttons in the upper-right corner:

- **Send**
- **Save**
- **Menu Options:** The options in this menu may vary per business process, but each workflow BP has the following menu options:
  - **Print**
    - **HTML**
    - **PDF**
    - **Custom**
  - **Reload**
  - **Review**
  - **Help**
    - **(Business process name) Help**
    - **User Productivity Kit**
  - **Close**

After you are done working on the business process form, click **Send** to route the workflow business process to the specified recipients. You can click **Save** to save a draft of the form, so you can work on it again. When you have completed work on the business form, click **Close.**

> **Note:** The Close action does **not** save the information on the form. To save the information, you must click **Save** before you close the form.

Additional Elements of the Form

Upper Form: The upper portion of the business process contains the basic (General) information that the form is managing, such as the name of the record and its description, who created the record and when, and other general information. It may also contain fields for referencing other forms, and it may contain fields that are required for specific functionality. This is an example of an upper form for a business process type called Work Orders:

Workflow or Action Details: This section appears in the middle part of workflow business processes. It is for viewing or assigning the next assignee in the workflow or shows the last person who acted on it. Depending on how the workflow has been set up for the BP, the next assignees may be predetermined, or you may be able to choose the next assignee or send a copy of the BP to another user. You can print workflow progress using custom print.

Non-workflow business processes do not have an Action Details section.

When you finish a form, clicking **Send** will show the **Workflow Action Details** window. The **To:** and **Cc:** buttons are active after you select a workflow action in the **Workflow Actions** drop-down list.

> **Note:** If there is only one possible workflow action for a step, the action is auto-populated in the field.

You can track a step through the workflow by clicking the link **Workflow Progress** tab in the right pane.

In Classic View, click the notepaper icon next to **Task Notes** in the Action Details section to add notes to the routed task. These are notes for the task recipients.

Content or Lower Form: The lower portion of the form contains the details and main content of the record, such as line items, file attachments for Document-type business processes such as transmittals or submittals, or comments or instructions in text-type BPs such as RFIs. Simple-type BPs do not have a Content section.

The lower form of certain BPs may be organized using multiple tabs. The BPs that support tabs in the lower form are:

- Line item type
- Cost type with the classification generic (line items with CBS codes, multiple codes, or account codes)
- Cost type with the classification lease, and the subtype line items with multiple codes

> **Note:** If the entire name is too long to appear on the tab, hover over the tab. The system will display the complete name in a tool tip.

The toolbar in the line items log contains the following options:

- **Form View**
- **Grid View**

- **Add**
- **Actions**
  - **Import**
    - **Data From CSV File**
    - **Data From Microsoft Excel File**
- **Refresh**
- **Print**
  - **Print**
  - **Export To CSV**
  - **Export To Excel**
- **Search**
- **Find on Page**

Notes:

- For export to Microsoft Excel, the system currently supports only Euro (EUR) and United States Dollar (USD) currency symbols.
- If you export data from a business process (BP) record, sheet (such as an Activity Sheet), or log (such as Company Funding Sheet Log) to Excel, be aware that depending on how your negative values are formatted, you might need to configure your columns in Excel to match the correct data type (Number). Otherwise, the columns will not be treated as numeric and will not sum as expected. One supported format includes placing the negative sign between the currency symbol and the amount (for example, $-1,000).

The *gear menu* (⚙) for each line item contains the following options:

- **Copy**
- **Remove**
- **Add to Group**

About summary line item

Example

When a subcontractor wants to provide input related to the cost of a Change Order, the subcontractor can add summary line items to the change order without being able to see the cost breakdown structure that the contractor, or the owner, is using. The contractor, or the owner, can then review the summary line items and add them to the cost breakdown, for each of the summary lines added by the subcontractor.

Auto-sequencing and Unique Values in Fields

The administrator can specify values on business process upper or lower forms that enable auto-sequencing, or that specify unique values (upper form only). These features are available for both company-level and project-level business processes, and can be used on workflow and non-workflow business processes.

Unique DEs can be defined for a BP at either the company level or the project/shell level and must be unique for the level in which they are defined and used.

Auto-sequencing

The administrator can configure auto-sequencing for certain data elements (DEs) on a business process (BP) form. This is in addition to the standard BP numbering, and allows the numbering of up to two fields on an upper form, and two fields on a lower form. For example, the administrator can specify that a "Name" field uses auto-sequencing to number business processes that have similar names. Auto-sequencing generation occurs for the business process when you click:

- **Send** on workflow business processes
- **Save** on non-workflow business processes
- **Submit** on non-workflow business processes for line items
- **Apply** or **OK** for line items

Notes:

- Fields configured for auto-sequencing are not available for Bulk Edit, because the values for these fields are system-generated.
- The auto-sequence DEs, at both record level and line item level, are generated when a record is submitted. For auto-sequence DEs defined at the line item level, when line items are added, the format of the auto-sequence is calculated but the value of the DE remains blank. When the record begins the routing process, the auto-sequence DEs are created. When other DEs use an auto-sequence DE in a formula, subsequent updates to the line item through any means will recalculate the formula.
- If you import a Folder Structure Template in the Document Manager or the Structure and Properties of a specific item in the Document Manager and there are fields that are enabled for auto-sequencing in the template or properties, the system applies the auto-sequencing of formulas and other values. This setting is applied to existing documents within the selected folder and to BP records generated from the updated folder or document.
- When a DE is added to the lineitem form and configured using the SYS Auto Sequence DD for a Summary Payment Application (SPA) BP, the sequence counter increments the sequence based on the line items present in the SPA BP. When the user adds lines to the SPA BP, the sequence is applied per line item regardless of any cost breakdowns that might have been added to any of the lines. (That is, the individual cost breakdown entries are not counted in the sequence and are not sequentially numbered.)

The following explains how the auto-sequenced fields work:

You can generate sequence numbers based on the unique values of parameters that have been used in formatting the sequence number. You cannot modify the values of parameters after they have been generated.

If the DEs, or parameters, do not have values, this type of sequencing number will not be generated.

The counter mechanism will increment based on the uniqueness of the value of the parameters.

Generating the sequence formatting is available for the following actions:

- “Send” on WF BPs, including the line items
- “Save” on NWF BPs
- “Submit” on NWF BPs for line items

If you remove a sequence-based DE from configuration, data will not be generated for any newly created BP records. The existing data will remain as is and will be read-only.

The system audits the DEs based on the SYS Auto Sequence.

When you create a BP record by way of the user interface:

- The system will not generate auto-sequence numbering if you reset one of the parameters.
- In the BP includes formula DEs that depend on **SYS Auto Sequence**, and a **SYS Auto Sequence** DE, the formula DE's values will not have a sequence value until the record or line item is updated, and after a sequence number is generated when the record is submitted or routed.
- Translation will not impact generating the sequence number.
- Since the auto-sequence fields are defined as formulas and formulas will always consider the value and not the label, you can use a parameter in an auto-sequence definition that has a data set, and one of the values does not have a label.

The configuration of auto-sequence setup will be retained in BPs:

- When creating and updating BP records through the user interface (UI).
- When creating and updating BP records through the bulk update and bulk edit.
- When creating BP records and line items by way of CSV files.
- When auto-creating BP records.
- When copying a BP record and then submitting, or sending, the copied BP record.
- When updating a BP record by way of opening the BP record through a reference link, or through a form sheet such as Cost Sheet.
- When submitting a BP record after creating a line item, through line item consolidation.
- When submitting a BP record after creating a line item and updating the line item through the grid.
- When creating and updating BP records through web services.

Unique Values

The administrator can configure unique value validation on DEs on business process upper forms. When unique DEs are deployed for use in business processes, the system checks and validates for duplicate values or including any leading or trailing spaces, and displays an error message, if applicable.

Example

If a business process has a field called **Invoice**, and should enforce that each invoice number is a unique string, this field can be configured to validate for a unique value. If you attempt to enter a string that is not unique (has been entered on another business process), you will get a warning message that an alternate value must be entered. Unique value validation occurs for the business process when you click:

- **Send** on workflow business processes
- **Save** on non-workflow business processes
- **Submit** on non-workflow business processes for line items

Notes:

- If you use **Bulk Edit** to update multiple records and attempt to update a field that has value uniqueness configured, only the first record will update (and is therefore unique).
- When a unique DE is not part of the integration validation form, the system will ignore the value sent via integration and restful services in the created business process records.

The system does not generate the record number (the value in the “record_no” field) until the BP record is moved from the creation step to the next step in the BP workflow. As a result, at the creation step, the value for the “record_no” field in any formulas will be null.

Note: The system re-evaluates the values in the record number field within the Publish Path (uuu_dm_publish_path) and the Record Information Publish Path (uuu_dm_record_info_path) DEs, after the record number is generated.

At the upper form level, any form level validation that is defined in the design and involves the "uuu_attachment_count" field will be processed when you click **Upload** or after submitting the form.

Note: If the Sys Auto Sequence DE is dependent on a value that is getting set only after the creation of the record, Oracle recommends that you run an update call to update all the line items to generate the auto-sequencing value.

Pickers

Pickers appear as selection lists on business processes and other components. These pickers let the user choose elements such as dates, blanket POs, other users, companies, line items, funds, or currencies.

Some pickers are designed to display a structure to guide you to the correct location where a record resides, such as a specific project or a specific business process.

If the **Include only current Project/Shell records** option is enabled in the BP Data Picker Configuration window in uDesigner, you can only select current shell records in the **BP Data Picker** window or a drop-down list. However, if the project level BP Data picker is added in a company-level business process, the system ignores the above option.

Note: If both the **Show results matching any condition** option and the **Include only current Project/Shell records** option are selected in the BP Data Picker Configuration window of uDesigner, the system displays only those records that match either the **Include current Project/shell records** option or any of the specified query conditions.

By using this additional structure, you can navigate more easily through your business process records to the one you want. The *Cost Control* feature uses the following pickers:

Picker	Description
Account Code	Found on cost-type business processes for choosing company account codes.
Activity	Found on project/shell-level business process forms for selecting activities from the master schedule sheet. **Note**: Activity Picker is supported on Timesheet BP (Line Item Details form) and can be used for selecting activities from the Master Schedule Sheet.
BP	For linking one business process to another (for example, to tie invoice business processes to purchase order business processes). Often, the field will be named something like Reference BP, although this is up to the designer of the business process. Depending upon the design of the form, some fields may be automatically populated when the referenced business process is selected. **Note**: The business process list that you see will depend on your permissions. Users who do not have permission to view a BP that may be part of the business process picker list will not see that business process on the list.
Commit Line Item	Used when you create a new line item for a change commit business process. This picker displays a composite view of base commit and change commits. The data elements on the picker are reference, description, and CBS code.
Currency	For selecting a currency on a cost-type business process. If no currency is chosen by the creator of the record, the default is the project/shell currency. If there is not a

Picker	Description
	Currency picker on the form, the currency defaults to the project/shell currency. **Note:** If you select a different currency for transactions, the system correctly uses the exchange rates to calculate subsequent information. However, when you view the main form for the approved BP record, the system currently displays all the data elements (DEs) that are of the Currency Amount data definition (DD) for Project or Base currency values. Oracle recommends that you add DEs for the Decimal Amount DD for Project or Base currency values. If you view the Project Currency by selecting it from View Currency on the Line Item tab, the correct symbol is shown.
Date	Displays an interactive calendar from which the date can be chosen. For some business processes, dates in Date pickers can be set to automatically default. For example, this defaulting can be useful in the case of entering a delivery date and having the date default to today's date rather than having to use the Date picker to get a date.
Date Only	Displays an interactive calendar from which the date can be chosen. This picker lets you select a date from the picker or enter a date into the field. This picker lets you choose the date only, with no associated time or time zone. For example, you would not need time and time zone for a date like an equipment purchase date. Also, for some business processes, dates in Date Only pickers can be set to automatically populate the server date. For example, this defaulting can be useful in the case of completing an equipment purchase and having the date default to today's date rather than have to use the Date picker to get a date.

Picker	Description
Fund	On Cost business processes, for selecting which fund (from the company funding sheet) the business process will allocate funds to or consume funds from.
Location	For selecting a shell.
Planning Item	For selecting a planning item at the company level.
Project	For selecting a company-sponsored project. You can use this picker to auto-populate project data elements on other BP fields. The picker is designed to show Active, Inactive, View-Only, and On-Hold projects.
Project Template	For selecting a template to use to auto-create a project.
Resource	On time sheet, booking, or assignment business process, for selecting the resource to report on or assign. This picker always opens in Find mode and requires you to enter at least one search criteria, such as a name or a skill, to narrow the field of names to choose from. For time sheet business processes, use this picker to select the personnel to report time on. At runtime, the picker will default to read-only mode and show the current user's name, as the system assumes the user will be reporting his or her own time. However, depending on permissions, the picker can be editable to allow others, such as project managers, to complete time sheets on behalf of other workers.

Picker	Description
Role	On time sheet, booking, or assignment business processes or for resource allocation sheets. It allows you to choose the role to report on or assign. On time sheet business processes at the project level, it will filter out those roles that have already been booked for other projects
Shell	For selecting a company-sponsored shell to auto-populate shell data elements on other business process fields. The picker is designed to show Active, Inactive, View-Only, and On-Hold shells.
Shell Template	For selecting the template that should be used by a business process to auto-create a shell. The picker will show you a list of active templates that have been created for the shell.
User/Group	For selecting project/shell users (members of a project team) or company users (all users defined within a company). See more information under ***User Picker and Group Picker*** (on page 47).
CBS	On Cost-type business processes, project/shell cost sheets, and on schedule activity forms, for selecting CBS codes.
Week	On Resource or Time Sheet business processes for selecting a specific week for reporting.
Work Package	On Cost-type business processes, for selecting a work package for a Cost Sheet. This picker is populated with the work packages that have been created.

The following lists all the pickers:

- Account Code picker
- Activity Picker
- Allocation Template Picker

- Asset Picker
- Auto-update Status Setup Picker
- Bid Picker
- BP Picker
- BP Line Item Picker
- BP Line Item Data Picker
- CBS Picker
- CBS Code Picker
- CM0 Picker (Generic Cost Manager)
- CMx (Code and Record based) Picker
- CMx (Code based) Picker
- Commit Line Item Picker
- Company Picker
- Configurable Manager [Name] Picker
- Cost Attribute Picker
- Cost Code Picker
- Currency Picker
- Data Picker
- Date Picker
- Date Only Picker
- Fund Picker
- Generic Cost Code Picker
- Group Name Picker
- Hyperlink Picker
- Image Picker
- Level Picker
- Location Picker
- P6 Activity Picker
- Planning Item Picker/Planning Line Item Picker
- Planning Period Picker
- Project Picker
- Project Template Picker
- Resource Picker
- Role Picker
- Role Data Picker
- Seasonal Date Picker
- Shell Picker
- Shell Code Picker
- Shell Template Picker
- Shell Data Picker
- Single User Picker
- SOV Picker

- Space Picker
- SYS Date Picker
- User Picker
- User Data Picker
- WBS Code Picker
- WBS Picker
- Week Picker
- Work Package Picker

For the following details, for each picker, refer to the *Unifier Data Reference Guide*:

- Data Element Name
- Label that will Appear on the Form
- Available for Forms on Mobile Device
- What it Does

At run-time, when a record is selected for a BP Data Picker, all the line items for referenced BP Line Item Data Picker that meet the query conditions defined on the Line Item Data Picker are displayed. For more information about where a BP Line Item Data Picker is supported, see **BP Line Item Data Picker** in the *Unifier uDesigner User Guide*.

In the Action form, a line item data picker can be either editable or read-only.

- Editable: A line item from a line item data picker.
- Read-only: A disabled text box without select icon.

In the View form, a Line Item Data Picker will be read-only.

- Read-Only: A disabled text box without select icon.

If picker is read-only, the display element of the selected line item in previous step is displayed. If no line item is picked, or the display element does not have value, picker shows empty text box and is disabled.

Click the picker icon for BP Line Item Data Picker to view the detail forms of the source BP displayed as different line items.

> **Note:** The tabs that are visible in the picker configuration are shown.

All the source line items within each tab that satisfy the query conditions are displayed.

The Toolbar options are:

- Lineitem: This is a drop down that shows tabs from source BP. Tabs that are hidden in picker configuration will not be shown.
- Find: All the BP search elements that were added in **Find** tab are shown. You can further filter the line items based on the search parameters.
- Find on Page: Same behavior as in other logs in the system.

Line item log for each tab is displayed as designed.

CBS Picker

The CBS Picker has an auto-completion feature. If you know the code, begin typing in the CBS Code field, and the picker will show the top 10 matches. If you continue to type, the picker will narrow the list as it matches more of the characters you type.

In this picker, you can use the following keyboard shortcuts:

- Use the Up and Down arrows to move through the list
- Press the Enter key on a highlighted CBS code to confirm a selection
- Press the Backspace key to delete a selection
- Use the Tab key to make a selection and move to the next field on the form

In the **CBS Picker** log, you can click **Find on Page** to do a text-based search for each column. You can click **Find** to filter CBS codes. When you click **Find**, any additional defined elements become present and a **Show CBS Hierarchy** check box appears. To view the entire CBS hierarchy of filtered CBS codes, select the **Show CBS Hierarchy** check box to view summary level codes and child level codes below the CBS code.

WBS Picker

When you select the WBS Picker, the field displays all WBS codes that are available in WBS Sheet. You can select a leaf-level and summary-level WBS code per P6 project. The auto-populate data elements that are defined from the WBS Picker will be populated for the selected WBS code.

When the BP record (CBS-type or WBS-type) is routed to the next step, or to the terminal step, the amount or quality (amount and uuu_quantity data elements) will roll up to the WBS Sheet, per selected WBS code in the BP record.

In the WBS Sheet, when you add the columns, which are of data source type SYS BP Currency Amount and SYS BP Decimal Amount, the amount and uuu_quantity data elements values from the new Cost BP (Standard tab) line items will be rolled up.

When the BP record (CBS-type or WBS-type) is created and routed to the next step by way of CSV import, SOAP services, and RESTFUL services, the pertinent roll up will take place. Refer to the *Unifier Integration Interface Guide* for more details.

Bulk Edit

When you bulk edit multiple BP records (CBS-type or WBS-type) and change the status, the corresponding amount and quantity will roll up.

> **Note**: You can use bulk edit to update all other data elements in the action forms.

Bulk Action

You can route multiple records at a time by going to the Task log and selecting one of the following options:

- Bulk Action with Preview
- Bulk Action without Preview

You can route the BP records (CBS-type or WBS-type) to the next step by using bulk action and roll up will occur if the BP status is added as a column in the WBS Sheet.

For the current workflow BPs, you can route the BP record through email. When routing the BP record through email to the next step, or terminal status, the corresponding amount and quantity data elements are rolled up to the WBS Sheet, in the same way the same line item rolls up to the Cost Sheet for the corresponding CBS Code.

The BP records (CBS-type or WBS-type) are available to be used for User-Defined Reports (UDRs), similar to other BPs.

In a project:

- If the WBS has not been created yet, the system does not allow the creation of a new BP record (CBS-type or WBS-type).
- When a BP record (CBS-type or WBS-type) is terminated, the data rolls back from both Cost Sheet and WBS Sheet.
- You cannot delete a WBS code that has line item data and is removed from P6.
- If the Cost Sheet is not locked, the system does not allow you to route the new BP record (CBS-type or WBS-type) to next step.

When you create a new BP record (CBS-type or WBS-type), the main form of the record appears and each line item appears as a tab (**Create New CBS/WBS BP** window). The following explains this form in detail.

The form is split into two panes. The left pane contains the upper form and contains tabs that contain line item details:

- **General** tab
- **Standard** tab
- **Payments** tab
- **Schedules** tab

The right pane contains the following tab:

- **Attachments** tab

  To add attachments by way of browsing or Document Manager (if the uDesigner option is selected).
- **General Comments** tab

  To add general comments (if the uDesigner option is selected).
- **Linked Records** tab

  To include a link to additional records, similar to other BPs.
- **Linked Mail** tab

  To include a link to emails.

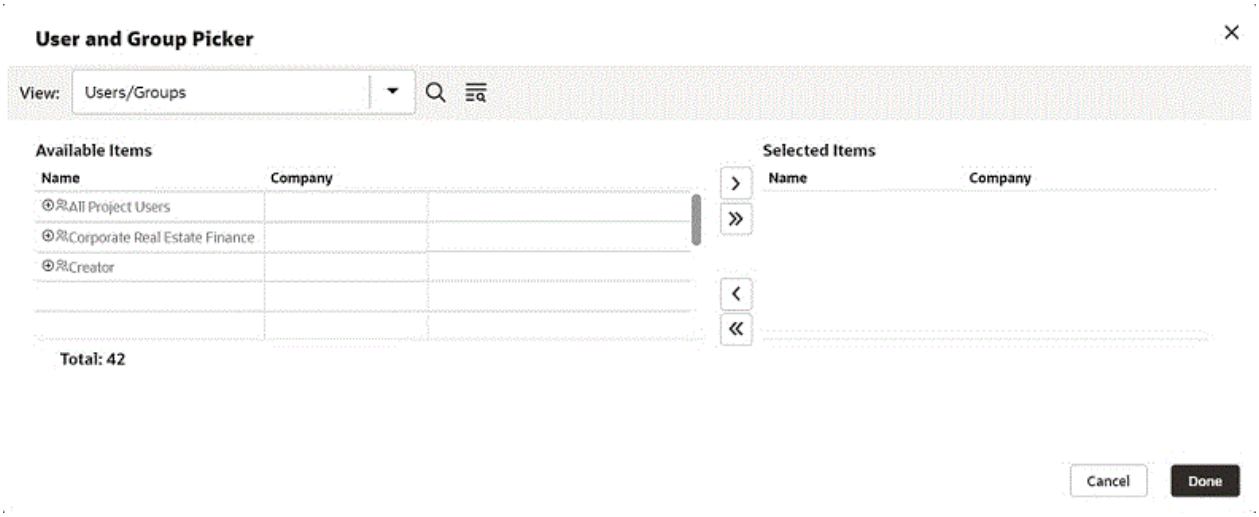
The menu option (the three horizontal lines icon) enables you to conduct the following:

- **Auto-create**
  To use if there are any BP creators on the form, where user can define scheduled auto-creation.
- **Export Line Item Template**
  To use the CSV template to import the line items, in bulk.
- **Print**
- **Reload**
- **Help**
- **Close**

User Picker and Group Picker

Most pickers operate in the same way. However, the User/Group Picker has several features that other pickers do not.

> **Note:** If a User Administration design has been imported, the content of the User/Group picker (in User view) can vary. The Find window and sort order can also vary depending on the optional design created.



The list of users and groups in your company may be exceptionally long. To make reading the picker list easier, you can filter the names on the list by project/shell and by user or group, or both. To filter the user/group list:

- To filter the list by project/shell, use the **List Names From** field and choose the name of the project/shell. (This filter option is generally available only to administrators; for example, when an administrator is adding project/shell members.)
- To filter the list by user or group, use the **Show By** field to display users, groups, or both users and groups on the list.

To select a user or group:

1) To select a user or group for an action, select the name. To select multiple names, hold down the **Ctrl** key while you click the names.
2) To add the names for the action, click **Add**. The names are displayed at the bottom of the window.
3) Click **OK**.

To remove a user or group:

If you change your mind, you can remove a name from the action as follows:

1) At the bottom of the window, select the user or group you want to remove. To select multiple names, hold down the **Ctrl** key while you click the names.
2) Click **Remove**. The names are removed from the bottom of the window.
3) Click **OK**.

To view a user's profile:

Select the name and click the **View Profile** button. The View User Profile window is displayed, showing work information for the user, including their Title, E-Mail, Phone Number, and Company Address. Use the drop-down list to view the user's information for either the company or shell level.

To see a list of group members:

Select the name of the group and click the **Members** button. The Member List window is displayed. To remove a user from the list, deselect the check box beside their name.

Shell Data Picker

When you open the shell properties in User mode and use the shell data picker hyperlink:

- The shell data picker can be editable, read-only, or read-only with a hyperlink on the Action form.
- The shell data picker can be read-only or read-only with a hyperlink (in read-only mode) on the View form.

  When you click the shell data picker hyperlink (in read-only mode) on the View form:
  - If you are a member of the shell and have permission to the View form, you can see the View form in the shell details in view-only mode.
  - If you are not a member of the shell, you cannot see the View form.
  - If you are a member of the shell and have "Modify Properties" permission (in Access Control) for the shell, you can view the Action form of the shell in view-only mode.
  - If the shell administrator accesses the shell data picker hyperlink, the administrator will see the Action form of the shell in view-only mode.

> **Note**: Starting in 19.12.3, when you select the shell data picker, only the General tab information of the shell properties is seen.

Completing a BP Record Form

For detailed instructions on creating a BP record, see ***Creating a Business Process (BP) Record***.

To complete a Business Process (BP) form:

1) Complete the Main form. Fields marked with a red asterisk (*) require an entry.
2) Add line items, if applicable.
   - If this is a cost or line item-type BP add line items as necessary.
   - If this is a Document-type BP, attach any documents to the form.
3) Add additional information, if applicable.
   - General comments.
   - Attachments to General comments.
4) After you have completed the form, do one of the following:
   - *If this is a non-workflow BP:*
     - Click **Save** to save your changes. Saving the form for the first time will save a new BP record and subsequent saves just save changes incorporated in the BP record.
     - Click **Submit** to save and process the record data. The record will be displayed in view-only mode.

       After the non-workflow BP is 'submitted,' it can impact any of the following:

       - Roll up to the Sheets and Managers
       - Cashflow auto commits
       - Autocreation
       - RAP
       - Publish record info to DMS

     When you create a record, the list of values for Status only displays those that are marked Active. When you update a record for which the current Status has been marked Inactive, you must select a different Status. The system uses the status values to track the state of a business process record and any line items it may contain. For example, a Pending status generally means people are still working with the record, while a Closed status suggests the record is completed. Records in Closed status are typically marked as Terminal, meaning the record has reached a point where no further input is either required or desired. You can still access a non-workflow record in a terminal status if the record is in Edit mode. However, if you click **Submit** when the record is in a terminal status, the record becomes permanently read-only and un-editable.

     > **Note**: For non-workflow business processes, the system evaluates the specified upper form validations specified in uDesigner only when the BP record is submitted by clicking the **Submit** option.

   - *If this is a workflow BP:*

a. When you have completed the form, click **Send**. The Workflow Action Details form is displayed.
b. From the **Workflow Actions** drop-down list, select a workflow action. If there is only one possible action name, then this step is pre-populated.
c. The **Send For** field displays the Step name. The step name is populated based on the selected Action name and is a read-only field.
d. The **To** field displays the possible list of assignees for the workflow step. Use the User/Group picker to select an assignee, if not already preassigned.

> **Note:** If the Assignment Policy is set to Preassigned, the **Additional Task assignees from record and tabs** line is read-only.

e. The **CC** field displays only if the workflow step allows CC users. Use the User/Group picker to select users who will receive notification on the BP record form. This field might be pre-populated based on the step setup.

> **Note:** If the Assignment Policy is set to Preassigned, the **Additional CC users from record and tabs** line is read-only.

f. If the selected step has a due date, the details of the due date are displayed. If not already preassigned, you can choose from one of the following options:

   Set all task due dates as: Lets you set the same due date for all assignees.

   Set individual task due dates: Allows you to assign different due dates for each assignee one at a time.

   Click the **Calendar** icon corresponding to the option you chose. The Date picker opens. Select the month and year, and then click the date you want to select.

g. Click **Send**.

Editing Values on a BP Record Form

The following table describes the values:

> **Notes:**
>
> - Click **X** to clear out values. You can also clear all field values by selecting ☰ **Menu**, and then selecting **Reload**.
> - Use the **Search** and **Find on Page** options displayed on pickers to find specific items. Use the pagination controls if multiple records are present.

Form Values	Description
Text fields	Text fields have an input box.
Data Pickers	You can click **Picker** to launch the picker screen and either select a record and then click **Select** or double-click the record.
BP Pickers	You can click **Picker** to launch the picker screen and either select a record and then click **Select** or double-click the record.
Line Item Picker	Use the Line Item picker to select a line item. You can click **Picker** to launch the picker screen and either select a line item and then click **Select** or double-click the line item.
Shell Picker	For selecting a company-sponsored shell to auto-populate shell data elements on other business process fields. The picker is designed to show Active, Inactive, View-Only, and On-Hold shells. You can use the **Type** drop-down menu to view by Shell types.
Space Picker	The space log and space types are displayed. You can filter using the **View** drop-down menu. Space types are displayed on the left and the right grid displays the log for the selected space type.
Image Picker	For uploading images.
Hyperlink Picker	For adding and updating hyperlinks.
CBS Picker	On Cost-type business processes, project/shell cost sheets, and on schedule activity forms, for selecting CBS codes.
Work Package Picker	On Cost-type business processes, for selecting a work package for a Cost Sheet. This picker is populated with the work packages that have been created.
Transaction Currency Picker	The Transaction Currency picker displays the Project Currencies. Columns seen here are Currency Name and Currency Symbol.

Form Values	Description
	Note: If you select a different currency for transactions, the system correctly uses the exchange rates to calculate subsequent information. However, when you view the main form for the approved BP record, the system currently displays the Project Currency Amount field using the applicable symbol for Transaction Currency instead of the symbol for the Project Currency. For example, if the Base Currency for the project is US Dollars ($) and you select China Yuan Renminbi for the Transaction Currency, the system incorrectly displays the Project Currency Amount using the Yuan symbol (¥) on the main form. If you view the Project Currency by selecting it from View Currency on the Line Item tab, the correct symbol is shown.
User Picker	For selecting project/shell users (members of a project team) or company users (all users defined within a company). The options you see are contextual. Use the **>** or **<** controls to move the selected group or user from the Available Items list to the Selected Items list.
Commitment Summaries Picker (CM)	For selecting commitment summary that is used by a Generic Cost Manager in a shell.
Account Code Picker	For selecting company account codes included in the Cost-type BP.
CM0 Picker	For selecting Generic Cost Code.
Seasonal Dates Picker	For selecting Seasonal Dates record in the system. This is a system-defined picker.

Supported Data Pickers

The following is a list of the data pickers supported in the BPs with redesigned user interface:

Note: These data pickers support the Type Ahead feature.

- Account Code Picker
- Activity Picker
- Allocation Template Picker
- Asset Picker
- Auto-update Status Setup Picker
- Bid Picker
- BP Line Item Picker
- BP Picker
- CM0 ,1 to 25 Picker
- Commit Line Item Picker
- Company Picker
- Cost Attribute Picker
- Cost Code Picker
- Currency Picker
- Date Only Picker
- Date Picker
- Fund Picker
- Group Name Picker
- Hyperlink Picker
- Image Picker
- Location Picker
- P6 Activity
- Planning Item
- Project Picker
- Project Template Picker
- SOV Picker

  The system does not permit type ahead for the SOV Picker field, in both form view and grid view.
- Resource Picker
- Role Picker
- Seasonal Dates Picker
- Shell Code Picker
- Shell Picker
- Shell Template Picker
- SYS Date Picker
- User Picker
- WBS Code Picker
- WBS Picker
- Week Picker
- Work Package Picker

Refer to the *Unifier Data Reference Guide* for details.

Creation Step

The create BP record form opens as a pop-up window. When you create a record, the list of values the form contains tabs (main form and line item tabs), and toolbar options. The main form is displayed as the first tab and each line item tab appears as subsequent tabs. The left pane displays the record details and line item details. The right pane displays additional tabs associated with the main form or line items. You can resize the left and right panes using the **Resize** icon.

Main form:

The main portion of the business process form contains information about the BP record, such as the name of the record, description, who created the record and when, and other general information. Additional informational blocks defined by your administrator are also displayed. You can collapse and expand these blocks.

Toolbar Option	Description
Save	To save a draft of the form. You can view your drafts by clicking **Home** and selecting **Drafts**.
Send	To route a workflow business process to the specified recipients. This option is displayed only for workflow BPs.
Submit	Use Submit when you have finished editing a record. Displayed on all Non Workflow BPs when in Edit Mode.

Toolbar Option	Description
Menu	The options you see under this menu are based on the BP design. ▸ Auto-Create: Displayed on any BP that can auto create other BPs. ▸ Print HTML, PDF and Custom: Displayed on all BPs. You cannot print draft records. ▸ Export Line item template: Displayed on any BP that has detail form integration interface defined. ▸ Reload: Displayed on all BPs. This option will reload the page. ▸ Help: BP specific help option. Your company or project/Shell administrator may provide a custom Help file to give you information about a specific business process. If a custom help file is available, it will be listed under the Help menu for the business process log or form. ▸ Close: Close the record.

The right pane displays the following tabs associated with the main form: Attachments, Comments, linked Records, and Linked Mail. For Portal BPs, Attachments and Comments tabs are displayed.

If the **Attachments** tab of the business process form contains any attachments, an **Attachment** indicator is displayed. If the tab contains no attachments, the right pane is refreshed and the indicator is no longer displayed.

If the **Comments** tab of the business process form contains any comments, a comment indicator ( ) is displayed. If the tab contains no comments, the right pane is refreshed and the indicator is no longer displayed.

Line Item form:

Line item tabs are displayed after the main form tab. All line items are displayed on the left pane, and the right pane displays the details form associated with the selected line item. The right pane contains the Details form, Attachments, and Linked Records. The Attachments tab is displayed only if the line item form supports the addition of attachments. Query based tabs will not be seen in the Creation step. The *gear menu* (⚙) displays next to each line item on the left pane and contains all available actions you can perform on the line item. The following options are displayed on the *gear menu* (⚙): **Copy**, **Copy With Attachments** (option seen only if attachments exist), **Add to Group**, and **Remove**. The Copy, Add to Group, and Remove options are displayed only if it is specified in the form design.

Toolbar Options	Description
Add	To add new line items. The Add button will be seen only if the form design allows for line item additions.
Actions	The following actions will be seen: ▸ **Import** ▸ **Consolidate Line Items**
↻ **Refresh**	Refreshes the line items. All unsaved manual edits will be lost.
🖶 **Print**	Prints the list view. You can choose from: **Print**, **Export To CSV**, and **Export To Excel**. **Notes:** ▸ For export to Microsoft Excel, the system currently supports only Euro (EUR) and United States Dollar (USD) currency symbols. ▸ If you export data from a business process (BP) record, sheet (such as an Activity Sheet), or log (such as Company Funding Sheet Log) to Excel, be aware that depending on how your negative values are formatted, you might need to configure your columns in Excel to match the correct data type (Number). Otherwise, the columns will not be treated as numeric and will not sum as expected. One supported format includes placing the negative sign between the currency symbol and the amount (for example, $-1,000).

Toolbar Options	Description
Search	Enables users to search for specific line items across all pages.
Find on Page	Enables users to find items on the displayed page. When you click this option, the system inserts a row that lets you enter filter parameters.
Collapse All Groups **Expand All Groups**	To expand or collapse line items groups. These icons are displayed only when line item groups are present.

Update Step

The following options are displayed when the form is in edit mode.

Toolbar Options	Description
Send	To route a workflow business process to the specified recipients. This option is displayed only for workflow BPs.
Save	To save a draft of the form. You can view your drafts by click **Home**, and then selecting **Drafts**.
Submit	Use Submit when you have finished editing a record. Displayed on all Non Workflow BPs when in Edit Mode.
Menu	The options you see under menu are based on the BP design. ▸ Auto-Create: Displayed on any BP that can auto create other BPs. ▸ Print HTML, PDF and Custom: Displayed on all BPs. ▸ Export Line item template: Displayed on any BP that has detail form integration interface defined. ▸ Terminate Record: Displayed on all BPs. This option is displayed only if the user has permissions to terminate records. ▸ Transfer Ownership: Displayed on all BPs. This option is displayed only if the user has permission to transfer

Toolbar Options	Description
	ownership. ▸ Undo Accept Task: Displayed on all workflow BPs. This option is displayed only after the user has accepted a task. ▸ View Map: Displayed on all BPs that support geo-coding.

View Step

The View BP record form contains read-only fields and options that are applicable in the View step. The form is divided into two panes- the left pane displays the main upper form and the line items associated with the record, the right pane displays additional tabs associated with the main form or line items. The main form is displayed on the left pane as the first tab, and each line item tab appears as subsequent tabs. You can resize the left and right panes using the **Resize** icon.

The main form contains Task Details and other informational blocks defined by your administrator. You can collapse and expand these blocks. The Task Details section of the form contains details of the assigned task and displays the following fields: From, To, CC (if applicable), Sent For, and Task Due Date (displayed if the task has an assigned due date). This section is not shown for users who have previously declined the task or are on the CC list.

The Attachments, Linked Records, General Comments, Linked Mail, Reference Records, Workflow Progress (displayed if user has permission to view progress), and Audit Log (displays only if user has the required permission) appears as tabs on the right pane. The information in these tabs is read-only.

Toolbar Option	Description
Accept	Accept a task. This option is displayed for workflow BPs. You may see this option if your non-workflow BPs is an I Step record.
Decline	Decline a task. This option is displayed for workflow BPs. You may see this option if your non-workflow BP is an I Step record.
Menu	The options displayed under this menu will vary based on the BP design. ▸ Add more assignees (Displayed for

Toolbar Option	Description
	workflow BPs.) ▸ CC more users (Displayed for workflow BPs.) ▸ Review ▸ View Record location ▸ Auto-Create ▸ Export Line Item Template ▸ Email as Attachment ▸ Print - HTML, PDF and Custom ▸ Terminate Record ▸ Transfer Ownership ▸ Help ▸ Close
Edit	Edit non-workflow BPs. This option is displayed only if you have permission to edit.

Auto-Populating Fields in a BP Record

Using the auto-population feature, you can automatically populate fields on a form or line item at the time the form/line item is created. Auto-population can occur on business processes that are in the same shell, or across shells. Using auto-population means that you do not have to enter data in every field in a form. For example, this feature could automatically fill in a "Plant Location" field from an attribute form.

For another example, the date field on a time sheet could be set up to default to the server date and time so that you do not need to use a date picker. Or a field could be set up to automatically display a title or other text that you would normally need to fill in on a frequent basis.

In addition, auto-population can be used with the Unifier portal. When a user logs into the portal to submit a form, such as a work order, the user's information, such as his/her location and department, can be automatically populated on the work order. Or when an employee "move" request is created, the current location of the employee can be auto-populated onto the move request form.

Fields on a form can be auto-populated from the following sources:

- Fields on an attribute form for managers (except a code-based configurable manager)
- Fields on another business process form or line item
- Fields on a User Attribute Form (via a user data picker)
- Shell Attribute Forms
- Fields from an upper form (to fields on a detail form)
- Fields on single-record BPs at the company, shell, or project level
- Fields on an SOV (for a payment application BP)

- Fields from document properties of a line item attachment
- The total value from a line-item numeric field (can populate a field on an upper form; becomes a read-only field)
- A constant value that was specified for a field when the form was created

> **Note:** If you configure specific Data Elements (DEs) to auto-populate from a Base Commit BP, do *not* configure the same auto-population using CSV, Microsoft Excel, or REST API in an SOV sheet for General Spends, Payment Applications, or Summary Payment Applications.

Exceptions

When BP records and line items that have auto-populate DEs defined from pickers (all data pickers, BP picker) are updated through integration (REST API and Excel update), the auto-populate DEs from the picker are *not* updated when the input request does not include a picker value.

> **Notes:**
>
> - Auto-population is also not triggered if the picker element is in the Main form of the record, when the input request (REST API and Excel update) includes the same value for the picker.
> - Although uDesigner supports the inclusion of Pull Down DEs (string or integer) on the payment detail form for use with Auto Population from an SOV Sheet, the Pull Down DE column cannot be added to the SOV Sheet from the SOV Structure. Because of this, the Pull Down DE in a line item cannot auto-populate a value from the SOV Sheet when a classic Payment BP record is created. Auto Population is only supported for decimal or current amount DEs.

Additionally, when a picker (destination picker) in a detail form is designed to be is auto-populated from another picker (source picker) from the **Upper** form, the system auto-populates the DEs from the former picker (destination picker) when a line item is created, only if a picker value (from the source picker) exists in the **Upper** form.

Reverse Auto-Populating (RAP) Fields in a BP Record

Some data elements (DEs) on forms can be updated using "reverse auto-population" (RAP). These DEs are specified when the form is designed. Reverse auto-population means that some values can be automatically updated when other values are modified in a business process (BP) form. Note the following:

- The data fields in a BP form can be updated through RAP, including those in the behavior set of a DDS.
- RAP does not occur for projects/shells with View-Only or Inactive status.
- RAP is not supported for non-workflow BP records that have an Inactive status.
- RAP is not supported for single-record BPs, except in the case of BPs existing under child shells, which can reverse auto-populate to single-record BPs under any parent shell in the shell hierarchy.

- The system does not support RAP for any data pickers that use the BP Line Item selectors. None of data picker data elements (including the user data picker data element) can have "Reference BP Line Item Selectors," when defining RAP. Other data elements can have "Reference BP Line Item Selectors," when defining RAP.
- RAP on line items will not cause the system to re-evaluate the upper form elements that may depend on the line item values.

Reverse Auto-Population in Auto-Created Business Processes

A business process can be designed to update the record or line item that auto-created it. For example, a Meeting Minutes business process auto-creates **Action Items** business processes from line items. If you update the Meeting Minutes business process line item, the Action Item business process can be updated via reverse auto-population.

In another case, if a business process auto-creates a new line item for an existing record, that line item can be updated with information from subsequent steps in the workflow.

Business cases that might use reverse auto-population:

- A work order could reference the line items on a preventive maintenance type business process. Certain updates in the work order could be reverse auto-populated onto the line items of the preventive maintenance type business process.
- Changes to the detail form in a business process under a child shell could result in changes to the upper form of a single record non-workflow business process under any parent shell in the shell hierarchy.
- Lease payment requests could be auto-created from a lease business process. An approved payment request could reverse auto-populate the lease BP's line item status to "approved."
- A move order business process could reference an asset record. Updates on the move order could be reverse auto-populated onto the asset record.
- An office move order business process could reference a User Attribute Form. After the move is complete, the user's new location could be updated on the attribute form. (This kind of reverse auto-population is normally triggered when you choose a user from a data picker, rather than when a business process is auto-created.)

Reverse Auto-Populate Status of Non-Workflow BP

The Status DE on a non-Workflow Business Process can be Reverse Auto-Populated (RAP) from another non-Workflow or Workflow Business Process.

Example

A non-Workflow Asset Business Process (BP) (a non-workflow BP) record is in an "In_Service" status. Another Business Process goes through approvals to shut down that Asset. As a result, the Asset BP status changes to "Inactive."

The following explains the function of the Data Element (DE) of Data Definition (DD) = "Record Status Pulldown" at runtime:

If the DE is set to Reverse Auto-Population on a BP form and a default value has been defined, the BP form renders the DE to display the default value. You can change the default value.

If the DE is not set to Reverse Auto-Population on a BP form, the BP form renders a read-only value because the BP form does not have a configured RAP, in which a data set has been defined for the DE.

Example

BP Form 1 is configured for RAP and two DDs (DD = "Record Status Pulldown") have been set as A and B. The BP Form 1, will render the DE as Editable, Required, or Read-Only as defined. If the DE is designated as "Editable," you can select A or B.

BP Form 2 is not configured for RAP, so the BP Form 2 renders the DE as read-only, irrespective of the settings. The DE value is the one that you have selected for BP Form B.

BP Form 3 is configured for RAP and two DDs (DD = "Record Status Pulldown") have been set as C and D. The BP Form 3, will render the DE as Editable, Required, or Read-Only as defined. As a result, the value from BP Form 1 is deleted. If the DE is designated as "Editable," you can select C or D.

BP Form 4 is configured for RAP and two DDs (DD = "Record Status Pulldown") have been set as D and E. The BP Form 4 will render the DE as Read-Only as defined. If you select C in BP Form 3, the value is deleted. If you select D in BP Form 3, the value will be retained. If the DE is designated as "Editable," you can select D or E.

If RAP is configured such that the destination is a non-Workflow BP, and the destination record is in finished or edited state, the RAP first brings the record to an "Edit" state and then back to finished or edited state (rollback).

Reverse Auto-Populate Status of Workflow and non-Workflow BP Errors

The Reverse Auto-populate (RAP) will fail if an invalid or inactive Status has been defined in the data set value during RAP configuration of a destination non-Workflow BP. (Error messages might include: RAP to "Status" has failed because an invalid value was detected in the source element. Or: The data element cannot be updated in destination BP as record status is inactive. Or: The selected record status is inactive in destination BP and cannot be updated.) The system logs these errors, which you can send to the user who has been designated to receive source BP error notifications in the "Send error notification to" section of the Business Process Setup window. The error email notification will have the following two additional fields to assist the recipient with identifying the source:

- Destination Reference
- Source Reference

You can find the reasons for the reverse auto-population (RAP) failures in the audit log of the business process record. In addition, on occasion the system generates error codes for reverse auto population failures which can be used to troubleshoot the reverse auto population failures.

Reverse Auto-Populate Status and Email Messages

The Reverse Auto-populate (RAP) email messages will notify your if the RAP fails, during runtime, and include the following details for better traceability:

> **Note**: The Reverse Auto-population (RAP) option can take place between different elements, if the option is included for those elements.

For Source Business Process and Destination Business Process:

- Destination Reference with BP Record number (Destination Reference: Where you have the field with a value that can change through RAP.)
- Source with Source BP Name (Source Reference: Where you have the field with a value that you can change, and as a result, update the Destination through RAP.)
- Source Reference with Source Record number

For Source Business Process and Destination P6 Activity Sheet:

- Destination Reference with P6 Activity ID (`uuu_P6ActivityId`)
- Source with Source BP Name
- Source Reference with Source Record number

For Source Business Process and Destination Asset:

- Destination Reference with Asset Name (`uuu_asset_name`)
- Source with Source BP Name
- Source Reference with Source Record number

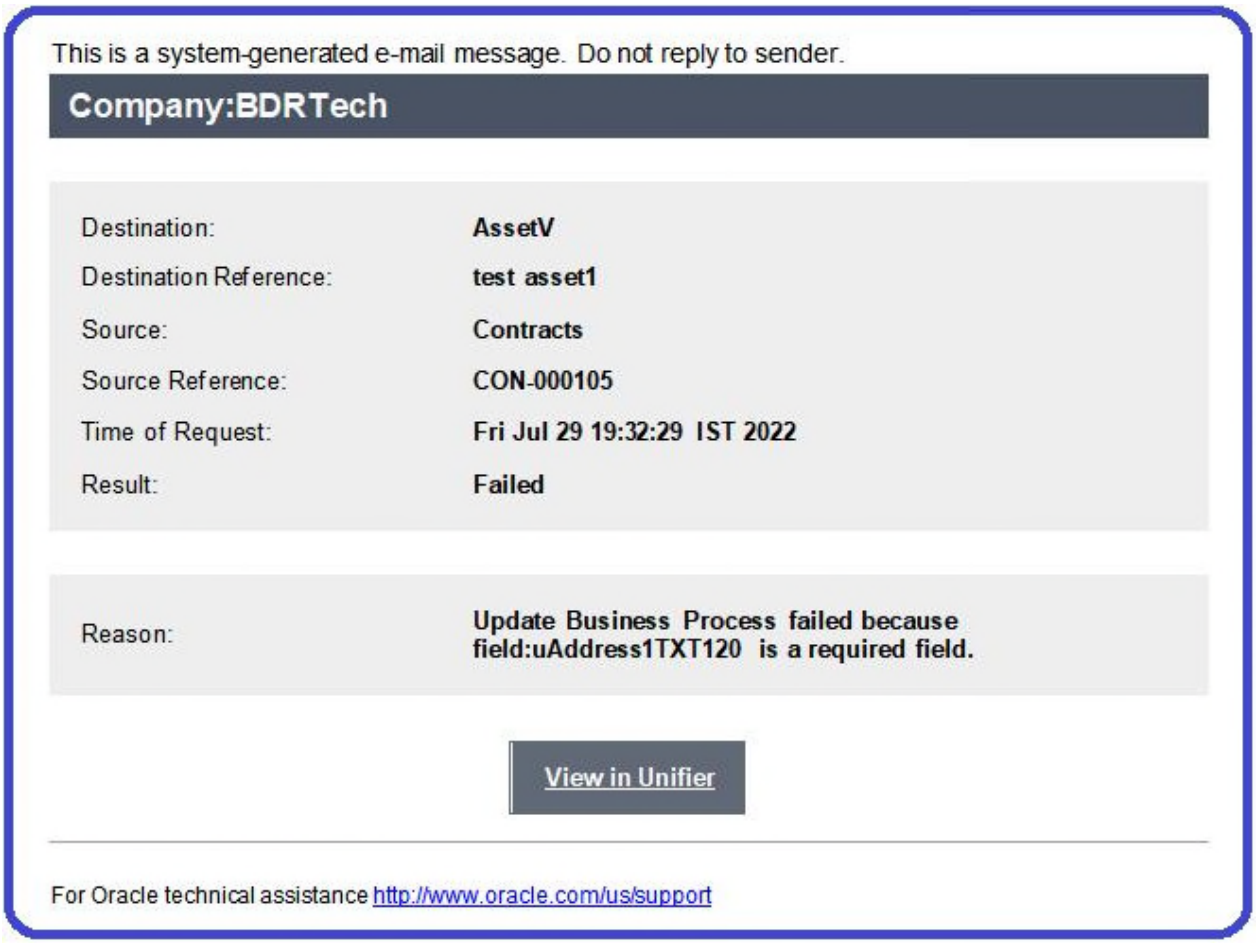
For Source Business Process and Destination Planning:

- Destination Reference with Planning Item (`uuu_planning_item`), if feasible
- Source with Source BP Name
- Source Reference with Source Record number

For Source Business Process and Destination Shell:

- Destination Reference with Shell
- Source with Source BP Name
- Source Reference with Source Record number

The following is a sample of an RAP email message that displays the changes done when a data element is reverse auto-populated.


This is a system-generated e-mail message. Do not reply to sender.

Company:BDRTech

Destination:	**AssetV**
Destination Reference:	**test asset1**
Source:	**Contracts**
Source Reference:	**CON-000105**
Time of Request:	**Fri Jul 29 19:32:29 IST 2022**
Result:	**Failed**

Reason:	**Update Business Process failed because field:uAddress1TXT120 is a required field.**

View in Unifier

For Oracle technical assistance http://www.oracle.com/us/support

Viewing Messages or Cc'd Tasks

If someone copies you (Cc) on a task, it is not a task for you, but it is for your information only and called a message. These business process record copies are listed in your **Notifications** log. You will usually be notified by email when you have a new a message. If you receive an email notification, click the hyperlink at the bottom of the email. You will be directed to the Sign In screen and, after you log in, to the project/shell or company **Notifications** log.

> **Note:** Notifications for View-Only projects/shells are listed in the **Notifications** log, but you cannot add general comments to these messages.

Notifications are view-only snapshots of the form at a particular step and remain available for viewing until the BP is sent to the next step. Notifications received for an end-step will remain available in the log.

To view your messages from:

- **Home** workspace, click the **Home** node, and click the **Messages** link listed under **Items Requiring Your Attention**.
- **Home** workspace, and click **Notifications**.
- Project/shell tab, switch to **User** mode, and select **Notifications** in the left Navigator.

Accessing a BP Record from an External System

The system provides a data element for business processes that can display a URL for access to Unifier from an external system. If the business process contains this URL field, you can open a view-only copy of the record from that external system.

For example, you might have notifications from the system that are sent to email programs, such as Microsoft Outlook or Yahoo Mail. From that email program, you could open a view-only copy of the business process. Or, you might have an approval process that resides outside of the system. At a certain point in the workflow, the business process record data could be sent from Unifier to that external approval process. From that external system, you could open a view-only copy of the business process record.

> **Note:** If this business process created records before this URL field was added to the form, those records will not show data in the URL field. Only new records will show data in the URL field. Any business process designed to be opened from an external system must be available in the **Master Log - Business Processes** grouping node.

To open a business process from an external system:

You must be an active member of the project, shell, or sub-shell, and have at least view permission to the **Master Log - Business Processes** grouping node that lists/contains the business process record you want to view.

Use the URL to access Unifier. This URL will open the Sign In window. After you are signed in, the system will display the business process record in view-only mode.

> **Note:** If the system has been configured to sign in users using single

sign-on (SSO), the **Sign In** window will not appear.

Depending on what permissions you have, you can take the following actions from this view-only copy of the record:

- Terminate the business process
- Print the business process
- Send Mailbox
- Transfer ownership
- View reference records
- View the audit log
- View record attachments, general comments, linked records, and linked Mailbox
- Click line item tabs and open the line items in grid view
- Use the Find feature to locate line items
- Use any hyperlinked field, such as a picker, an image, or a URL, or the workflow progress link
- View the assignees and cc'd users on the step

Business Processes in Company Logs and Logs Nodes

The **Company Logs** grouping node is in **Company Workspace**, and the **Logs** grouping node can be accessed in a project/shell. You can use the **Company Logs** grouping node and the **Logs** grouping node to access the business processes that you have permission for.

Note: By default, the out of the box (OOTB) version of the product includes a **Company Logs** grouping node in the **Company Workspace** and a **Logs** grouping node in projects/shells. If the Company Administrator configures the User Mode Navigator for your organization and modifies the appearance and organization of the modules and business processes that are available in the left Navigator, the **Company Logs** and **Logs** grouping nodes might be named differently. For example, you might need to select the Budget Management module in the left Navigator to view the Business Process log (BP log) for it.

You can use the enhanced **Search** option (described in the table) in the following logs and logs nodes:

- Company Logs
- Tasks log
- Drafts log
- Logs
- Line Item Consolidation page
- BP Picker

- BP Data Picker
- Query-Based Tab (QBT)
- Bidder Log
- Portal Log

To access the business processes in **Company Logs** grouping node:

1) Go to the **Company Workspace** tab and switch to **User** mode.
2) In the left Navigator, expand the **Company Logs** grouping node to see the business processes.

To access the business processes in **Logs** grouping node:

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, expand the **Logs** grouping node to see the business processes.

The following explains the log elements in both **Company Logs** and **Logs** grouping nodes. The logs in each grouping node are divided into two panes, left and right.

The toolbar options and columns on the left pane are:

Option/Column	Description
Create	To create a new record and subsequently add attachments, add comments, and include link to other records.
Actions	To perform the following actions: - **Import** - **Export CSV Template** - **Export Microsoft Excel Template** - **Create From Template** - **Bulk Edit** - **Print** - **Transfer Ownership** - **Terminate Record**
View	To change the view of the log based on the following options: - **All Records** (default) - **Records Created by Me** - **Records Received by Me** - **Records Created and received by Me** - **Records from My Company** - **Create New View** - **Manage Views**
Edit View	To edit the current view.
Refresh	To refresh the contents of the log.

Option/Column	Description
Print	To print or export the contents of the log.
Search	Lets you search the log for a specific field or combination of fields, which filters the BP records based on the selected criteria. In addition to completing the applicable fields that are displayed in the **Search** window, you can use the wildcard characters percent (**%**) and underscore (_) to refine your search. The percent character represents any number of characters, including letters, spaces, numbers, and so on; the search returns all results that contain the search string. The underscore character represents one character. For example, in a **Title** field, enter **Co%ts**. The list of results contains all records that include a word that starts with **Co** and ends with **ts**.
Find on Page	Lets you find items on the displayed page. When you click this option, the system inserts a row that lets you enter filter parameters.
<*BP-specific*> **Help**	Lets you access the specific help for the selected BP.

The tabs on the right pane are as follows. The information in each tab corresponds to the record that has been selected.

> **Note:** Displaying a tab depends on the business process type, such as Workflow or non-Workflow.

Tab	Description
Record Details	Enables you to see the details of the record that are selected on the left page. The record details seen depend on the form that you have access to.

Tab	Description
Workflow Progress	Enables you to see the details of the workflow progress which includes: ▸ View Graphic ▸ Title ▸ Record Number ▸ Current Step ▸ BP Setup Used ▸ Assignee Reassignments? ▸ Step Name ▸ Assignee ▸ Company: This column displays the assignee's company name. For Partner users, this column shows the assignee's Partner Company name. ▸ Status ▸ Action ▸ Completion Date You have the option of filtering (**Filter By**) the information displayed on the workflow progress.
Attachments	Enables you to access the record attachment, if available. For each attachment, you can click the *gear menu* (⚙) to conduct the following: ▸ Open ▸ Open in AutoVue (You can also open an attachment by double-clicking the name of the attachment) ▸ Download

Tab	Description
Integration Log	This tab displays only if a connection with Oracle Integration is set up and enabled for workflow BPs. It displays a history of workflow BPs with the following information: ▸ Date ▸ Workflow ▸ Step ▸ Action ▸ User ▸ Company ▸ ID ▸ Status ▸ Started ▸ Finished ▸ Comments **Note**: When a Workflow BP is created, it displays the status as *Initiated*. Subsequent updates to the **Status**, **Started**, **Finished**, and **Comments** fields are based on the APIs invoked in the Oracle Integration recipes for the Workflow BP. This tab is also available for workflow business processes in the **Master Log -Business Processes** node of the Navigator.

Additional View Form Accessibility in Record and Log Previews

When you view the record preview and the record details upon opening a record, the content seen depends on the form that you have access to. Your administrator may have set up restrictions to view certain form data and may have given access to a View form. This View form may be different from the View form associated with the workflow.

If you have View restrictions for multiple View forms, the first View form from the View Forms list in the BP setup is displayed. If you do not have View restrictions, the Step form is displayed. This is applicable for Record Owners, Record Editors, and Step Editors.

If the end form is an Action form and you have View restrictions, the appropriate View form is displayed. However, if you do not have View restrictions, the Action form is displayed.

If the end form is a View form and you have View restrictions, the Restricted View form is displayed. However, if you do not have View restrictions, the View form that is part of the end step of the workflow is displayed.

Record Content Impacted by Additional View Form Accessibility

The additional accessibility of View forms impacts all areas where you can open and view record content. These areas are listed below:

- Workflow BP and Task logs
- Reference Records
- Linked Records
- Dashboard Drill Down Records
- BP Picker, BP Data Picker, and BP Creator links
- Permission-driven Data Sources
- Cost Sheet, Funding Sheet, SOV Sheet, Schedule Sheet, and so on
- Email Notifications
    - If you have View restrictions for the View form in the BP setup, the email has the data elements that are part of the View form. In the case of a task assignee, if the previous check box is not selected, the email has the Step form elements.
- HTML and PDF Print views
    - If you have access to a Restricted View form, the View form data is displayed.
- I-Step Records
- Mobile applications

> **Note:** Additional accessibility is not applicable for Master logs since the BP setup is done at the project/shell levels.

When user is an I-Step Assignee, and the record is in the I-Step (initiation step), the existing form will be seen as read-only end-form for Workflow BP records and read-only action-form for Non-workflow BP records.

If the user is an I-Step Assignee but not the creator of the record, and the record is in post-creation step, a restricted view form will be seen if the I-step Assignee has access to restricted view forms.

When I-Step Assignees have access to restricted view form, the following rules apply:

User Name	User Role	Record Status	Form The form that will be seen upon opening the record, as well as in the Logs (BP log) Preview.
User A	I-Step Assignee	Initiation Step	Read-only Action Form/End Form
User B	I-Step Assignee-Creator	Creation Step	Action Form
User C	I-Step Assignee-Not a Creator	Creation Step	Restricted View Form

Deleting View Forms

When you delete a View form, the system removes the View form from **View Forms** tab in the **Business Process Setup** window.

Important

When you delete a View form in the Staging environment and create a new View form, the new form:

a) Gets the ID of the deleted form (permissions, users, and so on).

   This is configured in: Go to the Company Workspace tab and switch to Admin mode. In the left Navigator, select uDesigner, and then select Business Processes. Open the applicable BP ... View Forms (delete or add new one).

b) Appears in the Business Process Setup automatically; meaning, it does not go through the regular way of creating a new form, deployment, and then added (within the BP Setup module).

   This is configured in: Go to the shell tab and switch to Admin mode. In the left Navigator, select Setup, and then select Business Process. Open the applicable BP ... (same as above) View Forms (Deleted or added new one).

When you open a Non-Workflow Business Process, the system checks to see whether you have the appropriate permissions.

> **Note:** There are no changes to the **Permissions** tab in a Non-Workflow Business Process log and **Access Control**.

To be able to view Non-Workflow Business Process records, you must have the following permissions:

- Navigation-level access (left Navigator) to view the Non-Workflow Business Process record.
- View All Records
- View Company Records
- View User Records

At the Non-Workflow Business Process log level, you must have at least the "View" permission to view the record content.

The **Views** setting of the **Permission Settings** block (**View Forms** tab) of a Non-Workflow Business Process sets the visibility of the data (including tabs) when you open the record.

Create a New View of a Log

1) Open the applicable log and select **Create New View** from the **View** menu.

   By default, the **Columns** tab is selected.

2) From the **Available Columns** box, select the columns that you need and click the **Move** icon (the single arrow icon pointing to the right) to move your selected column to the **Selected Columns** box.

   The **Selected Columns** box contains the columns that are seen in the log view. The last column in the **Selected Columns** box is not available for locking.

3) If you want all the available columns to be seen in the log view, select one column in the **Available Columns** box, and click the **Move All** icon (the double-arrow icon pointing to the right) to move all columns to the **Selected Columns** box.
4) To move multiple available columns at the same time, select one column in the **Available Columns** box, hold down the **Ctrl** key, select each additional column from the **Available Columns** box, and then click the **Move** icon (the single arrow icon pointing to the right) to move all the highlighted columns to the **Selected Columns** box.

   You can move each column in the **Selected Columns** box by using the:

   - **Move Up** icon (the single up-arrow icon)
   - **Move Down** icon (the single down-arrow icon)

   You can move multiple columns in the **Selected Columns** box by using the:

   - **Move to Top** icon (the double up-arrow icon)
   - **Move to Bottom** icon (the double up-arrow icon)

   To lock columns in the log view or determine the number of records, or both, use the following drop-down fields in the **New View** window, respectively:

   - **Lock after selected Column**
   - **Number of Records per Page**
5) Complete the **Filters** tab.

   If you want to view only non-workflow BP records that are in an editable state (that is, you want to exclude records that have a status such as submitted, terminal, or initiated), select the applicable options in the **Record** section, and then set the **Show Edit Records** option to **equals** and to **Yes**.
6) Complete the **Group By** tab.
7) Complete the **Sort By** tab.
8) When you are done, enter a name for your view in the **View Name** box, and click **Save**.

Creating a Business Process (BP) Record

You can create a business process (BP) record and access that record from any of the business process logs (**Company Logs** in **Company Workspace** or **Logs** in a project/shell).

> **Note**: You must have the proper permissions to create a BP record.

Behavior of the Due Date (due_date) Field

In the **Workflow Settings** field in the **Workflow Setup** of a BP, if the **Override Workflow Due Date** field is set as **Yes**, you *can* edit the due date in the creation step. If the **Override Workflow Due Date** field is set as **No**, you *cannot* edit the due date in the creation step. Also, you cannot edit the Due Date if the work has started or the work has moved to the next step (is in-flight) in the workflow process.

When you create workflow BP records through file imports (CSV or Microsoft Excel), the system currently sets the Due Date automatically based on the **Workflow Settings**; the Due Date provided in the input file is ignored. Also, when you update workflow BP records through file imports (CSV or Microsoft Excel), the system uses the Due Date that was based on the **Workflow Settings** and ignores the Due Date provided in the input file.

After a workflow record is created by using any workflow schema (unique combination of Setup Name + Workflow Name), the workflow record continues to reference the workflow schema even if the status of the workflow schema has been set to **Inactive**.

This condition includes workflow records that are in the following statuses:

- Draft
- Initiation Step (I-Step)
- Also, this condition includes any workflow record at any other step in the workflow.

If there is an Active BP Template, the Template continues to create records referencing the Inactive workflow schema. For instructions on creating a template, see ***Creating BP Templates and Scheduling BP Creation***.

A new BP record can be created in the following ways:

- Manually create a new BP record, starting with a blank form.
- Copy an existing BP record in the same log. The fields will be populated with the original record entries, which can be edited as necessary.
- Create a BP record from a template.
- Auto-create a BP record from another record at a specified step (S-Step) in a workflow.
- Auto-create a BP record when certain conditions are met or at a specified frequency.
- Create a BP record from the **Master Log - Business Processes** grouping node.
- Create a BP record from within the Document Manager, selecting the documents or folders to include as attachments.
- Auto-create a BP record using the Scope Management feature of the Schedule Manager.

Before You Begin Creating a Business Process (BP) Record

Be sure that you have the proper permission settings. All functions are controlled by fully configurable permission settings, including creating business processes. Contact your project/shell or company administrator regarding permission settings.

A business process (form and workflow) must be imported, configured, and set up by an administrator before it can be used.

You cannot create records of other business processes in a business process log (except in the **Tasks** log and **Master Log - Business Processes** grouping node).

For a Workflow Business Process, when you create a record, if the next step is match step *Creation* (per workflow setup), the *To* list will be populated with the user who has signed in.

The users that have been removed from the group, and the newly added users, will not be displayed in the Workflow page, when you create a BP record manually, by way of a template.

Gaps in Generated Business Process Record Number

The Business Process (BP) record number is sequentially generated when you create a record. The newly generated record number is locked so that other records (being created at the same time) cannot use that number. If the BP record cannot be created for any reason (for example, Cost Sheet rules or validations that exist at the SOV level), the system only voids the generated record number and does not reset the record numbering sequence to allow another BP record to pick up that generated number. This operation generates gaps in BP record number generation.

Manually Creating a BP Record from a BP Log

The following is a general procedure that can be used to create a new BP record from any BP log (Company or Project/Shell—**Company Logs** or **Logs**).

Company Logs

To create a new BP record from *Company BP log*:

1) Go to the **Company Workspace** tab and switch to **User** mode.
2) In the left Navigator, select **Company Logs**, and then select a BP to open the BP log.
3) From the toolbar, click **Create** to open the **Create New <BP NAME>** window.

   The **Create** option is not available if you do not have the permission to create a record.

   You cannot create records of other business processes in a business process log (except in the **Tasks** log and **Master Log - Business Processes** grouping node).

   Example

   You cannot create a Meeting Minutes business process record in an **Action Items** business process log.
4) When finished, click **Create**.

Project/Shell Logs

To create a new BP record from *Project/Shell BP log:*

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Logs**, and then select a BP to open the BP log.
3) From the toolbar, click **Create** to open the **Create New <BP NAME>** window.

   The **Create** option is not available if you do not have the permission to create a record.

   You can no longer create records of other business processes in a business process log (except in the **Tasks** log and **Master Log - Business Processes** grouping node).

   Example

   You cannot create a Meeting Minutes business process record in an **Action Items** business process log.
4) When finished, click **Create**.

Manually Creating a BP Record from the Master Log

If you have permission to create BP records, you can go to the master log (click **Home**, and then select **Master Log - Business Processes** in the left Navigator).

> **Note:** The name of the **Master Log - Business Processes** grouping node can be customized.

Auto-population and reverse auto-population are also supported for BP records that are created or edited in the master log.

> **Note:** The default elements and fields (log layout, view, search, and so on) that are defined in the Standard Log determine the Standard user interface elements and fields of all logs.

The following BP records actions and functions *are not supported* in the master log:

- Import template
- Export template
- Permissions

There are specific conditions for creating workflow BP records and non-workflow BP records in the master log.

Creation conditions for *workflow* BP records:

- The BP must have an Active setup in the selected Project/Shell.

  If no active setups exist for the BP, the system will notify you.
- The selected Project/Shell controls the list of enabled workflow setups.
- You must be an assignee on the Create step of the BP, within the selected Project/Shell.
- If you save a BP record (during its creation) instead of sending it, the system lists the BP record drafts folder (go to the **Home** workspace and then select **Drafts**) and not the master log.
- After you create a BP record, the system lists the BP record in both the:
  - Project/Shell BP log (go to the shell tab and switch to **User** mode; in the left Navigator, select **Logs**)
  - Master log (go to the **Home** workspace; in the left Navigator, select **Master Log - Business Processes**)

Creation conditions for *non-workflow* BP records:

- The BP must have an Active setup in the selected Project/Shell.

  If no active setups exist for the BP, the system will notify you.
- You must be on the Creator list, for the BP, in the selected Project/Shell.
- After you create a BP record, the system lists the BP record in both the:
  - Project/Shell BP log (go to the shell tab and switch to **User** mode; in the left Navigator, select **Logs**)

- Master log (go to the **Home** workspace; in the left Navigator, select **Master Log - Business Processes**)

To create a BP record from the master log:

1) Go to **Home** workspace.
2) In the left Navigator, expand the **Master Log - Business Processes** grouping node.
3) Select a BP and open the BP log.
4) Click the **Create** icon to open the **New Record** window.
5) Select a value for the **Business Process Origin** field.

   The **Details** icon ( ), next to the **Select Business Process Origin** field drop-down list in the **New Record** window, lets you see a list of available options. The list on the left pane is displayed according to your permissions. After you select an entry from the list and click **Select**, your selected option becomes the value of the **Select Business Process Origin** field of the **New Record** window.

   The **Select Business Process** field displays the BP that you have selected to create a record for.

   The **New Record** window, for a BP, has a **Select Workflow** field which displays value if:

   - The BP is a non-Workflow BP.
   - There is only one Workflow schema available that you can choose.
6) When finished, click **Create**.

Single Record Business Process in Master Log

A single record BP is available at the shell level, and it lets you define additional shell attributes.

You can access the single record BPs, and their subsets, in the **Business Processes** functional node of the master BP log (**Master Log - Business Processes** grouping node), if you have permission. In the master log, you can access single record BPs and perform the following actions:

- View and edit the BP record information.
- Perform bulk edit on the BP record, across all shells.
- Define filtered views.

The **Business Processes** log (under the master BP log) displays the following information in columns:

- **Project Number**
  Displays the shell number.
- **Project Name**
  Displays the shell name.
- **Project Status**
  Displays the shell status.
- **Title**
  Displays the `uuu_title` value from the record.
- **Creator**

Displays the name of the creator of the record.

- **Record Status**

  Displays the single BP record status.

- **Last Updated Date**

  Displays the date that the single BP record was last modified.

Similar to other BPs in the master log, when you have permissions, you can perform the following actions (under the **Actions** option):

- **Bulk Edit**
- **View**

Users or Groups with **View** permission can:

- View the single record business process, per project/shell, within the log.
- Update the record if they have the **Bulk Edit** permission.

All the Data Elements (DEs) that can be bulk updated are based on the integration settings.

When you bulk edit the single record business process records in the master log, you can update the common attributes across all projects/shells.

Additional Information about Single Record BPs, in Master Log

The following provides various scenarios related to the permissions granted to a user.

View permission for single record BPs, in master log will enable the user to view:

- Information about all the records across all shells. Viewing all the single record BPs in the shell hierarchy, is based on the highest level of the hierarchy.
- All the single record BPs across multiple shells, with **Active** and **On-hold** status. This will prevent the need to navigate to the individual shells for updating the single record BPs details.

Bulk Edit permission for single record BPs, in master log will enable the user to bulk update:

The default values of the single record BPs, for the selected shell instances, from the master log.

You can navigate to updated single record BPs, in the master log, and verify that the default or existing values have been updated.

To attain a hard copy, or electronic copy, of the single record BPs in the master log, you can generate HTML, PDF, or custom format of the records by using the **Print** option.

For the single record BPs in the master log, you can view the following source information about the record information under the following columns:

- Shell Number
- Shell Name
- Shell Status
- Creator
- Record Status
- Last Updated Date

The system will maintain the shell-level BP permissions, when displaying the single record BPs in master log. This ensures that you only edit the records that you are a member of its creators or record editors, per the pertinent list at the shell level.

You can:

- Define a custom view for the master log which includes filtering option by columns. This lets you view all the single record BPs according to your customized filtering and grouping.
- Use the **Find on Page** option in the master log, and filter the existing single record BPs.
- Use the **Search** option, based on the master log columns and filter the single record BPs that I want to see.
- Select multiple single record BPs, in the master log, click **Bulk Edit** (**Actions** options), and see all the DEs that have been defined in the **Integration** tab with direction set as **Both**.
- Edit multiple DEs in the **Bulk Edit** window and click **Update**. This causes all the selected DE values to be updated, across all shells.

Manually Creating a BP Record from the Tasks Log

1) Go to the **Home** workspace and click the **Tasks** node.
2) From the **Tasks** log click the **Create** icon to open the **New Record** window. When you create a BP record:
   - The **Create** option is not available if you do not have the permission to create a record.
   - You can only create records of other BPs in the **Tasks** log and **Master Log - Business Processes** grouping node.
   - In a BP log (BPs within the **Master Log - Business Processes** grouping node or within the **Logs** node), you can only create records of that particular BP. For example, when you go to the **Master Log - Business Processes** grouping node to create a *Budget Change* BP record for your **Cost Management**, when you click **Create**, the system does not let you select any other type of BP record other than a *Budget Change* BP record.
   - You generate tasks for assignees on the next step, and the tasks appear in the assignees' logs.
   - The newly created BP record (including the status) appears in the BP log, as the BP record moves through the workflow.
3) Select a value in the **Select Business Process Origin** drop-down field.

   The **Details** icon ( ), next to the **Select Business Process Origin** field drop-down field, in the **New Record** window, lets you see a list of available options.

   The list on the left pane is displayed according to your permissions.

   Select the option from the left pane, select an entry from the list (on the right pane), and click **Select**. The list of business process names includes those business processes that you have the "Create" permission for.

   Your selected option becomes the value of the **Select Business Process Origin** field of the **New Record** window.

   If applicable and if you have the "Create" permission, select a workflow from the **Workflow** drop-down field.
4) In the **Select Business Process** field, click the drop-down list and select a BP that you want to create a record for.

The **New Record** window, for a BP, has a **Workflow** drop-down field which displays a value *if the BP is a non-Workflow BP*.

> **Note**: There is only one workflow schema available that you can choose.

5) When finished, click **Create**. The BP record is now created in the appropriate log.

Creating a BP Record by Copying an Existing BP Record

You can copy an existing business process record to create another business process record of the same type.

The original data in all data entry fields, including line items (if applicable), will be copied. For most business processes, you will have the option to copy attachments to the new form. Other attached information, such as general comments, linked records, and linked Mailbox, will not be copied.

The copied record will reflect the data found in the original record. Auto-populated fields will not be refreshed or recalculated.

For non-workflow BPs, copying a record results in creation of a record and not creation of a draft.

In addition, you can restrict the line items to be copied and specify other copy options by using the **Copy with Conditions** copy option. The **Copy with Conditions** lets you:

- Copy specific (rather than all) line items
- Include or exclude attachments
- Retain or remove references to records auto-created from an upper form
- Retain or remove references to records auto-created from line items (from all tabs)
- Include linked records

The above options are not available for Payment Applications.

Business processes that have been auto-created and are currently in the Initiation step (prior to the Create step in the workflow) cannot be copied. You cannot copy these business processes until the record has been sent or is in a "finish edit" status.

To create a business process (BP) record by copying another BP record in the *Company BP log*:

1) Go to the **Company Workspace** tab and switch to **User** mode.
2) In the left Navigator, select **Company Logs**, and then select a BP type to open the BP log.

3) Click the gear menu (⚙) next to the record that you want to copy and select one of the following options:
   - Copy with Attachments
   - Copy without Attachments
4) Follow the prompts to complete copying your record for use.

To create a BP record by copying another BP record in the *Project/Shell BP log:*

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Logs**, and then select a BP type to open the BP log.
3) Click the gear menu (⚙) next to the record that you want to copy and select one of the following options:
   - Copy with Attachments
   - Copy without Attachments
4) Follow the prompts to complete copying your record for use.

Notes:

- You cannot create a new BP record by copying another BP record in the **Tasks** log.
- You cannot copy attachments for document BPs. Line items of records are treated as attachments, so details of line items and forms are not copied to document-type BPs.

Reset on Copy of Record

- A reset only works on Workflow BP records.
- If the Action form associated with the "Creation Step" of record has data elements that have "Reset" property, then after copy the system resets the values of these fields.
- If the reset is done on an element that has a data set of value/label pairs, and if there is a default value specified, then the default value is displayed.
- For fields with Data Picker as auto-population source, if the value of the Data Picker (as auto-population source) has been reset, then the system resets the value of the field. This means that the auto-population of the form fields from a Data Picker will change if the Data Picker value is reset.
- After a reset is done, any formula that depended on the Reset field will be re-evaluated.
- If a default value has been specified for a Data Element with Reset property, this default value will be seen in the Upper Forms after the Reset operation has been performed. This only applies to Upper Forms. Reset does not work for Line items because the system treats a reset operation as though the user has edited the record and saved it as a draft.

Creating Business Process Records Across Projects/Shells From the Master Log

As a company-level user or partner user, you can create and upload a batch of business process (BP) records across projects/shells from a Microsoft Excel spreadsheet (.xlsx or .xlsm) if you have:

- Access to the Master Log
- **Allow Bulk Creation** permission

  The **Allow Bulk Creation** permission, although visible for all BPs, is supported for only:

  - Simple BPs such as Action items, Project Note, and Field Observations
  - Generic Line Item BPs such as Daily Reports, Warranty
  - Generic Cost BPs (Line item with CBS Code, Line item with Fund Code, Line item with CBS and Fund Code, and Line item with CBS and WBS Code)
  - Transfer Cost BPs (Line item with CBS Code, Line item with Fund Code, Line item with CBS and Fund Code, and Line item with CBS and WBS Code)
  - Base Commit (Line item with CBS Code - Create SOV of General Spends and Payment Applications)
  - Change Commit BPs (Line item with CBS Code - Update SOV of General Spends and Payment Applications)

Notes:

- It is recommended that you use this process to create several records in bulk across projects/shells. It is a scheduled high-priority background job and the job can be processed based on other background jobs in the queue.
- Do not use this process to update *existing* BP records.

Behavior of the Due Date (due_date) Field

In the **Workflow Settings** field in the **Workflow Setup** of a BP, if the **Override Workflow Due Date** field is set as **Yes**, you *can* edit the due date in the creation step. If the **Override Workflow Due Date** field is set as **No**, you *cannot* edit the due date in the creation step. Also, you cannot edit the Due Date if the work has started or the work has moved to the next step (is in-flight) in the workflow process.

When you create workflow BP records through file imports (CSV or Microsoft Excel), the system currently sets the Due Date automatically based on the **Workflow Settings**; the Due Date provided in the input file is ignored. Also, when you update workflow BP records through file imports (CSV or Microsoft Excel), the system uses the Due Date that was based on the **Workflow Settings** and ignores the Due Date provided in the input file.

Procedure

To create business process (BP) records in bulk across projects/shells in the Excel spreadsheet:

1) Create the business process records in the Excel file.

   For more information, see ***Creating the Excel File for Bulk Creating BP Records*** (on page 83).
2) Import the Excel file into Unifier.

For more information, see ***Importing the Excel File for Bulk Creating BP Records*** (on page 84).

3) View the import history details of the bulk creation process.

   For more information, see ***Viewing Bulk Create Import History Details*** (on page 86).

4) View error details of business process records, if any, associated with the bulk update process.

   For more information, see ***Viewing Error Details of the Bulk Create Import Process*** (on page 87).

5) Resolve the errors and re-import the business process records.

   For more information, see ***Reusing the Error File Spreadsheet For Bulk Create Import Process*** (on page 88).

Creating the Excel File for Bulk Creating BP Records

When you use Bulk Create or Bulk Update, you start by exporting the BP design structure to a Microsoft Excel or CSV file and then populating the required fields. If you leave a Data Picker Data Element (DE) field blank that is configured to Auto Populate, the system completes the field when you run a Bulk Create; however, it does not complete the field when you run a Bulk Update. To reduce confusion and maintain consistency for both Bulk Create and Bulk Update, the system uses the Excel or CSV file to populate the Data Picker field if the field is excluded from the Integration Form for the BP design.

You must have **Allow Bulk Creation** permission to complete this task.

To bulk create business process records across projects/shells in the Excel spreadsheet:

1) Click the **Home** (⌂) tab.
2) In the left Navigator, select the **Master Log - Business Processes** node and select a specific business process.
3) Open the **Business Process** log in the right pane. For example, open the **Action Item** BP log.
4) Download a Shell Details Excel file to identify the projects/shells that will contain the new BP records you plan to create:
   a. From the **Actions** menu of the business process log in the right pane, select **Download** and then select **Shell Details.**
   b. Download and open the ShellDetails.xlsx file.

      For more details on the file contents, see ***Microsoft Excel File Format of Shell Details File*** (on page 131).

      Note: The ShellDetails.xlsx file contains a list of all active projects/shells you can use to create BPs across projects/shells.

5) Download the template for creating BP records:
   a. From the **Actions** menu in the right pane, select **Download** and then select **Template for Record Creation**.
   b. Locate the downloaded file.
6) Open the downloaded <Selected *BP Log Name*>_bulkcreate.xlsx file. For example, open the ActionItem_Bulkcreate.xlsx file.

For more details on the downloaded file format, see ***Microsoft Excel File Format for Bulk Creating BP Records in the Master Log*** (on page 129).

7) Add BP records in the Excel file as follows:
   a. In the **Main Form** tab of the Excel file, enter the details of each BP record.

      Note: The combination of the **Shell Number** and **Record Sequence Number** must be unique for each BP record.

   b. (Optional) To add line items to a BP record:
      1. Select the **Line Item** tab or any additional tab that may display based on the BP design in the Excel file.
      2. Copy the **Shell Number** and **Record Sequence Number** values from the **Main Form Tab**.

         To add multiple line items to the same BP record, use the same combination of **Shell Number** and **Record Sequence Number**, but with sequential values in the **Line No.** field.
      3. In the **Line No.** field, enter a sequence number for each line item.
      4. Enter details for each line item.
   c. Repeat the previous step as needed to add multiple line items to the same BP record.
8) Repeat previous step to add BP records in multiple projects/shells.

   Note:

   - Use the unique combination of the **Shell Number** and **Record Sequence Number** specified in the **Main Form** tab in all subsequent tabs.
   - If you rename any tabs with line items, the data in those tabs will not be processed.

9) Save the Excel file (.xlsx or .xlsm).
10) Import the data created in the Excel spreadsheet into Unifier.

    For more details, see ***Importing the Excel File for Bulk Creating BP Records*** (on page 84).

Importing the Excel File for Bulk Creating BP Records

Each Excel file (.xlsx or .xlsm) for import must not exceed 100,000 rows of record and line-item data, including the header and blank rows. It is recommended to use Excel import to create thousands of records in bulk across projects.It is a scheduled high priority background job and the job can be processed based on other background jobs in queue. Ensure you do not use this import process to update existing records. A maximum of 100,000 rows (including headers and blank rows) can be included in the imported file.

After ***Creating the Excel File for Bulk Creating BP Records*** (on page 83) across projects/shells, import the Excel file to add the new BP records in Unifier as follows:

1) Click the **Home** (⌂) tab and switch to **User** mode.
2) In the left Navigator:

a. Click the **Master Log - Business Processes** grouping node.
b. Select the specific business process where the BP records are to be imported. For example, select the **Warranty** business process.

3) In the right pane:
   a. From the **Actions** menu, click **Import**.
   b. In the **Import Records** drawer, drag and drop the saved Excel file, and click **Import**.

   A message displays indicating the import has been initiated.

> **Note**:
>
> - To avoid data format validation issues, the logged-in user's preferences are used instead of the auto-creation user's preferences.
> - Business process (BP) records will be created using the Creation Form of the workflow selected in the **BP Setup** of each project/shell instead of the Integration Form.
> - Required fields in the downloaded template file are determined by the Integration Validation Form.

4) To review status of the imported data, perform any of the following actions:
   - Click the **View Import History** link in the displayed message
   - Click the **View Import History** from the **Actions** menu
   - Click the link in the email notification you receive

   If the import process is *Completed Successfully*, you will receive a success message.

   If the import process is *Completed with Errors*, check the attached error file that contains a list of erroneous records.

   If the import is unsuccessful, review the ***import history details*** (see "***Viewing Bulk Create Import History Details***" on page 86).

File Validations

When the import is initiated, the file is checked for the following:

- If the Excel file has the same column structure as defined in the Integration tab in Main Form or Line Item worksheets
- If the **Shell Number** and **Record Sequence No.** columns have been removed, renamed, reordered, or duplicated in the **Main Form** tab
- If the **Shell Number**, **Record Sequence No.**, and **Line No.** columns have been removed, renamed, reordered, or duplicated in the **Line Item** tabs
- Duplicate rows in the **Main Form** tab with the same **Shell Number** and **Record Sequence No.**
- If the **Record Sequence No.** is a non-integer or a random string

Data Validations

When the import is initiated, the data is checked for the following:

- If the Business Process, Integration settings, or default workflow are not set up in the specified project/shell

- If the **Shell Number** is not valid in the **Main Form** tab.
- If the project/shell numbers specified in the **Line Item** tabs do not exist in the **Main Form** tab
- If the project/shell numbers are not valid in the **Line Item** tabs
- If project/shell numbers with **Inactive**, **View-only**, or **On-hold** statuses are specified
- If required fields have been specified
- If invalid values have been specified for data elements
- If form validation rules are satisfied
- If dynamic data set behavior data elements are updated via import data and behavior element is read-only based on master value

Viewing Bulk Create Import History Details

If you have the **Allow Bulk Creation** permission, you can view the import data history details for the files containing BP records across projects/shells that you imported into the Master Log.

To view the import details history:

1) Click the **Home** (⌂) tab and switch to **User** mode.
2) In the left Navigator:
   a. Click the **Master Log - Business Processes** grouping node.
   b. Select the specific business process where the BP records are to be imported. For example, select the **Warranty** business process.
3) In the right pane:
   a. From the **Actions** menu, click **Import History Details**.
   b. Review the following information in the import history:
      - **Uploaded File**: Click to download the Excel file that was uploaded originally.
      - **End Date**: The end date and time of the import process.
      - **Start Date**: The start date and time of the import process.
      - **Records Processed:** The total number of BP records in the **Main Form** worksheet.
      - **Records Imported**: Click to download an Excel file displaying the project/shell name, shell number, record number, and the title of the records that were created successfully. The file name is generated in the format, *Imported_<Uploaded File Name>.xlsx*.
      - **Failed Records**: Click to download an Excel file to review the list of failed records .The file name is generated in the format, *Failed<Uploaded File Name>.xlsx*.
      - **Status**: Displays the job status of each imported file as any of the following:
        - **Not Started**: Indicates the import is yet to commence.
        - **In Progress**: Indicates the import job is in process.
        - **Completed Successfully:** Indicates all records and line item data have been successfully created.
        - **Completed with Errors**: Indicates records were partially created or failed to create at least one record.
        - **Aborted**: Indicates the job could not progress due to system issues or server failures.

- **Failed**: Indicates record is not created.

- **Requested By**: The username of the logged-in user who initiated the bulk create import job.

Viewing Error Details of the Bulk Create Import Process

If you have **Allow Bulk Creation** permission, you can view the import history details for the files you imported to create BP records across projects/shells from the Master Log node.

The **Import History Details** window displays a log of all the files imported and their outcomes for a business process.

If the import process is successful, the **Job Status** indicates *Completed Successfully*.

If the import process is *Completed with Errors*, you can either download the input file or the error file to correct the data and re-import.

If the import process is *Aborted*, you can continue importing the remaining data.

To view the outcome of the import process:

1) Click the **Home** ( ) tab and switch to **User** mode.
2) In the left Navigator:
   a. Click the **Master Log - Business Processes** grouping node.
   b. Click the BP node where you want to import the BP records. For example, select **Master Log - Business Processes**, and select **Warranty**.
3) In the right pane:
   a. From the toolbar, click **Actions**, and select click **Import History Details**.
   b. If the import process is *Completed with Errors*, select that row to perform any of the following actions:
      - Download the *input file* using any of the following options:
        - Click the **gear menu** ( ) of the row and select **Download Input File**.
        - From the toolbar, click**Download** ( ), and select **Input File**.

      Correct the data in the input file and re-import as outlined in ***Updating BP Records in Excel for Bulk Update From Business Process Log Node*** (on page 239).
      - Download the *error file* using any of the following options:
        - Click the **gear menu** ( ) of the row and select **Download Error File**.
        - From the toolbar, click**Download** ( ), and select **Error File**.

      Correct the data in the error file to re-import as outlined in ***Reusing the Error File For Bulk Update Import Process*** (on page 257).
      - Click**View Error Details** ( )to review a list of erroneous records in the **Import Error Details of <filename>** window.
   c. You can also perform any of the following actions:
      - Click **Refresh** ( ) to refresh the **Import History Details** window.
      - Click **Search** ( ) to open the **Search** window.

Reusing the Error File Spreadsheet For Bulk Create Import Process

If the bulk create import process is *Completed with Errors*, an error file (.xls or .xlsm) is generated with a list of erroneous records identified by the import process. You can resolve these errors and reuse the error file to re-import the records.

> **Note:** You should have **Allow Bulk Creation** permission to import or re-import BP records using a Microsoft Excel spreadsheet (.xlsx or .xlsm) from the **Master Log** grouping node.

The generated error file adheres to Error File Spreadsheet Format of Bulk Create Import Process by default.

To reuse the error file for re-import:

1) In the **Main Form** tab, resolve the errors identified for each BP record.
2) In the relevant **Line Item** tabs, if any, resolve errors corresponding to the BP record identified in the previous step.
3) In the **Action** column, select **Update** for each record. Otherwise, by default, the line item will not be updated when set to a *Blank* value.
4) After resolving all errors, delete **Column A** to clear all errors identified in the **Main Form** tab and relevant **Line Item** tabs.
5) Save the modified error file to prepare for import.
6) Import the error file as described in ***Importing the Excel File for Bulk Creating BP Records*** (on page 84).

Copying a BP Record in Master Log

To create a BP record by copying another BP record in *master log* (**Master Log - Business Processes** grouping node):

> **Notes:**
>
> - The name of the **Master Log - Business Processes** grouping node can be customized.
> - You cannot copy attachments for document BPs. Line items of records are treated as attachments, so details of line items and forms are not copied to document-type BPs.

1) Go to the **Home** workspace.
2) In the left Navigator, expand the **Master Log - Business Processes** grouping node.
3) Select a BP and open the BP log.
4) Click the *gear menu* (⚙) next to the record that you want to copy and select one of the following options:
   - Copy with Attachments
   - Copy without Attachments
   - Copy with Conditions
5) Follow the prompts to complete copying your record for use.

Note: You cannot create a BP record by copying another BP record in **Tasks** log (go to the **Home** workspace and select **Tasks** in the left Navigator).

See ***Restricting Line Items by Using Copy with Conditions Option*** (on page 149) for more details.

Visibility of Properties Tabs in BPs

In a company, a shell, or a project (**Master Log**, **Company Logs**, **Single-Record BP Log**, **Portal BP Log**, and **Logs** nodes), when you open a business process and select a record, the window displays the properties pane with a series of applicable tabs (record properties) such as **Record Details** tab, **Notifications** tab, **Record Properties** tab, **Attachments** tab, **Permissions** tab, and so on.

The Record Properties tab lets the administrator define restrictions within the BP setup on who can view specific tabs. This rule also applies to the following nodes:

- **Drafts**
- **Tasks**

For the **Attachments** tab, if you have restrictions to download, you will only be able to view or access the attachment; you cannot download or save the attachment to a local system.

Auto-Creating BP Records

There are different ways of auto-creation:

1) Spawning a record at a particular point in a workflow (S-Step)
2) Auto-creating a record or line item when it reaches a particular condition or frequency (I-Step)
3) Using a template that is scheduled to auto-create records

For auto-creating BP records in S-Step or I-Step, you must reset on creation step.

Notes:

- For auto-created records, the system will populate the due date time for the auto-created record from the source record instead of copied record, if the following conditions apply: the due date element in the record is a formula (including today), and the source record is copied from another record, and if there is a time gap between the source and the copied record.
- Line items will not be copied if either the source tab name or destination tab name that displays in the Auto-creation Processes - Upper or Detail setup is incorrect. If you update a source or destination tab name of a BP from the **Item Logs** navigation menu, ensure that you verify the tab name mapping for autocreation.
- When the system auto-creates a project-level Cost- or Commit-type

business process (BP) that contains an upper (main) form reference to a company-level commit-type BP record (such as a Blanket Purchase Order [BPO]), the value is copied to the destination record if a matching DE exists. However, if a BPO Lineitem Picker value existed in the detail form of the source record, that value is not copied over to the line items of the auto-created record.

- Because a Summary Payment Application (SPA) BP contains two sub-tabs—Line Item and Cost Breakdown—on the Detail Form, the system does not support I-Step or S-Step auto-creation of line items from a non-SPA BP to an SPA BP.
- If the Completion Policy for a step is set to **All-Consensus** and **Auto Creation** is enabled, automatic creation of the applicable items begins after all assignees have agreed on the action.

Reset on Creation Step

The following rules apply:

- If the Action form associated with the Creation Step has Data Elements (DEs) that have Reset property, the post auto-creation the values of these fields will be reset.
- Regardless of whether the auto-created record is in I-Step or not, the values must get reset.
- Fields with auto-population source, "Data Picker" whose value has been set as reset must get reset.
- After a reset is done, any formula that depended on the Reset field will be re-evaluated.
- Reset will work for Workflow BPs only (This is an existing limitation).
- If a default value in the reset field has been specified for a DE that has reset property, this default value will be seen in the Upper Forms after the Reset operation has been performed post auto creation. This will be applicable to Upper Forms only.

Note: Reset will not work for line items because the system will treat a reset operation as though the user has edited the record and saved it as a draft.

Auto-Create a BP Record from a Workflow Step (S-Step)

You can use design a business process form that automatically creates a new BP record, after reaching a designated status in a workflow (for example, approved).

The user who owns the original record becomes the owner of the auto-created record. After being created, the new record is sent automatically to the next step in the workflow if it is a workflow business process. Non-workflow business process records will reside in the log.

Note: Business processes are not auto-created in projects/shells that

have the **View-Only** or **Inactive** status.

The original record can be set up to automatically populate upper form (header) information on the new record, provided the data elements of the upper form fields are the same on both records. That is, for example, if a **Description** field using the same data element appears on both records, the text in the original record can be entered automatically into the new record.

Auto-Create a BP Record, or Line Item, Based on Conditions or Frequency

You can design a form that automatically creates a new record, line item, or planning item if certain criteria are met. The criteria can be:

- A **condition**, such as a dollar amount.
- A **frequency**, such as a daily or weekly time frame.
  - Only for a record
  - Line items cannot be created with a frequency trigger.
- Both a **condition** and a **frequency.**

When the business process, planning item, or line item reaches the condition or frequency trigger(s), the form will automatically create a new record and send it to an **Initiation step (I Step)**. These forms contain a **Creator** field to activate the auto-creation, either automatically, or manually. If you have **Modify Ownership** permission on the source record, you can auto-create new records or line items. You can also override conditional auto-creation and immediately invoke the auto-creation manually if necessary.

Note: If the line items have been grouped (as part of the administrator's business process setup), you can manually invoke the auto-creation; however, only those line items in a status of "pending creation" will be grouped.

Bypassing the I Step

During business process setup, the administrator can set up the auto-created workflow business process to skip the initiation step and send the record directly into the workflow, where it normally arrives at the first step after the Create step (or the first step in a conditional routing). For a workflow business process, the administrator specifies the schema, the step in the workflow that the record should use as its first step, the workflow duration, and the name of the person or group who will be the owner of the auto-created record. When the record is created, data will roll up to manager sheets at the appropriate status; however, if the system encounters errors or invalid data, the record will remain at the Create step, and roll-ups will not occur until the user resolves the errors.

For a non-workflow business process, the administrator can set up an auto-created record to skip the initiation step. In this case, the system creates the non-workflow business process record and lists it in users' logs in either:

- Edit mode. When the record is in edit mode, you can see the **Submit** button.
- Read-only mode. When the record is in read-only mode, you can see the **Edit** button.

If it appears in edit mode, the user will have to open the record and add or correct information on the form. If it appears in read-only mode, the record is considered complete, and data will roll up to manager sheets.

> **Note:** Business processes are not auto-created in projects/shells that have the **View-Only** or **Inactive** status.

Your administrator sets up the auto-creation by specifying:

- The name of the person or group who will be the owner of the auto-created record.
- (For workflow business processes) The workflow schema to use.
- (For workflow BPs) Which step in the workflow the record should use as its first step
- (For workflow BPs) The workflow duration
- The criteria that will trigger the auto-creation
- Whether attachments to the record or line item will be included when the record is auto-created
- Whether records that were linked to the creating record should also be linked to the newly created record, or to the new line item
- Whether the I Step should be bypassed when a new record is auto-created
- Whether the line items from line item tabs should be grouped

Delete Error Lines

The **Delete Error Lines** option appears in the **Errors and Warnings** window when you finish editing (or send) a BP when the BP line items are failing validation errors (such as required field check, and so on). The Delete Error Lines option lets you delete the faulty BP line items and route the BP record to the next step, if the BP line items are not needed.

> **Note:** After you delete the faulty BP line items, the system removes them permanently without providing an option to access them.

If line item auto-creation fails

If the line-item creation is auto-created with a condition-based query (that is, not manually), the system will send an email notification to the business process owner. The email will contain location information so that the recipient can see where the auto-creation originated and where it failed. Following are conditions under which line item creation can fail:

- The To field is empty. This is possible if the assignee becomes inactive after the schedule is created or if a group is empty.
- The CBS code is invalid, which can happen if the CBS code becomes inactive after selecting in the template.
- The rules engine validation fails.
- For payment applications, the associated SOV is locked, either by the payment application record in routing, or by a change commit with a negative line item value. See ***Payment Application Business Processes*** (on page 273) for details.

> **Note:** If the destination business process does not exist or has not been imported into the system, the location specified in the email notification might be non-existent or incorrect.

Bypassing the Initiation Step (I-Step)

During the Business Process (BP) setup, the administrator can set up the auto-created workflow BP to skip the **Initiation** step and send the record directly into the workflow, where it normally arrives at the first step after the **Create** step (or the first step in a conditional routing).

Workflow BP

For a workflow BP, the administrator specifies the workflow schema to use, the step in the workflow that the record should use as its first step, the workflow duration, and the name of the person or group who will be the owner of the auto-created record. When the record is created, data will roll up to any applicable manager sheets (for example, the cost sheet) at the appropriate status; however, if the system encounters errors or invalid data, the record will remain at the Create step, and roll-ups will not occur until the user resolves the errors.

Non-workflow BP

For a non-workflow BP, the administrator can set up an auto-created record to skip the initiation step. In this case, the non-workflow BP will be created and will appear in the users' BP logs in either an "edit" or "finish edit" mode. If it appears in an "edit" mode, the user will have to open the record and add or correct information on the form. If it appears in a "finish edit" mode, the record is considered complete, and data will roll up to any applicable manager sheets.

Additional information about bypassing the I-Step

In the following scenarios, If the auto-creation of a change commit BP is set to "Bypass I-Step," the auto-created record will remain in I-Step and the element "refid" will remain blank:

- If the source BP form has no BP Data Picker, or BP Picker, pointing to the Change Commit "refid" Base Commit BP.
- If the source BP form has more than one BP Data Picker, or BP Picker, that satisfy the conditions needed to populate "refid" (map to the Change Commit "refid" Base Commit BP).
- If the conditions on "refid" picker are not satisfied by the value from the source BP, for example, the "refid" picker only allows an "Approved" Base Commit, but the source BP sends a "Pending" record.
- If the value from the source BP that is mapped to the "refid" element is set as: <null>.
- When copying the Line Items form a source to the destination record:
  - The source Detail form does not contain the element: `uuu_sovlinum`
  - The destination Change Commit Detail tab contains the element: `uuu_sovlinum`

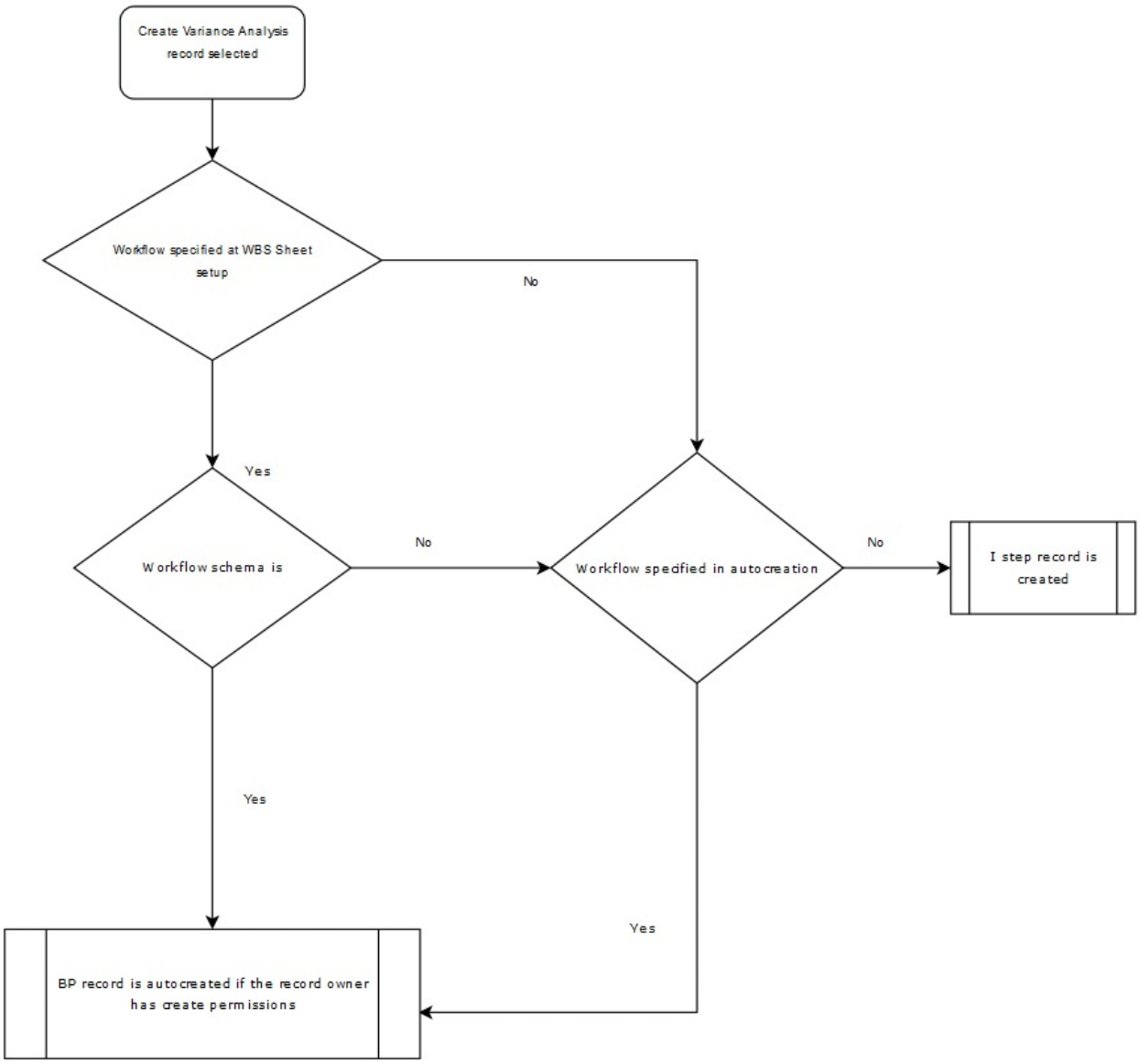
> **Note**: In this scenario, the Line Items will be copied from the source to destination, and the `uuu_sovlinum` field will be set as blank. All other fields will be mapped from source to destination Detail form.

In the above scenarios, because the "refid" is blank, no Line Items will get copied into the "Standard" tab of the auto-created Change Commit record.

> **Note**: If any other tab in the "Change Commit" is configured to copy Line Items from the source, those Line Items will be copied.

You will be able to auto-create a "Change Commit" type BP from any type of BP Upper or Detail form.

For Workflow BP, when By Pass I-step selected, the following process takes place:



Examples of Auto-Creation

You can use the auto-creation feature to manage events such as the following:

- **Line Items of Lease Business Process generating Payment Request BP records**: A lease business process with a pregenerated payment schedule can use this feature to generate Payment Request records at appropriate days in advance of the payment due date so that the record can be routed for approvals.
- **Preventive Maintenance BP line items generating Work Order BP records**: A Preventive Maintenance type business process (Preventive Maintenance Book - PM Book) can be set up to create Work Orders for assets at periodic intervals depending on the service needs of the asset.

  In the Preventive Maintenance Book (PM Book), for:
  - Floating Line Items holding non-terminal work orders, you cannot edit the following DEs:
    - Family Identifier
    - Line Item Status
    - Schedule Type
  - Fixed Line Items holding non-terminal work orders, you can edit the following DE:
    - Line Item Status
- **Create Action Items from Meeting Minutes**: Auto-creation feature can be used to create and assign tasks to different people creating a fully automated flow for routing of action items from meeting minutes records that have lines items. For example, each line item Action Item could auto-create a separate Action Item records from the meeting minutes record.
- **Create a planning item from a business process**: You can create a planning item from a business process when the business process, with its details (such as expense estimates, owners, and so on) has been approved.
- **Add a new line item to an existing record**: You can add a line item to an existing business process. For example, a submittal registry record could contain line items that auto-create separate submittal business process forms for each contractor on a project. In the course of work, you might realize that the original submittal registry record is missing a submittal for an architectural drawing. You could submit a new submittal business process form that would add the missing architectural drawing submittal to the original registry record.

For Line Item Creation

- You cannot create a line item on a record that is at a terminal or terminated status.
- If you create a line item on a non-workflow cost type business process, the cost amount(s) will roll up to the Cost Sheet.
- If you create a line item on a workflow cost type business process, the cost amount(s) will not roll up to the Cost Sheet.

Exceptions for Auto-Creation

You cannot auto-create Payment Application business processes and General Spends business processes because these business processes use the Schedule of Values (SOV), from a Cost type business process.

You cannot auto-create a business process by using a Lease business process because the line items of the Lease business process contain several system-defined data elements that cannot be automatically included in other types of business processes.

Rules for Checking Conditions for Auto-Creation

There are rules that govern when the Unifier scheduler checks the conditions for auto-creation, and then if these conditions are met, it auto-creates the BP.

Rule 1

The Company Administrator selected the Enable Auto creation check box for BP Creator when the auto-creation was set up.

If the Enable Auto creation check box is selected, it implies system based auto-creation, and the BP Creator Select button is not displayed in User mode.

For non-workflow BPs: The condition check occurs on **Submit**. If condition met, creates record and shows the link for the auto-created BP. If no condition is specified auto-creates records and shows the link for the auto-created BP.

For workflow BPs: The condition check occurs on **Send**. If end step reached and Action Form is used on End Step, the condition check occurs on **Save** instead of **Send**. If condition met, creates record and shows the link for the auto-created BP. If no condition specified blindly creates records and shows the link for the auto-created BP.

If the Enable Auto creation check box is not selected, it implies manual creation.

For non-workflow BPs: The condition check does not occur on **Submit**.

For workflow BPs: The condition check does not occur on **Send**.

BP Creator - Select button shown in User mode so that the user can create the business process manually. If clicked, creates BP record without checking any condition, and creates record and shows the link.

Rule 2

Date Trigger Condition check: Are checks on the specified Date Data Element. For workflow or non-workflow BPs, this setup implies that the condition checks are done on a date instead of Finish Edit/Send, if a link does not exist next to BP creator element. If a link exists, it will not create any new records for that BP Creator element in the chosen line item of the record.

Rule 3

Trigger Condition check based on frequency (Periodic): Are checks on frequency for BP Creator elements with Enable Auto creator checked. If specified, these are the only time condition checks are done. This overrides any other checks for date. This is the only method to create multiple records even if a link exists and a record has already been created for this BP Creator element. The link created using this will always point to last auto-created record.

Auto-Creation in Operation

Upon auto-creation, the following are *not* copied to the auto-created Business Process (BP) from the source BP:

- Line item status
- Creator fields
- Hidden tab data

When a line item is auto-created (by using the line item auto-creation logic), the values in the fields on the line item that are based on a data picker in that line item will not be auto-populated.

These elements are copied from the source BP to the auto-created BP on certain conditions:

- Configurable Manager codes and CBS codes are copied from the source business process to the auto-created business process if the codes are available in the destination shell.
- User/Group Picker values are copied only if they are available in the destination shell.
- **Transaction currency** field is copied if that currency is available in the destination shell.

Change Commit

If you configure a BP Creator field to auto-create a "Change Commit," during the runtime the field will behave the same way as any other BP Creator field. Also:

- A "Change Commit" type BP always holds a required BP Picker element (refid) on the BP Upper form. In uDesigner, this BP Picker is configured to point to Base Commit BP.
- During the auto-creation of a "Change Commit," the required BP Picker element (refid) on the BP Upper form gets populated with the value of the same BP Data Picker, or BP Picker (the source BP). This value:
  - Resides on the same form as the BP Creator, and
  - Points to the same Base Commit type BP as the BP Picker element (refid) is configured to point to in uDesigner.

Attachments

Including attachment in the **Auto Creation** tab of the BP setup enables the copying of attachments from both the upper and detail forms.

When a record is auto-created and receives Line Items from a reference record during the auto-creation, the Line Item attachments transfer from the source reference record.

If the option of including attachments in a BP setup BP creator configuration is checked, the source Line Items from a "Referenced" picker will be copied into the auto-created record with attachments. This applies to BP creators on upper as well as detail form.

If an attachment existing in the Line Items of the Source BP record needs to get copied to the upper form of the destination BP record, the project administrator can specify the levels for the transfer of attachments: Upper form to Upper Form, Line Item to Upper Form, and so forth.

Example

An operations manual (existing as an attachment) in the Line Items of the Source BP of Preventive Maintenance Book (PM Book) must be seen as an Upper form attachment on the auto created BP record of the Work Order.

> **Note**: The system will not error out for duplicate file attachments in auto-created records. Hence, the recommendation is to check for duplicate file attachments in source records regardless of the level at which they are attached when the **Copy Line Item Attachments to the Upper Form of the Record** option is selected in the auto-creation setup.

The following provides more details:

The **Business Process Setup** window enables your administrator to provide additional levels of granularity for copying attachments when auto-creations are happening from Record to Record and Line Item to Record methods of Auto creation.

Record to Record

This is the option seen in the Creation Method field "Record Auto Creation: Upper Configuration" in uDesigner (go to the Company Workspace tab and switch to Admin mode; in the left Navigator, select uDesigner, select Business Processes, and open the applicable BP; in the left Navigator, select Auto Creation Process, and then select Upper). This option is pre-populated by the system based on where the BP Creator is located. If the BP creator is located in the upper form of the BP, this option will be seen in the above-mentioned field.

Line Item to Record

This is the option seen in the Creation Method field "Record Auto Creation: Detail Configuration" in uDesigner (go to the Company Workspace tab and switch to Admin mode; in the left Navigator, select uDesigner, select Business Processes, and open the applicable BP; in the left Navigator, select Auto Creation Process, and then select Detail). This option is pre-populated by the system based on where the BP Creator is located. If the BP creator is located in the detail form of the BP, this option will be seen in the above-mentioned field.

The **Auto Creation** tab (in the **Business Process Setup** window) provides the following attachment options:

- **Include Upper Form Attachments**
- **Include Detail Form Attachments**
  - **Copy Line Item Attachments to Upper Form of the Record**
  - **Copy Line Item Attachments to Line Items of the Record**
- **Bypass Initiation Step during auto creation**
- **Copy Linked Records**

The following explains the results of the selections:

When the **Include Upper Form Attachments** option is selected, and the source is a Line Item BP, the attachments from the Upper Form of the source record are copied over to the Upper Form of the auto-created record.

- If the destination is a Line Item BP, then:
  - The line items may get created but no attachments from the line items will get copied over.

- If the destination is a Simple BP, then:
  - No attachments from the line items will get copied over to the Upper Form.

When the **Include Detail Form Attachments** option is selected, and the source is a Line Item BP, the **Copy Line Item Attachments to Upper Form of the Record** option will be selected by default.

> **Note**: The **Copy Line Item Attachments to Upper Form of the Record** option will be selected by default to inform you that because the destination is a Simple BP, checking the option of Include Detail Form Attachments will always add the line item attachments to the Upper Form of the Simple BP.

- If the destination is a Line Item BP, then:
  - The attachments from the line items of the source record are copied over to the Upper Form of the auto-created record. If the Upper Form of the source BP record has attachments, the attachments will not get copied over.
  - The line items may get created and any attachments from the source line items will get copied over as Upper Form attachments. The line items from the source may be seen in the auto-created record; however, the line items will not have any attachments.
- If the destination is a Simple BP, then:
  - The attachments from the line items of the source record are copied over to the Upper Form of the auto-created record. If the Upper Form of the source BP record has attachments, the attachments will not get copied over.

When the **Include Detail Form Attachments** option is selected, and the source is a Line Item BP, the **Copy Line Item Attachments to Upper Form of the Record** option will be selected by default. The attachments from the line items of the source record are copied over to the line items of the auto-created record. If the design of the source BP does not have any tab mapping, the line items will not get created, and the line item attachments will not get copied over.

- If the destination is a Line Item BP, then:
  - The line items created in the destination record will have attachments from the corresponding line items of the source record.
- If the destination is a Simple BP, then:
  - The option will not be available.

When the **Include Upper Form Attachments** and the **Include Detail Form Attachments** options are selected, and the source is a Line Item BP, the **Copy Line Item Attachments to Upper Form of the Record** option will be selected by default.

- For Line Item BPs and Simple BPs:
  - The Upper Form attachments from the source record and the line item attachments from the line items are copied over as an Upper Form record attachments in the destination record.

When the **Include Upper Form Attachments** and the **Include Detail Form Attachments** options are selected, and the source is a Line Item BP, the **Copy Line Item Attachments to Upper Form of the Record** option will be selected by default.

- For Line Item BPs:
  - The Upper Form attachments from the source record are copied over as an Upper Form record attachments in the destination record. The Line Item BP attachments, from the line items of the source record, will are over as line item attachments, if the design permits the creation of line items.

> **Note**: When only the **Include Detail Form Attachments** option is selected, the attachments from the Detail Form of the Line Item type BP will not copied to a Simple BP, on Auto-Creation.

When the **Include Upper Form Attachments** is selected, the source is a Simple BP, the **Copy Line Item Attachments to Upper Form of the Record** option is selected (disabled by the system), and the **Copy Line Item Attachments to Line Items of the Record** option is disabled by the system:

- If the source is a Simple BP:
  - The only option that is available is the **Include Upper Form Attachments**.
- If the source is a Simple BP and the destination is either a Simple BP or a Line Item BP:
  - The Upper Form attachments from the source record of the Simple BP is copied over as Upper Form attachments in the destination record.

Schedule BP Auto-Creation Dynamically

Auto-created business processes can be scheduled for creation from setups created by an administrator, or you can create them dynamically.

To create business process records using auto-creation:

1) Navigate to a business process log and open the source BP record to use for auto-creation.
2) Open the **Menu Options** ☰ and select **Auto-create**.
3) Select the **Enable Scheduled Runs** check box.
4) Under **Frequency**, choose how often you want the auto-creation to occur: Daily, Weekly, Monthly, or Yearly.
5) Under **Range of Recurrence**, specify the date range during which the auto-creation should occur.
6) Click **Done**.

   After the new record is auto-created, there is a link in the source record to the newly created record. Click this link to access the auto-created record. The link always accesses the last record created by the auto-creation.

After you create a **workflow** record, the system sends it to the assignees as an **initiation task (I Step)** that will appear on their **Tasks** log and the Business Process (BP) log to which the record belongs. If a new record is sent as an initiation task, users must accept the task to manually launch the record.

After you create a **non-workflow** record, the system sends it to the designated creators as an **initiation task (I Step)** that will appear on their **Tasks** log and the BP log to which the record belongs. Users must accept the task to view the record.

> **Note**: If your administrator has set up these business processes to bypass the I Step, the new records will appear at different workflow steps, or in different statuses. For more information, see ***Bypassing the Initiation Step (I-Step)*** (on page 93).

Stop Auto-Creation

To stop the creation of auto-created business process records:

1) Navigate to a business process log and select the source record or records to use for auto-creation.
2) Open the **Menu Options** ☰ and select **Auto-create**.
3) Deselect the **Enable Scheduled Auto creation** check box.
4) Click **Done**.

Create a BP Record, or Line Item, with Manual Auto-Creation

> **Note**: For line item creation, you cannot add a line item to a record in a terminal or terminated status.

To create a business process record or line item with manual auto-creation:

1) Open the record that will auto-create the record or line item.
2) Click the **Create** button next to the creator field.

   The field will display the words "Pending Creation."

   The system immediately auto-creates the destination record or line item. The new, auto-created record or line item will show a link to the source record that created it. You can click this link to view the source record.

   If you manually auto-create a line item, the system will validate the creation and tell you immediately if there are errors that caused the auto-creation to fail.

The Reset button

When you manually auto-create a record or line item, the button beside the creator field changes from Create to **Reset**. You can use this **Reset** button to break the link from this (the source) record to the new record/line item so that you can auto-create another record or line item manually. When you click the Reset button, it changes back to a **Create** button.

> **Note**: You can find the reasons for the auto-creation failures in the audit log of the business process record. In addition, the system occasionally generates error codes for auto-creation failures, which can be used to troubleshoot the auto-creation failures.

Auto-Create SPA Commits with Variable Unit Cost Lines

You can auto-create the SPA commits with both the Lump Sum and the Unit Cost line items. You can also auto-create the SPA commits with the variable unit cost line items. Similar to other cost line item types, the summary along with cost breakdown will be created if the source is a cost BP and has line items with CBS Codes. This is applicable to both the record-level and the line item auto-creation using the BP Creator and the Line item creator when the source and the destination tabs are mapped in the auto-creation design.

Source Business Process	Destination Business Process	Expected Results
The Cost-type BP of CBS type, and the Line Item-type BP (with the line items having Cost line item-type) selected as variable unit cost type.	Summary Payment Applications SOV BP (SPA commits).	In the auto-created BP record both the summary line item and the cost breakdown will be created if all the required field data is defined. In the summary line item for the variable unit cost type, both the `uuu_quantity` and the amount are populated. The cost breakdown will be created with the `uuu_quantity`, `uuu_unit_price`, and the amount. The CBS Code, from the source, will be copied in to the cost break down in the destination record. If the Cost line item-type in the source BP record is a variable unit cost, and the destination design does not have the uuu_quantity and the uuu_unit_price elements, the auto-creation cannot take place. If the BP record is auto-created across the shell and the CBS Code does not exist, only the summary line item will be created, with the quantity and the amount values. All other validations such as the Cost line item-type value and other required fields will take place during the auto-creation of the BP record, and the auto-created BP record will be in the Creation Step, if any of the required field values are missing.

Source Business Process	Destination Business Process	Expected Results
SPA commits type BP	The Cost BP of CBS type and Line item type BPs (with their line items having cost line item type selected) as variable unit cost type.	In the auto-created BP record, a line item will be created if all the required fields are available, in case of Bypass-I-Step and S-Step auto-creation. In case the required field values are missing, the BP record will remain in the Creation Step.

Creating a BP Record in Document Manager

If you have permission to access the **Document Manager** grouping node, you can create a business process directly from the **Documents** functional sub-node. You can create the BP record by selecting or not selecting the files/folders that must be attached to the record. Additionally, the system supports auto-population of Document Manager properties for Document-Type BP records with and without folder structure.

To access this node:

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Document Manager** and then select **Documents**.

Creating a record without selecting the files or folders that must be attached to the BP record

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Document Manager**, and then select **Documents**.
3) In the **Documents** log, click **Create** and select **Business Process**.
4) In the **New Record** window, select the business process type under **Select Business Process**.
5) Click **Create**.

> **Note:** The format of the business process form changes depending on the availability of the standard forms (user interface) option.

The name of the project/shell (for the Documentation Manager in which the business process is being created) appears under **Business Process Origin**.

The **Select Business Process** field lists business processes that you have permission to access.

After you select a business process:

- For a single workflow setup, the workflow name appears under **Select Workflow**.
- For multiple workflows setups, the **Select Workflow** list lets you select a workflow setup for the new BP record from a list of applicable workflow setups.

> **Note:** The list of workflow setups that appears in list depends on whether you (user) have been designated as an assignee in the creation step.

Creating a record while selecting the files or folders that must be attached to the BP record

If you select files/folders and then create the BP record following the steps outlined earlier, the system adds the files/folders as attachments for the new BP record.

- If you select one or more files, the files are included in the Attachments tab.
- If you select one or more folder folders, then:
  - For Document Manager business processes that do not support folder structure, the system displays an alert message and the documents from selected folders and sub-folders are attached without the folder structure.
  - For Document Manager business processes that support folder structure, the system displays the folder structure.

Creating a BP Record from a Template

You can manually create BP records by copying a BP template, if you have created a business process template for a BP.

Creating a BP record from a template is similar to copying an existing BP record. Any values in any of the form fields on the template (either manually entered or auto-populated) will be copied to the new record. The line items, file attachments, and attachments to line items will also be copied; however, the other attached information, such as general comments, linked records, and linked Mailbox, will not be copied to the new form.

> **Note**: The users who have been removed from a group, or the users who have been newly added to a group, will not be displayed in the Workflow page, when you create a BP record manually by way of a template.

To create a business process record from a business process template:

1) Go to the shell tab and open the business process log.
2) In the left Navigator, select a BP that you want to use.
3) In the BP log, click **Actions** (toolbar options).
4) Click **Create From Template** option (available for all Workflow type BPs, only) to open the template list (**<BP NAME> Template List**) log or page. This page displays a list of templates, if available. In this page, the right pane has the following tabs:

- **General** tab
- **Schedule** tab

Simple-type Business Processes: The system *enables* the **Refresh auto-populated and calculated fields on record creation** check box option if you use the **Create From Template** option to create a template.

5) Click **Create** (toolbar options) and enter values for the following fields, in the **General** tab:
   - **Name**
   - **Description**
   - **Workflow**
   - **Copy Link Records**

   In the **General** tab, enter a name for the BP template (in the **Name** field) and select a workflow (from the **Workflow** field drop-down).

   If the BP has only one workflow, the system selects that workflow automatically.

   If the BP has more than one workflow, a list of the workflows appears in the **Workflow** drop-down list field.

   The **Cancel** option lets you abort creating the template, cancel the changes, and reload the previous template properties.

   The **Create** option lets you save the template changes.

   For information about the **Schedule** tab, see below for more information.
6) When finished, click **Create**. The new template will be displayed in the page.
7) Select the template from the list and click **Open** (by using the *gear menu* [⚙] or by double-clicking the template). The BP form opens (**Template - <BP NAME>**). The data is populated based on the template. You can modify the data or enter additional data, where allowed. After you are finished, you can:
8) Click **Save** to save the template.
9) When the BP is ready to move to the next step, click **Complete** to send the workflow to the next.

> **Note**: You can save the record by clicking **Save**, which saves a draft of the record but does not affect the template.

You can double-click the newly created template (or an existing template) to open it for viewing.

If you have created a business process template for a BP, you can manually create BP records by copying the template. For instructions on creating BP templates and scheduling BP creation, see ***Creating BP Templates and Scheduling BP Creation*** (on page 110).

The template list (**<BP NAME> Template List**) log or page contains the following toolbar options:

- **Create**
- **Find on Page**
- **Delete**

  You can select (Ctrl+click) multiple templates and delete them at the same time.

The template list (**<BP NAME> Template List**) log or page contains the following columns:

- **Name**
- **Description**
- **Workflow**
- **Status**
- **Scheduled**
- **Creator**

If there are templates created for the BP, select a template and click **Open** (*gear menu* ⚙). The BP form opens. The data is populated based on the template. You can modify the data or enter additional data.

If there are no templates created for the BP, the "No Templates are available" message is displayed. In this case, you must create a template as described below:

- Double-click a template to open it for viewing.
- Click **Save** to save updates to a newly created template.

The options available for *gear menu* are context-sensitive, based on the status of the template. The following *gear menu* (⚙) options are available for the items in the template list (**<BP NAME> Template List**) log or page:

The following options are displayed when the template is in **Draft** status:

- Open
- Create Record
- Delete

The following options are displayed when the template is in **Complete** status:

- Open
- Create Record
- Delete

The following options are displayed when multiple templates, regardless of status, are selected:

- Delete

Scheduling a Run

Use the **Schedule** tab to schedule a run. A template can be set for a scheduled run only if it is marked as **Complete** (under **Status**). The fields in the **Schedule** tab are disabled until the template is marked as Complete. The following options are available in the **Schedule** tab:

- Schedule
  - Enable scheduled record creation

> **Note:** You can schedule auto-creation of records when the template marked as **Complete** (under **Status**).

- Frequency
  - Daily
  - Weekly, end of day

- Monthly
- Quarterly
- Yearly

- Range of Recurrence
  - No end date
  - End by
- Additional Information
  - Auto-email creator if scheduled creation fails

When the template is in **Complete** status, and user is setting up the schedule, the Schedule tab shows the following options:

- **Cancel**
- **Save**

When the template is in **Draft** status, after the Creation step, the Schedule tab shows the following options:

- **Cancel**
- **Save**

Under other conditions the following two options are not available:

- **Cancel**
- **Save**

By default, the first template is selected, and the details for the first template are displayed on the right pane.

In the creation step, no template will be highlighted on the left pane. After you save, the template is added to the template list, highlighted on the left pane, and the details are displayed on the right pane.

Template Status

Templates with Draft status

When you open a template that is in draft status, the system displays the following toolbar options in the upper-right section:

- **Complete**
- **Save**
- **Menu Options** (☰)

  Auto-create

  Export Line Item Template

  Print (**HTML** and **PDF**)

  Reload

  Help
  - **[BP Name] Help**
  - **User Productivity Kit**

Close

When you finish drafting and click Complete, the system displays the **Workflow Action Details** window. In this window, you can enter all the workflow information and click **Save** when finished. When you click **Save**, the toolbar options change to:

- **Edit**
- **View Workflow**
- **Send**
- **Menu Options** (☰)

Templates with Complete status

When the template status is marked as **Complete**, the template turns into read-only mode. If you decide to edit a template marked as **Complete**, you can open the template and click **Edit**. This action changes the status of the template to **Draft**. In this case, the system checks to see if there is any scheduled auto-creation for the template.

If a schedule is detected, the system displays a Confirmation message. If you click **Yes**, the system changes the template status to **Draft** and stops the scheduled auto-creation for the template; however, the system retains the previously entered scheduled runs information.

Creating a record from a template with Complete status

When you select a completed template and click **Create Record** from the *gear menu* (⚙), the system opens the **Create New [BP name].** The fields in **Workflow [BP name] Details** window are populated with the workflow information that was stored at the time of drafting and subsequent completing of the template, and will open when you click **Send**. The toolbar options change to:

- **Send**
- **Save**
- **Menu Options** (☰)

If you click **Cancel** in the **Workflow [BP name] Details** window to work in the **Create New [BP name]** window to make necessary changes, or to review the record information, you must click **Send** to route the record to the next step. In these two scenarios:

- The **Workflow [BP name] Details** window opens, but the fields will not be populated with the workflow information that was stored at the time of drafting and subsequent completing of the template.
- You must re-enter the workflow details as the system treats this instance as a one-time creation.

Creating BP Templates and Scheduling BP Creation

You can create templates for project/shell-level and company-level workflow business processes. This allows:

- Easy creation of records for business processes that you use often or are recurring (for example, time sheets)
- Scheduling automatic creation of recurring BP records

This section discusses how to:

- Create and edit business process templates
- Schedule automatic business process record creation from the template

> **Note:** When you create BP records from a BP template, any values in any of the form fields on the template (either manually entered or auto-populated) will be copied to the new record. Line items, file attachments, and attachments to line items will also be copied. Other attached information, such as general comments, linked records, and linked Mailbox, will not be copied to the new form.

Creating a BP Template

You can create a template for any business process for which you have at least "view user records" permission.

> **Note**: Because draft option is not available for *non-workflow* business process records, and draft option is essential in storing a business record template, you can only create a template for a *workflow* business process record.

To create a template:

1) In **User** mode, open to the log containing the business process for which you want to create the template.
2) From the left Navigator, select the business process.
3) From the toolbar, click **Actions**, and select **Create From Template**. The Template List window for that business process opens. The window displays any templates that have been created for the selected BP.
4) Click the **Create** button.
5) Use the information in the table below to fill in the **General** tab in the right pane.

> **Note:** Although the Schedule tab is visible, it is disabled until you have changed the status to Complete. At this point, you can use this template to manually create BP records; however, if you want to schedule

automatic creation, you must first change the template status to Complete.

6) Click **Create**.

   The system adds the template to the Template List with a status of Draft and opens the form as it would in the create step of the workflow. This form will be used as the template.

7) Enter any information into the template form that you want to include in the records that you create from it.

8) You can add line items as needed. You can also add file attachments, which will be attached when a record is created from the template. This includes attachments to the record itself and attachments to line items.

   You can also add linked records, linked Mailbox, and general comments to the template, but these will not be included in the records created from this template.

9) Click the **Save** button at the top of the form.

   The system saves the template in Draft mode, and the window remains open. You can use the template at this point to manually create BP records; however, if you want to schedule automatic creation, you must first change the template status to Complete (see the following procedure).

In this field:	Do this:
Name	Enter a name for the new template.
Description	Enter a description of what this template is used for.
Workflow	Select the workflow that should be used for the BPs that will use this template.
Copy Linked Records	Select the check box if you want to copy any linked records whenever a record is created from this template.

Changing Template Status (Draft and Complete)

Each template will either be in **Draft** mode or **Complete** mode. You can change the status of a template between the two statuses at any time. The template status controls whether a BP creation schedule can be defined.

If the template status is **Draft**, the template can be edited and used to manually create BP records. Required fields and assignee information can be left blank. Scheduled record creation cannot be performed.

If the template status is **Complete**, the **Schedule** tab in the right pane is activated and can be used to define and schedule automatic record creation. The form is no longer editable (unless changed back to **Draft**). Required fields and assignee information must be completed before the status can be changed to **Complete**.

To change the status of a business process template to Complete:

1) In **User** mode, navigate to the log of the business process for which to edit the template. Click the **Actions** menu and choose **Create from Template**. The Template List window opens.
2) Hover over a template, click the *gear menu* (⚙) and click **Open**. The template form opens.
3) Complete the BP form:
   - Complete all required fields.
   - Be sure the rest of the template form is filled out appropriately, including line items and attachments, if applicable. Remember that if you will be scheduling automatic record creation from this template, the information that you enter here will used for the creation step and sent to the first step in the workflow.
4) Click **Complete** when finished. A validation check will verify that all required fields are filled out.
5) After a successful validation check, the **Workflow Action Details** window will open.
   - Select a workflow action for the first step in the workflow. If there is only one option, the **Workflow Actions** field will be auto-populated.
   - Add users to the **To** and **CC** field.

When the status is **Complete**, the template form becomes view-only. If you have defined a record creation schedule in the **Schedule** tab, the schedule will be activated.

To change the status of a business process template to Draft:

1) In **User** mode, navigate to the log of the business process for which to edit the template. Click the **Actions** menu and choose **Create from Template**. The Template List window opens.
2) Open the template form.
3) Click **Edit**.
4) When the **Confirmation** message appears, click **Yes**.

In **Draft** mode, the template form becomes editable. Scheduled record creation is disabled until you change the status back to **Complete**.

Scheduling Automatic BP Record Creation Based on a Template

You can schedule automatic BP record creation runs that are based on a BP template. The templates must have a status of Complete before you can define and activate the schedule.

For information on manual creation from a BP template, see ***Creating a BP Record from a Template*** (on page 105).

Note: Business process creation cannot be scheduled from a template in projects/shells that have the View-Only or Inactive status.

To define a BP creation schedule:

1) In **User** mode, navigate to the log of the business process for which to edit the template.
2) Click the **Actions** menu and choose **Create From Template**. The Template List window opens.
3) Select a template from the list to use for the automatically created BP records.
4) In the right pane, click the **Schedule** tab.
5) Complete the Schedule tab as described in the following section.
6) Click **Save**. The schedule is active if the template status is Complete.

In this field	Do this
Enable scheduled record creation	Select this check box if you want to enable automatic record creation based on the schedule defined below.
Frequency	The frequency determines how often the new records are created from the template. The options are: ▸ Daily ▸ Weekly (select the day of the week) ▸ Monthly (select the day of the month) ▸ Quarterly (runs on the last day of the calendar quarter) ▸ Yearly (runs on the last day of the calendar year) All scheduled record creation is performed at 11:59:59 PM (PST).
Range of Recurrence	Choose one of the options: ▸ No end date (runs until changed or schedule is disabled) ▸ End by (select an end date)
Auto-email creator if scheduled creation fails	Select this option if you want the template owner or creator to receive email notification if the scheduled creation fails. The email will contain location information so that the recipient can see where the auto-creation originated, and where it failed.

Editing or Deleting a BP Template

Users with view permission to a business process log will be able to view any associated templates. The template form and properties can be edited by the owner or creator and by users with Modify Record Ownership.

Only the owner or creator of a template can delete it.

To edit a template:

1) In **User** mode, navigate to the log of the business process for which to edit the template. Click the **Actions** menu and choose **Create from Template**. The Template List window opens.
2) Open the template form.
3) If the template has a **Complete** status, click **Edit**.
4) The fields, line items, file attachments, and other data are editable. You cannot change the workflow after the template has been created.

To delete a template:

In the Template List window, select the template click **Delete** from the toolbar, or hover over the template and click **Delete** in the *gear menu (* ⚙). Click **Yes** to confirm.

Editing or Canceling a BP Template Schedule

To edit a business process schedule:

You can edit the schedule information in the Schedule tab at any time. The Schedule tab is active only when the BP status is Complete. After saving changes, the new schedule will be activated immediately.

To pause or cancel scheduled business process creation:

Do one of the following to deactivate scheduled BP creation:

- Open the template and select the **Schedule** tab. Deselect the **Enable scheduled record creation** check box. To reactivate the schedule, select the check box.
- Open the template form and change the status to Draft (open the Complete template and click **Edit**). As long as the template remains in Draft mode, the BP schedule will be inactive. You can still manually create BP records from a draft template. To reactivate the schedule, change the status back to Complete.

Failed Scheduled BP Record Creation

If a scheduled BP creation fails and the check box enabling notification has been selected on the Schedule tab of the template Properties window, email notification is sent to the template owner. The email contains location information so that the recipient can see where the auto-creation originated and where it failed. Following are conditions under which scheduled record creation can fail:

- The To field is empty. This is possible if the assignee user becomes inactive after the schedule is created or if a group is empty.
- CBS code is invalid, which can happen if the CBS code becomes inactive after selecting in the template.
- If the rules engine validation fails.

- For payment applications, if the associated SOV is locked either by the payment application record in routing, or by a change commit with a negative line item value. See ***Payment Application Business Processes*** (on page 273) for details.

> **Note:** If the destination business process does not exist or has not been imported into the system, the location specified in the email notification might be non-existent or incorrect.

Using CSV and RESTful Services

You can use CSV and RESTful Services to create a BP Record or Line Item with Line Item Data Picker. When you export your CSV template, the Line Item Data Picker is shown and the direction is set as an input or both, in the Integration tab in uDesigner.

> **Note:** You cannot modify the BP Data Picker alone if it has an associated Line Item Data Picker value. You must provide both the BP Data Picker value and BP Line Item Data Picker value to modify any one of them.

When you use Bulk Create or Bulk Update, you start by exporting the BP design structure to a Microsoft Excel or CSV file and then populating the required fields. If you leave a Data Picker Data Element (DE) field blank that is configured to Auto Populate, the system completes the field when you run a Bulk Create; however, it does not complete the field when you run a Bulk Update. To reduce confusion and maintain consistency for both Bulk Create and Bulk Update, the system uses the Excel or CSV file to populate the Data Picker field if the field is excluded from the Integration Form for the BP design.

Behavior of the Due Date (due_date) Field

In the **Workflow Settings** field in the **Workflow Setup** of a BP, if the **Override Workflow Due Date** field is set as **Yes**, you *can* edit the due date in the creation step. If the **Override Workflow Due Date** field is set as **No**, you *cannot* edit the due date in the creation step. Also, you cannot edit the Due Date if the work has started or the work has moved to the next step (is in-flight) in the workflow process.

When you create workflow BP records through file imports (CSV or Microsoft Excel), the system currently sets the Due Date automatically based on the **Workflow Settings**; the Due Date provided in the input file is ignored. Also, when you update workflow BP records through file imports (CSV or Microsoft Excel), the system uses the Due Date that was based on the **Workflow Settings** and ignores the Due Date provided in the input file.

When you create workflow BP records through a REST service, the system currently sets the Due Date automatically based on the **Workflow Settings**; the Due Date provided in the input request is ignored. Also, when you update workflow BP records through a REST service, you cannot change the Due Date.

Validations Performed on Line Item Data Picker Values

When you create a record or line items using a CSV import, if a CSV import or a REST input request has Line Item Data Picker values, the following validations are performed to check if:

- the associated data picker has a record selected
  If a record is not selected, the system displays an error message.
- the record selected verifies that the line item belongs to the selected record
  If not verified, the system displays an error message.
- the line item exists
  If it does, the system runs the query conditions defined for the Line Item Data Picker.
  If it does not, the system displays an error message.
- Duplicate work packages are included. Work package names are case-sensitive.

The system identifies specific erroneous records or line items for the following scenarios:

- If form validation rule fails
- Data elements in the upper form. For example, data elements that are not unique.

> **Note:** Data elements with leading and trailing spaces are ignored. For example, data elements "EAM" and "EAM ", the latter containing a trailing space, are treated as identical.

- If records within an input file or request contains same unique DE value
- Multiple records or line items exist for a specific value

The above Line Item Data Pickers validations are also supported in the following REST services:

- Get BP Record List
- Get BP Record
- Get BP Record with attachments
- Create BP Record
- Create BP Record with lineitems
- Update BP Record

> **Note:** You cannot create or update a non-workflow BP record for which the input request file contains a status value that is *Inactive*. If you submit a request that contains an *Inactive* status, the system sends an error message through email notification.

Validations Performed on User Picker Values

When you create a record or line items using a CSV import, REST services, or Bulk Update, if the CSV import or input request has User Picker values, the following checks are performed:

- BP records will be created successfully:
  - If a single user with a specific First Name and Last Name exists in a project with a status of **Active**/**On-hold**.
  - If multiple users exist with identical First Name and Last Name, but only one user's status is **Active**/**On-hold** while all other users have an **Inactive** status.

- BP records will not be created if multiple users exist with identical First Name and Last Name, with a status of **Active**/**On-hold**/**Inactive**.

Using Microsoft Excel Template to Create BP Records and BP Line Items in Bulk

Creating BP records, in bulk, through Microsoft Excel templates is available for all BPs that allow bulk creation of records and line items.

A Microsoft Excel file or template supports formulas, special characters, and it has multiple sheets.

Notes:

- A CSV file or template does not support formulas or special characters, and it does not have multiple sheets (click **Actions**, and select **Export CSV Template**).
- When you use Bulk Create or Bulk Update, you start by exporting the BP design structure to a Microsoft Excel or CSV file and then populating the required fields. If you leave a Data Picker Data Element (DE) field blank that is configured to Auto Populate, the system completes the field when you run a Bulk Create; however, it does not complete the field when you run a Bulk Update. To reduce confusion and maintain consistency for both Bulk Create and Bulk Update, the system uses the Excel or CSV file to populate the Data Picker field if the field is excluded from the Integration Form for the BP design.

When you click **Actions**, you can click the **Export Microsoft Excel Template** option to create a single BP record or multiple BP records (bulk) that contain formulas, special characters, and multiple sheets.

Note: This option will be seen for all users who have the **View** access to the log.

For creating Line Items for a single BP record or multiple BP records (bulk) that contain formulas, special characters, and multiple sheets, you can click the **Menu Options** icon (available for BPs that support line item export) and click **Export Line Item Template**.

Behavior of the Due Date (due_date) Field

In the **Workflow Settings** field in the **Workflow Setup** of a BP, if the **Override Workflow Due Date** field is set as **Yes**, you *can* edit the due date in the creation step. If the **Override Workflow Due Date** field is set as **No**, you *cannot* edit the due date in the creation step. Also, you cannot edit the Due Date if the work has started or the work has moved to the next step (is in-flight) in the workflow process.

When you create workflow BP records through file imports (CSV or Microsoft Excel), the system currently sets the Due Date automatically based on the **Workflow Settings**; the Due Date provided in the input file is ignored. Also, when you update workflow BP records through file imports (CSV or Microsoft Excel), the system uses the Due Date that was based on the **Workflow Settings** and ignores the Due Date provided in the input file.

The supported Microsoft Excel file formats are the Excel workbooks having the ".xlsx" and ".xlsm" extensions.

> **Note**: The Strict Open XML Spreadsheets having ".xlsx" extension is not supported.

The supported Microsoft Excel versions are Excel 2010 (v14.0) and later.

The supported Microsoft Excel functions are: ABS, ACOS, ACOSH, ADDRESS, AND, AREAS, ASIN, ASINH, ATAN, ATAN2, ATANH, AVEDEV, AVERAGE, BIN2DEC, CEILING, CHAR, CHOOSE, CLEAN, CODE, COLUMN, COLUMNS, COMBIN, COMPLEX, CONCATENATE, COS, COSH, COUNT, COUNTA, COUNTBLANK, COUNTIF, COUNTIFS, DATE, DAY, DAYS360, DEC2BIN, DEC2HEX, DEGREES, DELTA, DEVSQ, DGET, DMAX, DMIN, DOLLAR, DSUM, EDATE, EOMONTH, ERROR.TYPE, EVEN, EXACT, EXP, FACT, FACTDOUBLE, FALSE, FIND, FIXED, FLOOR, FREQUENCY, FV, GEOMEAN, HEX2DEC, HLOOKUP, HOUR, HYPERLINK, IF, IFERROR, IMAGINARY, IMREAL, INDEX, INDIRECT, INT, INTERCEPT, IPMT, IRR, ISBLANK, ISERR, ISERROR, ISEVEN, ISLOGICAL, ISNA, ISNONTEXT, ISNUMBER, ISODD, ISREF, ISTEXT, LARGE, LEFT, LEN, LN, LOG, LOG10, LOOKUP, LOWER, MATCH, MAX, MAXA, MDETERM, MEDIAN, MID, MIN, MINA, MINUTE, MINVERSE, MIRR, MMULT, MOD, MODE, MONTH, MROUND, NA, NETWORKDAYS, NOT, NOW, NPER, NPV, OCT2DEC, ODD, OFFSET, OR, PERCENTILE, PI, PMT, POISSON, POWER, PPMT, PRODUCT, PROPER, PV, QUOTIENT, RADIANS, RAND, RANDBETWEEN, RANK, RATE, REPLACE, REPT, RIGHT, ROMAN, ROUND, ROUNDDOWN, ROUNDUP, ROW, ROWS, SEARCH, SECOND, SIGN, SIN, SINH, SLOPE, SMALL, SQRT, STDEV, SUBSTITUTE, SUBTOTAL, SUM, SUMIF, SUMIFS, SUMPRODUCT, SUMSQ, SUMX2MY2, SUMX2PY2, SUMXMY2, T, TAN, TANH, TEXT, TIME, TODAY, TRANSPOSE, TREND, TRIM, TRUE, TRUNC, UPPER, VALUE, VAR, VARP, VLOOKUP, WEEKDAY, WEEKNUM, WORKDAY, YEAR, YEARFRAC.

The following topics explain how to use Microsoft Excel create a single BP record or multiple BP records (bulk) and line items that contain formulas, special characters, and multiple sheets.

Microsoft Excel Format for Creating BP Records

The following applies to all business Processes where BP records can be created, in bulk, by way of CSV import.

> **Note**: The Request for Bid business process (RFB BP) does not support bulk creation of records through CSV.

The following does not apply to managers such as Space Manager, Portfolio Manager, Configurable Managers, Code and Records-based Configurable Managers, and Code-based Configurable Managers that allow the creation of records by way of CSV import.

To create BP records, in bulk, through Microsoft Excel:

1) In your Shell go to the **Logs** grouping node (BP Logs) node and select a BP to open the BP log.
2) From the toolbar, click **Actions**, and select **Export Microsoft Excel Template**. This option is only available for the users with **View** permission, to the log.

To be able to download your Excel template the integration interface must be defined for the BP record. If the BP record does not have a defined integration interface, the entire import will be aborted and no BP records or BP line items will get created. In such scenario, Unifier displays the following error message: "*Import could not be completed. There are errors in this template file. These errors can be seen in the Import Data Template worksheet. Do you want to download the file and fix the errors? Click 'Yes' to download the file and 'No' to upload a different template file.*"

MS Excel Template File Name Format

When you export your template file, the name of the exported template file is generated in the following format: `<BPName>_Template`

> **Note**: The name will always be the source string without spaces.

For example, if the BP name is Daily Reports, the exported template file name is generated as *DailyReports_Template*.

MS Excel Template File Worksheets

The exported template file contains the following worksheets:

- **Instructions** worksheet
- **Imported Data Template** worksheet
- **<Other User-Defined>** worksheet

Instructions Worksheet

This worksheet is generated automatically in the first tab of the template file. You cannot change the name of this worksheet. The **Instructions** worksheet contains all the relevant information about entering the BP record and line item information data. The content of the instructions worksheet will depend on the type of business process.

Imported Data Template Worksheet

This worksheet is also generated automatically as the second worksheet in the template file. You cannot change the name of this worksheet. This worksheet contains the Unifier data needed for creating BP record and line item.

> **Note**: The name of this worksheet is translated according to the user's language preference.

The top section of this worksheet depends on the business process type.

- For the Cost BPs of Summary Payment Application SOV type, the **Enter date below** section displays an additional row to enter the Cost Allocation. In addition to the H & D rows, the CA row will also be seen. This row will have the asterisk symbol (*) for all the required fields of cost allocation details.

- For the Simple BPs, the worksheet displays the **Enter data below** section and an H row that contains the column headings.
- For Line items type of BPs, the first few rows lists all the line item tabs. The first line contains static informational text "Line Item Tabs along with the respective detail form fields." The tabs list one below the other. The hidden tabs are also displayed, similar to the CSV template files. The "Tab Name" is the first column followed by the Detail Form fields. All the required fields of the line item tab are marked with an asterisk symbol (*).

<Other User-Defined> worksheet

You can insert additional sheets for your reference. However, the content of these worksheets will not be processed by Unifier during import.

If the work package picker is included in the BP, the worksheet includes a **Work Package** field with a drop-down list of values. Work package names are case-sensitive.

Entering Data in the Microsoft Excel Template File

To enter data in the Excel template file, use the **Import Data Template** option to create records, or create records with line items.

> **Note**: Review the information on the Instructions worksheet to minimize the import errors.

When entering data, you can:

- Enter data in all the fields.
- Copy the values of a column from another sheet. This is to state that you can use the Excel native features when entering data.
- Use Excel formula feature to calculate values in the columns.
- Enter UTF-8 character string in the String fields.

For all data types, Unifier only processes the data and not the format, when importing.

For example, if you entered `-999.99` and the format on the cell is `(999.99)`, you will see the data in Excel as `(999.99)`. When Unifier processes this data, `-999.99` is processed and not `(999.99)`.

Creating BP Records By Importing a Microsoft Excel Template

To create BP Records by **Importing MS Excel Template**:

1) From the toolbar, click **Actions**, select **Import**, and then select **Data From Microsoft Excel File**.
2) Follow the prompts.

If you can create new BP records, the **Import** option further displays the following options:

- **Data From CSV File**
- **Data From Microsoft Excel File**

Uploading Excel Files

When you upload an Excel file, in the **Upload Microsoft Excel File** window (similar to the CSV), you can select the Excel file (using the **Select File** option) and click **Next** to proceed with your upload. See below for information about adding attachments.

Validating Microsoft Excel File Content

During the import process, validations occur at multiple levels. These include:

- validations to ensure that the BP record has the required setup to create records through Excel in the **Auto Creation** tab of the BP setup.
- validations to ensure values have been entered in all the required fields to create BP records as well as line items. If the import fails, the imported file will now contain error information.

> **Note**: Leading and trailing spaces in data elements will be ignored for validations. For example, data elements, "cost item", and "cost item ", the latter including a trailing space character, are treated as identical data elements.

After the initial validation ends, the file is processed further. At this stage, all validations pertaining to system-level rules as well as user-defined form-level validations are performed. In the event of a failure, an email notification with the reason for failure is sent to users and groups identified in the business process setup.

Errors and Corrections

When an error is encountered in any of the rows, the entire import is aborted and no BP records or line items are created. As mentioned earlier, when the import file contains errors, the following message displays:

Import could not be completed. There are errors in this template file. These errors can be seen in the Import Data Template worksheet. Do you want to download the file and fix the errors? Click 'Yes' to download the file and 'No' to upload a different template file.

Additional Information Regarding Importing a Microsoft Excel Template File

The name of a downloaded file is identical to the name of the imported Excel template file. If you decide to download a file with errors, the **Import Data Template** worksheet displays errors in the following format:

- On the first row of the worksheet, the following static text displays in an additional column: *Following errors were encountered while importing the data from the template. This column must be deleted after fixing all the errors. If this column exists in the file at the time of import, the import will fail.*
- Errors that are not specific to a row, display in the first H row that contains the data. For example, errors such as the auto-creation setup not being met.
- A row with multiple errors displays all the errors in the error cell.
- Each row that has an error displays the actual error message in the first column.
  - The following error format is used for the required fields:

    "Values are missing in required fields: <Field Label 1>, <Field Label 2>"

For example,

Values are missing in required fields: Contract Reference.

"Values are missing in required fields: <Field Label 1>, <Field Label 2>, <Field Label 3>"

For example,

Values are missing in required fields: Type, Short Description, Asset Type.

- For other form-level validations, the message is displayed against the row.

  For example, *Equipment Units Available cannot be less than 10. This number is required for contingency purposes.*

Adding Attachments

Similar to the CSV file import, you can add attachments. You can upload all the referenced attachments in the **Add Attachments** section. You can use the **Upload Microsoft Excel File** window (in the 'Add Attachments' step) to add attachments to your BP record, or line item, during your import. The review section on the screen enables you to see the files that have been uploaded and the files with upload pending.

For example, when you upload the Microsoft Excel file, all attachments listed in the Excel file display in the **Files to be Uploaded** section. When, you upload each file, the status of the file changes from *Waiting for File* to *Ready to be uploaded*.

In the **Review** section, you can perform sort operations on the **Status** column.

When you click **Upload**, Unifier uploads the attachments onto the respective BP record, or line item, as required.

Validating Added Attachments

When you upload your attachments, Unifier performs the following validations:

- If there is no data in the **Attachments** column of the Microsoft Excel file that is being uploaded, Unifier processes the file as a file that does not need have any attachments that need to be uploaded.
- If you have specified a name for the **Attachment** column at the BP record level or at the line item level, Unifier ignores the column headings.
- For Document Type BPs, you can include a maximum of one file as an attachment with each line item.

To validate a *BP record level* Excel import:

When you choose to create BP records by importing an Excel file from the **BP Log** node, Unifier does not retain the **Attachment** option that was used in the validation form of the integration interface. If you decide to import attachments while using Excel import, Unifier will allow the import action. If there are files that have been referenced in the **Attachments** column of the Excel file and Unifier cannot find the files in the attachment payload (attachment missing), the **Attachments** table displays the following message:

Some files are still waiting to be uploaded. Do you want to proceed without uploading those files? Click **OK** to create BP records or line items without any attachments from the Excel file, ignoring any missing attachments, or click **Cancel** to return to the **Upload Attachments** step of the upload process.

Similarly, if the file **Status** in the **Review** section displays *Waiting for the file* and you click **Upload**, the **Attachments** table displays the following message:

Some files are still waiting to be uploaded. Do you want to proceed without uploading those files?

Click **OK** to create BP records or line items without any attachments from the Excel file, ignoring any missing attachments, or click **Cancel** to return to the **Upload Attachments** step of the upload process.

For validating a *line item level* Excel import:

When you proceed with a line item import, from a **Line Item** tab, if the option **Upload documents from My Computer** is not selected in the design, you cannot add attachments, and the **Attachments** table will provide the following informational text: *Uploading of Attachments is not allowed.*

If there are files that have been referenced in the **Attachments** column of the Excel file and Unifier cannot find the files in the attachment payload (attachment missing), the **Attachments** table will provide the following informational text: *Some files are still waiting to be uploaded. Do you want to proceed without uploading those files?* If you click **OK**, Unifier will ignore the missing attachments (from the Excel file) and creates the line items, without any attachments. If you click **Cancel**, you will be returned back to the **Upload Attachments** step of the upload process.

> **Note**: If there are files uploaded in the attachment payload, but the uploaded files are not present in the **Files to be Uploaded** section of the Excel file, the files are not uploaded. In this scenario, the file **Status** does not change in the **Review** section.

Audit Log Information for Imported BP Records

The following information is captured in the Audit log for each BP record created through Microsoft Excel import process.

Non-Workflow BPs

The following information is captured in the audit log for non-workflow BPs:

- **Event**: *Creation by way of Microsoft Excel Import*
- **Action**: Create <BP Name>

Workflow BPs

The following information is captured in the audit log for workflow BPs:

- **Event**: *Creation by way of Microsoft Excel Import*
- **Action**: *<Action Name>*

Microsoft Excel Format for Creating Line Items for BP Records

You can create line items through the **Export Line Item Template** option under **Microsoft Excel** within the **Menu Options** toolbar.

> **Note**: This option is not available in the Bidder portal. A bidder can

import or update existing lines that are part of the Requestor package through CSV import only.

You can see **Export Line Item Template** option only if the integration interface has been defined for the BP record. If the BP record does not have a defined integration interface, the option will not be made available. In addition, this options will be available when the BP record is in **Edit** mode. The **Export Line Item Template** option will be seen whether or not the Upper Form property allows the addition of line items. Finally, this option will not be available in the **End** step of a Workflow BP.

MS Excel Template File

When you export your template file, the name of the exported template file will have the following format: `<BPName>_Line Items_Template`

Note: The name will always be the source string without spaces.

Example

If the BP name is Daily Reports, the template file name will be: `DailyReports_Line Items_Template.xlsx`.

MS Excel Template File Worksheets

The exported template file will have the following worksheets:

- **Instructions** worksheet
- **Imported Data Template** worksheet
- **<Other User-Defined>** worksheet

Instructions worksheet

This worksheet is generated automatically, and you cannot change the name of this worksheet. The **Instructions** worksheet contains all the relevant information about entering the BP record and line item information data. The content of the instructions worksheet will depend on the type of business process.

Imported Data Template worksheet

This worksheet is generated automatically, and you cannot change the name of this worksheet. Always set by Unifier as the second worksheet in the template file, this worksheet contains the data needed for creating BP record and line item.

Note: The name of this worksheet will be translated according to the user's language preference.

The top section of this worksheet is dependent on the business process type.

For Generic Line Item BPs

- The first row will have the following static informational text: "`Line Item Tabs along with the respective detail form fields`"
- The rows that follow will list all the line item tabs.
- The rows that follow will list all the line item tabs.

- All the required fields will have the asterisk symbol (*).
- The tabs are listed in the next rows, one after the other. The hidden tabs are also listed, similar to a CSV template.
- After all the line item tab fields, the subsequent rows will contain the fields that the user can enter details for the BP record or line item that needs to be created. The first row, in the data entry section, will have the following static informational text: "`Enter data below`"
- The D row will list all the fields from all the tabs.
- The **Tab Name** field is the label of the first column, followed by the detail form fields.

For Cost BPs of Summary Payment Application SOV type

The first row will have the following static informational text: "`Line Item Tabs along with the respective detail form fields`"

The rows that follow will list all the line item tabs.

All the required fields will have the asterisk symbol (*).

After the D row, a CA row will be seen. This row will have the asterisk symbol (*) for all the required fields of the cost allocation details.

<Other User-Defined> worksheet

A user may insert additional sheets for their reference. These sheets will not be processed by Unifier at the time of import.

An end-user (you) can add multiple worksheets.

> **Note**: The content of this worksheet will be ignored at the time of import.

Entering Data in the Microsoft Excel Template File

The following explains the general rules for entering data in the Excel template file.

You must use the **Import Data Template** option to be able to enter data and ultimately create records, or to create records with line items.

> **Note**: Review the information on the Instructions worksheet to minimize the import errors.

When entering data, you can:

- Enter data in all the fields.
- Copy the values of a column from another sheet. This is to state that you can use the Excel native features when entering data.
- Use Excel formula feature to calculate values in the columns.

> **Note**: If you enter a decimal value in the **Line No.** field of the imported template, Unifier will ignore the decimal value and will treat this line as a new line item and will create a new line item after the import. This method is applicable to both Excel and CSV imports.

Creating Line Items by way of Importing the Microsoft Excel Template Data

The **Import** option displays only if you can create new BP records. The sub-options within the **Import** option display only if the Upper Form properties allow the addition of line items. These include:

- **Data From CSV File**
- **Data From Microsoft Excel File**

To create line items by way of **Importing MS Excel Template**:

1) From the toolbar, click **Actions**, select **Import**, and then select **Data From Microsoft Excel File**.
2) Follow the prompts.

> **Note**: Spend-type BPs with configurable manager are not supported for importing line items.

Uploading

When you upload a Microsoft Excel file, in the **Upload Microsoft Excel File** window (similar to the CSV), you can select the Excel file (using the **Select File** option) and click **Next** to proceed with your upload. See below for information about adding attachments.

Validating Microsoft Excel File Content

There are multiple levels of validations that take place during the file import process. To begin, Unifier will check to ensure that all required fields for the creation of a line item have been met successfully.

In case of any failures, the import will fail, and the same file that was used for importing the data will be changed to contain information about the errors. After the initial check has been passed, the system will process the file further.

Errors and Corrections

When an error is encountered in any of the rows, the entire import will be aborted and no BP records, line items, will get created. As mentioned earlier, when the import file contains errors, Unifier will alert the user with the following message: "`Import could not be completed. There are errors in this template file. These errors can be seen in the Import Data Template worksheet. Do you want to download the file and fix the errors? Click 'Yes' to download the file and 'No' to upload a different template file.`"

Adding Attachments

Similar to the CSV file import, you can add attachments. You can upload all the referenced attachments in the **Add Attachments** section. You can use the **Upload Microsoft Excel File** window (in the 'Add Attachments' step) to add attachments to your BP record, or line item, during your import. The review section on the screen enables you to see what which files are uploaded and which files are remaining.

Example

When you upload the Microsoft Excel file, all the attachments listed in the Excel file will be read by Unifier, and they will get listed in the 'Files to be uploaded' section. As, and when, you upload the files, the status of the respective file will turn from 'Waiting for File' to 'Ready to be uploaded'.

You can perform sort operations on the **Status** column in the review section.

When you click **Upload**, Unifier uploads the attachments onto the respective BP record, or line item, as required.

Validating Added Attachments

When you upload your attachments, Unifier performs validations:

- If there is no data in the **Attachments** column of the Microsoft Excel file that is being uploaded, the system processes the file as a file that does not need have any attachments that need to be uploaded.
- If you have specified a name for the **Attachment** column (either at the BP record level or at the line item level), the system ignores the column headings.

For validating a *line item level* Excel import:

When you proceed with a line item import, from a **Line Item** tab, if the option **Upload documents from My Computer** is not selected in the design, you cannot add attachments, and the **Attachments** table will provide the following informational text: "*Uploading of Attachments is not allowed.*"

If there are files that have been referenced in the **Attachments** column of the Excel file and Unifier cannot find the files in the attachment payload (attachment missing), the **Attachments** table will provide the following informational text: "*Some files are still waiting to be uploaded. Do you want to proceed without uploading those files?*" If you click **OK**, Unifier will ignore the missing attachments (from the Excel file) and creates the line items, without any attachments. If you click **Cancel**, you will be returned back to the 'Upload Attachments' step of the upload process.

If there are files uploaded in the attachment payload, but the uploaded files are not present in the Files to be uploaded section of the Excel, Unifier will not upload those files. In this scenario, the **Status** value will not change in the review section, for the files.

After a successful import, the line items get created. Subsequently, the line item log will get refreshed with the newly created line items.

For Document Type BPs, you can include a maximum of one file as an attachment with each line item.

Audit Log

Each line item created through Microsoft Excel import will be audited. The following is the audit attributes:

- Event
  <Tab Name>: Line Item created through Microsoft Excel Import
- Action
  Add <Short Description>

Microsoft Excel File Format for Bulk Update Export/Import Process

The following applies to all business processes where BP records are exported using the **Bulk Update** option to a Microsoft Excel file (.xlsx). For more information on how to use bulk update, see ***Exporting BP Records Using Bulk Update From Business Process Log Node*** (on page 237).

> **Note:** Bulk Update is not currently supported for General Spends Classification of Cost BPs with Line item of CBS Code (both workflow and non-workflow) if breakdown rows exist in the referenced Schedule of Values (SOV).

When you select BPs using the **Bulk Update** menu options, the exported Excel file is saved using the following file formats:

- For business processes containing only Main Form data, the file is saved in the default format: *<BP Name>_MainForm.xlsx*. For example, *Warranty_MainForm.xlsx*.
- For business processes containing Main Form data and line item data, the file is saved in the default format: *<BP Name>_MainForm_LineItems.xlsx*. For example, *Warranty_MainForm_LineItems.xlsx*.

The exported/imported Excel file contains the following worksheets/tabs:

Instructions Worksheet

The **Instructions** worksheet is generated automatically. Depending on the type of business processes included in the Excel file, this worksheet describes how to use the Excel file to enter or update BP records and line item data.

Main Form Worksheet

The **Main Form** worksheet is generated automatically as the second worksheet in the Excel file. It is recommended to not rename or reorder this worksheet. The content of this worksheet is dependent on the types of BPs included in the export/import. It contains the Unifier data needed for updating existing BP records, and line items.

- Each BP record is identified by read-only fields in the following order: **Record ID** and **Record Number.**
- The following fields/data elements are also read-only: **Record Status**, **Creator, Creation Date, Currency ID**, **Due Date**, **Status in WF**, **BP**, **Formula Data Elements** and data elements that are set to auto-populate from the sum of all line items data elements from the Integration Validation Form.

- The line item tab order is identical to the order in the selected records.
- Custom date formats are honored.
- The data elements with direction set as **Input** or **Both** are shown as fields in the exported Excel file.
- The name of the worksheet is translated according to the user's language preference.

Additional Worksheets for each Line Item Tab

Each Line Item tab worksheet displays a list of line item records in the following format:

- The line item records and the data elements of each tab are listed in the same order as displayed in the user interface.
- Each line item record is identified by read-only fields in the following order: **Record ID**, **Line Item ID**, **Record number**, and **Line No**. These fields cannot be renamed, reordered, duplicated, or removed from the file.
- The formula data elements and auto-populated data elements are read-only fields.
- Worksheet names do not support the following special characters: \ / ? * : [or]

Codes and Descriptions Worksheet

The fields displayed in the **Codes and Descriptions** worksheet depends on the cost sheet. At a minimum, these include:

- **Cost Code**: Displays cost codes available in the project cost sheet. It includes active cost codes and inactive cost codes with the entire hierarchy.
- **Cost Item**: Displays the name of the item associated with the cost code.
- **Status**: The status of the cost code at the time of the export. Valid values include: **Active**, and **Inactive**.

SOV Line Items Worksheet

An **SOV Line Items** worksheet, if generated, displays the following fields:

- **refiid** (label of field): A list of contracts associated with the records in the **Line Item** worksheet.
- **Ref** (label of **uuu_sovlinum** field): A list of all reference codes from the SOV sheet of the selected contract.
- **CBS Code**: A range of CBS codes associated with the contract.
- **Commit Short Description**: A short description of each commit.

Microsoft Excel File Format for Bulk Creating BP Records in the Master Log

As a company-level user or partner user, you can create and upload a batch of business process (BP) records across projects/shells from a Microsoft Excel spreadsheet (.xlsx or .xlsm) if you have:

- Access to the **Master Log** node
- **Allow Bulk Creation** permission

  The **Allow Bulk Creation** permission, although visible for all BPs, is supported for only:
  - Simple BPs such as Action items, Project Note, or Field Observations

- Generic Line Item BPs such as Daily Reports or Warranty
- Generic Cost BPs (Line item with CBS Code, Line item with Fund Code, Line item with CBS and Fund Code, and Line item with CBS and WBS Code)
- Transfer Cost BPs (Line item with CBS Code, Line item with Fund Code, Line item with CBS and Fund Code, and Line item with CBS and WBS Code)
- Base Commit (Line item with CBS Code - Create SOV of General Spends and Payment Applications)
- Change Commit BPs (Line item with CBS Code - Update SOV of General Spends and Payment Applications)

It is recommended that you use this process to create several records in bulk across projects. It is a scheduled high-priority background job and the job can be processed based on other background jobs in the queue.

> **Note**:Do not use this process to update *existing* BP records.

Business Process (BP) records that you plan to import into the **Master Log** node must adhere to a specific file format. You can download the Excel file that is to be used as template for creating the BP records.

- For Simple BPs containing only Main Form data, such as Action Items, Project Note, or Field Observations, the Excel file is named in the default format, *<BP Name>_MainForm.xlsx*. For example, *Warranty_MainForm.xlsx*.
- For business processes containing Main Form data and line item data, such as Daily Reports, or Warranty, the spreadsheet is named in the default format, *<BP Name>_MainForm_LineItems.xlsx*. For example, *Warranty_MainForm_LineItems.xlsx*.

The exported/imported Excel file contains the following worksheets/tabs.

Instructions Worksheet

The **Instructions** worksheet is generated automatically as the first worksheet in the Excel file. Depending on the type of business processes included in the spreadsheet, the **Instructions** worksheet describes how to use the spreadsheet to enter BP records and line item data.

Main Form Worksheet

The **Main Form** worksheet is generated automatically as the second worksheet in the Excel file. It contains the Unifier data needed for updating existing BP records and line items.

- For each BP record, the following fixed columns display as the first and second columns:
  - **Shell Number**: A valid active project/shell number. Refer to the ***Shell Details worksheet*** (see "***Microsoft Excel File Format of Shell Details File***" on page 131) to view a list of active projects/shells across different hierarchies.
  - **Record Sequence No**.: A sequence no that uniquely identifies a record for that project/shell.

  Each BP record is identified by the unique combination of the **Shell Number** and **Record Sequence No**.
- Subsequent columns display the data elements based on the BP design of the **Upper Integration** tab.

- Mandatory fields are marked by an asterisk (*).

> **Note**: Do not rename or reorder this worksheet. The content of this worksheet is dependent on the BP selected for the bulk creation import process.

<Line Item Tab Name> Worksheets

One or more Line Item tab worksheets is automatically generated depending on the BP design. Use the Line Item tab worksheets to create line items for BP records specified on the **Main Form** worksheet.

- The following columns display initially in each line item tab:
  - **Shell Number**: A valid active project/shell number. It must be identical to a shell number in the **Main Form** tab. Refer to the Shell Details Excel spreadsheet below to view a list of active projects/shells across different hierarchies.
  - **Record Sequence No**.: A sequence number that uniquely identifies a record for that project/shell. It must be identical to the **Record Sequence No.** field value in the **Main Form** tab.
  - **Line No.**: (Optional) A sequence number to uniquely identify the lines for that tab. If a value is not specified, the **Shell Number** and **Record Sequence No.** are used to uniquely identify a record to add line items.

    Each line item is identified by the unique combination of values in the **Shell Number** and **Record Sequence No.** fields.
- Subsequent columns display data elements depending on the BP design.
- Additional pickers are available based on the business process type. For more information, see ***Available Pickers For Business Process Types*** (on page 133).
- The following special characters are not supported: \ / ? * : [or]

> **Note**: Do not rename or reorder this worksheet. The content of this worksheet is dependent on the BP selected for the bulk creation import process.

Microsoft Excel File Format of Shell Details File

The Shell Details Excel file contains information of all projects/shells with the following statuses:

- **Active**
- **Inactive**
- **On-Hold**
- **View-Only**

The following information is displayed for each project/shell:

- **Shell Number**: A valid active project/shell number.
- **Shell Name**: The name associated with the active project/shell number.

Use this Excel file to copy and include the above project/shell information while creating BP records across projects/shells in the **Main Form** worksheet and the **<Line Item Tab Name>** worksheets of the Excel file you will import into Unifier.

> **Note**: The project/shell numbers in the Excel file that will be imported into Unifier must be identical to those listed in the Shell Details Excel file.

To download the Shell Details Excel file, see ***Creating the Excel File for Bulk Creating BP Records*** (on page 83).

Error File Format of Bulk Update Import Process

When the Bulk Update import process is **Completed with Errors**, a list of erroneous files is generated in a Microsoft Excel file (.xls).

Use any of the following methods to download the error file:

- Download the error file from the **Import Data History Details** window.

  For more information, see ***Viewing Bulk Update Import Data History Details*** (on page 255).
- Download the error file from the email notification you receive when the import process is **Completed with Errors**.

The error file contains the following worksheets/tabs:

- **Instructions** worksheet

  The **Instructions** worksheet is generated automatically. Depending on the type of business processes included in the error file, this worksheet describes how to resolve errors identified in the BP records and line item data.
- **Main Form** worksheet

  The **Main Form** worksheet contains a list of erroneous records that did not get imported into Unifier. It is generated automatically as the second worksheet in the error file. It is recommended to not rename or reorder this worksheet.
  - **Column A** of the **Main Form** describes the error for each erroneous record.

    > **Note**: All line items associated with the erroneous record in the **Main Form** tab will not be validated. Therefore, the error file may not show all errors related to the line items for the erroneous record.

  - The following fields/data elements in the worksheet are read-only: **Record Status**, **Creator, Creation Date, Currency ID**, **Due Date**, **Status in WF**, **BP**, **Formula Data Elements**.
  - Data elements that are set to auto-populate from the sum of all line items data elements from the Integration Validation Form.
  - The line item tab order is identical to the order in the selected records.
  - Custom date formats are honored.
  - The name of the worksheet is translated according to the user's language preference.
- Line Item Tab Worksheets

Line Item tab worksheets with erroneous records are color-coded orange.

Each Line Item tab worksheet is organized as follows:

- **Column A** describes the error for each line item record.
- The line item records and the data elements of each tab display in the same order as in the user interface.
- Each line item record displays begins with read-only fields in the following order: **Record ID**, **Line Item ID**, **Record number**, and **Line No**. These fields cannot be renamed, reordered, duplicated, or removed from the file.
- The formula data elements and auto-populated data elements are read-only fields.
- Worksheet names do not support the following special characters: \ / ? * : [or]

Available Pickers For Business Process Types

The following pickers are available for each business process type in the Line Item tab worksheet:

Business Process Type	Available Pickers
Cost BP(Lineitem with CBS code) -Generic or Transfer	• CBS Picker (It can be in Main Form and all line item tabs) • Auto-populate elements from CBS picker • Work package Picker • BPO Picker • BPO line item picker
Cost BP(Lineitem with Fund Code) - Generic or Transfer	• Fund Picker • Auto-populate elements from Fund picker
Cost BP(Lineitem with Fund and CBS Code) - Generic or Transfer	• Fund Picker • Auto-populate elements from Fund picker • CBS Picker • Auto-populate elements from CBS picker • Work package Picker
Cost BP(Lineitem with CBS and WBS Code) - Generic or Transfer	• WBS Picker • Auto-populate elements from WBS picker • CBS Picker • Auto-populate elements from CBS picker • Work package Picker
Cost BP(Line item with CBS Code) - Base Commit of General Spends or Pay app SOV	• CBS Picker (It can be in Main Form and all line item tabs) • Auto-populate elements from CBS picker • Work package Picker • BPO Picker • BPO line item picker

Business Process Type	Available Pickers
Cost BP(Line item with CBS Code) - Change Commit of General Spends or Pay app SOV	▸ CBS Picker (It can be in Main Form and all line item tabs) ▸ Auto-populate elements from CBS picker ▸ Work package Picker ▸ BPO Picker ▸ BPO line item picker ▸ Reference ▸ Auto-populate from Reference

Viewing the Import Audit Log

1) Navigate to:
   - (For BPs at the company level) Go to the **Company Workspace** tab and switch to **User** mode. In the left Navigator, select **Company Logs**, and select the applicable BP sub-node.
   - (For BPs at the project or shell level) Go to the shell tab and switch to **User** mode. In the left Navigator, select **Logs**, and select the applicable BP sub-node.

   The system expands the navigator to show the list of BPs.
2) From the toolbar, click **Actions**, and then select **View Import Audit Log**.

   The Import Audit Log for the selected BP type opens. You can view information pertaining to the import process that created the BP, such as the name of the CSV or Microsoft Excel file that was imported, the date that the BP was created and completed, the name of the user who performed the import, and so on.

Filling Out a Business Process Form

To fill out a Business Process (BP) form:

1) Complete the Upper form. Fields marked with a red asterisk (*) require an entry.
2) Add line items, if applicable.
   - If this is a cost or line item-type BP add line items as necessary.
   - If this is a Document-type BP, attach any documents to the form.
3) Add additional information, if applicable.
   - Comments
   - Attachments to Comments
4) When you have completed the form, do one of the following:

- *If this is a non-workflow BP:*

a. Click **Save** to save your changes. Saving the form creates a permanent record.

b. Click **Submit** to render the record in view-only mode.

The system uses statuses to track the state of a business process record and any line items it may contain. For example, a Pending status generally means people are still working with the record, while a Closed status suggests the record is complete. Records in Closed status are typically marked as Terminal, meaning the record has reached a point where no further input is either required or desired. You can still access a non-workflow record in a terminal status if the record is in **Edit** mode. However, if you click **Submit** when the record is in a terminal status the record becomes permanently read-only and un-editable.

- *If this is a workflow BP:*

a. Click the **Send** button. At the **Creation** step, sending the form to the next step in the workflow creates a permanent record.

- If the workflow is not yet complete, the form will be forwarded to the next step in the workflow.
- If the workflow is complete (that is, your task was the last step of the workflow), the record will appear as complete in the business process log.

a. When you send the form, the **Workflow Action Details** window will open. Select an action from the **Workflow Actions** drop-down list. Action selections depend on the BP design, for example, if this is a review step, an action that you may be able to select is "Approve Budget Approval." Selecting a **Workflow Action** activates the other fields of the **Action Details**. If there is only one possible workflow action for a step, the action is auto-populated in the field.

b. In **Action Details**, designate assignees for the next step; that is, the users and groups who will receive the record as a task on the next step in the workflow. If the next step is the **End** step, then the **To** field will be preassigned.

Use the **Workflow Progress** hyperlink, in the **Action Details** section of a *Workflow BP*, to open the **Workflow Progress** window and view the workflow progress status.

When you accept the task, the form becomes editable. On the editable, or "action," version of a form (belonging to an accepted task), you can see the view form of the business process (**Task Details**). In the view form, you can view the Workflow progress status by clicking on the **Workflow Progress** tab in the right pane. This option is available for Workflow records of both company-level and project-level BPs.

Saving a Draft of a Workflow Business Process

At any time while filling out a business process form (whether creating one or responding to a task), you can save your work as a draft and return to it later. The record remains in your Drafts log until you send it.

> **Note:** Saving a draft is only applicable to Workflow type of BP records. For non-workflow type of BPs, saving a record results in creation of a record and not a draft.

To save a draft copy of the workflow business process form:

From the File menu of an open business record, click **Save**. A draft copy of the form with your edits so far is saved in your **Drafts** log.

To view your drafts:

Navigate to the Drafts log by doing one of the following:

- Click **Drafts** under the Home tab. The Drafts log lists all draft business processes.
- Go to your project or the Company Workspace and navigate to **Drafts** under the **Collaboration** grouping node.

> **Notes:**
>
> - Drafts for View-Only and Inactive projects/shells are not listed in the Drafts log.
> - The system displays the **Tasks**, **Notifications**, and **Drafts** functional nodes, in the respective Company Workspace and Project/Shell, based on the deployment of your **User** mode navigators.

To open a draft:

Click the *gear menu* (⚙) next to a record from the Drafts log and click **Open**.

To delete a draft:

Click the *gear menu* (⚙) next to a record from the Drafts log and click **Delete**. The draft form will be permanently deleted. A draft is automatically deleted from the log after the record has been sent or otherwise completed.

Accessing Custom Business Process Help PDF File

Your company or your Project/Shell administrator may provide a custom Help file to give you information about a specific business process. This file is provided as a PDF file, which can be read with Adobe Acrobat Reader. If a custom help file is available, it will be listed under the Help menu for the business process log or form.

Adding and Managing Line Items

Detailed information, such as transactions, can be entered as line items on BP records, if they have been designed to accommodate documents that are attached as line items.

You can edit or delete line items on a BP form if the form is still editable; that is, before it reaches its terminal status (for example, approved). If you add a new line item in any step (other than the creation step), you can modify the line item until the BP is sent to the next step. The line item status will always default to the default line item status specified in the design. Users with permission can change the status if modification to the line item status is allowed in that step.

You can add attachments and comments to line items. In addition, you can filter, copy, and consolidate line items.

You cannot change the transaction currency value after you create a BP and send it to the next step in the workflow.

Notes:

- Document and Line Item BPs can be designed to include line item status control, which allows users to choose a status for individual line items and control whether they can be modified.
- For Cost-type BPs: With version 23 and later, a Total row on a non-standard tab of a line item grid is not displayed. For version 22 and earlier, the Total row displays a 0.
- The system supports auto-population of Document Manager properties for line items in Document-Type BP records with and without folder structure.
- If you select a different currency for transactions, the system correctly uses the exchange rates to calculate subsequent information. However, when you view the main form for the approved BP record, the system currently displays the Project Currency Amount field using the applicable symbol for Transaction Currency instead of the symbol for the Project Currency. For example, if the Base Currency for the project is US Dollars ($) and you select China Yuan Renminbi for the Transaction Currency, the system incorrectly displays the Project Currency Amount using the Yuan symbol (¥) on the main form. If you view the Project Currency by selecting it from View Currency on the Line Item tab, the correct symbol is shown.

Adding Line Items

To add a line item:

1) In a business process form, select a line item tab and click **Add**. The right pane displays the Line Item Details.

2) Complete the Line Item Details section. You can expand and collapse these information blocks.
3) If your line item supports attachments, you can add attachments. The Attachments and Linked Records tabs are seen only after you save the line item. For more information, see ***Adding Attachments***.
4) When done, select from one of the following options:
   - **Save & Close:** To save the information that you have entered and close the window.
   - **Save & Add New:** To save information that you have entered and refresh the window so that you can add another line item.
   - **Cancel:** To discard changes that you have made and close the window.

Editing and Deleting Line Items

You can edit the line items on a BP record only if the design permits modification of line items and if the record has not reached the terminal step.

> **Note:** If the line item contains Yet To Buy (YTB) or AFC values, it cannot be modified.

To edit line items:

1) Select the line item tab.
2) From the left pane, select a line item. The line item details are displayed on the right pane.
3) Update the line items.
4) When done, select from one of the following options:
   - **Save:** To save the information that you have entered.
   - **Save & Add New:** To save information that you have entered and refresh the window so that you can add another line item.
   - **Cancel:** To discard changes that you have made and close the window.

To delete line items:

1) Select the line item tab.
2) From the left pane, select a line item.
3) From the *gear menu* (⚙), select **Remove**.

> **Note:** When a line item is removed, the system removes link information, both from the record the line item belongs to, and from the record that the line item was linked to.

When you edit a line item grid, the row counts (at the bottom left corner of the grid) capture the following actions:

- **New:** The count will depend upon the Add action and the Copy action on the line item. The number gets updated when you add new line items.
- **Deleted:** The count will depend on the Remove action on the line item.

> **Note**: These counts will not appear when the grid is in View only mode.

To edit an image field on a line item grid:

An image field on the grid displays only an image icon; however, you can see a thumbnail of the image if you double-click the icon. If you want to change or remove the image, double-click the cell anywhere but on the icon. The system displays a menu, from which you can choose to upload a different image or remove the image.

To edit a hyperlink field on a line item grid:

If you want to change a hyperlink, double-click the cell anywhere but on the hyperlink. The system displays the Hyperlink window, where you can change or remove the link.

To edit a check box field on a line item grid:

When the field is opened in **Grid View**, it is rendered as a box that you can select or deselect.

If the list of line items is opened in **Form View**, all the line items for a given tab are displayed. Similar to **Grid View**, the check box in the line item list is also rendered as a disabled box with the value.

The **Find on Page** option in the grid renders the check box field as a text box that lets you type **Yes** or **No**. If you type **Yes**, the system selects the check box and the line item associated with the check box is displayed along with the selected check box. If you type **No**, the system does not select the check box and the line item associated with the check box is displayed along with the deselected check box.

This table lists the sub-types of business processes and locations that allow the edit of line items on cost business processes:

Sub-Type	Shell (CBS Code)	Shell (Generic Code)	Company Workspace	Edit Line Item
Line Item with CBS Code	Yes	No	No	Yes
Line Item with Both Fund Code and CBS Code	Yes	No	No	Yes
Line Item with Fund Code	Yes	No	No	Yes
Line Item with Account	No	No	Yes	No
Line Item with Asset Code	No	No	Yes	No

Sub-Type	Shell (CBS Code)	Shell (Generic Code)	Company Workspace	Edit Line Item
Line Item with Multiple Codes	No	Yes	No	Yes
Commit at Company Level	No	No	Yes	No

Copy Line Items

You can create a line item by copying an existing line item. You can choose to include any attachments that are on the source line item; however, any links the line item has to other records will not be copied.

To copy line items from the same form:

1) In a business process form, select a line item tab.
2) Select a line item to copy, click ⚙ , and then select **Copy**.
3) From the **Line Item Details** tab on the right pane, complete all the required fields.
4) Click **Save**.

Filtering the Line Item List

Some business processes can include many line items, and filtering the list of line items can make the form easier to use. To narrow the list of line items you see, you must use the **Search** function. The **Search** function will search for and display specific line items according to the criteria you specify.

To filter the line item list:

1) Open the BP form and click the **Search** icon (🔍) in the line item tab.

   The window shows fields from the line item list, which you can use to narrow the list of line items you see.

   Each field shows an *operator*, such as "contains" or "equals," which you can use to specify more precisely which line items you want to see on the list.

   You can narrow the list of line items to show only certain class levels or cost categories.
2) To specify search criteria, first choose the operator you want to use on the field, such as "equals," "does not contain," or "is empty".
3) Enter the value the field should contain, or click the **Select** button and select the value from the list that appears.
4) Click **Apply**.

   The system displays all the line items that met the search criteria you entered.

   If you choose to, you can cancel the filtering action by clicking **[Cancel Search]**, or by clicking **Clear** and then **Apply** in the Search window**.** The system will restore the list of line items to its unfiltered state.

The total amount displayed at the bottom of the screen lets you select:

- **Total Amount**
- **Filtered Total Amount**

Total Amount is defined as: Sum of the "Amount" field from across all the line items.

Filtered Total Amount is defined as: Sum of the "Amount" field from the line items which are the result of the Search criteria.

When a Search is active, the option that you select from the drop-down will be the "Filtered Total Amount."

When the Search is canceled, the system will default the option back to Total Amount. At any given point of time, you will be able to toggle between the two options.

Example

Filtered Total Amount

Line #	Spend Category	Amount
001	Labor	$100
002	Materials	$200
003	Labor	$300

If the Search parameter is set to "Spend Category = Labor," then after applying of the filter:

Total Amount = $600.00; (Option selected); Filtered Total Amount = $400.00

If the Search parameter is set to "Spend Category = Agreements," then after applying of the filter:

Total Amount = $600.00; (Option selected); Filtered Total Amount = $600.00

If the user cancels the Search, then:

Total Amount (Option selected) = $600.00; Filtered Total Amount = $600.00

> **Note:** There is no page total. The user has the option to select between the above two mentioned totals.

Line Item Consolidation

Business processes can be designed to accommodate line item consolidation: the ability to select individual line items from one or more BP records (the source BPs) and copy them into a new record (the destination BP). The selected line items can be from the same BP type, or they can be from different types, if they are compatible. The source and destination BPs must be at the same level (both at company level or both at project/shell level). File attachments can also be copied. For example, this functionality can be used to consolidate specific line items from multiple change order requests submitted over a period into a single change commit.

This functionality is built into business processes through the design, which includes specifying which BPs can be used for the source and destination. Also, the ability to filter the business process records that can be consolidated (by status) can be added. This enables you to filter the records you see in the list to consolidate by the record status, allowing you, for example, to exclude records that have the status of Pending or Rejected.

> **Note:** Line Items can be edited after consolidation, if your administrator has enabled it by deselecting the **Prevent consolidating the same line item across multiple records** check box.

There are some restrictions when consolidating line items from different BP types.

The top pane of the Line Item Consolidation page is used to select BPs and records, and the bottom pane is used to select the line items. Pagination in the top and bottom panes is seen only if the number of records and line items (in both available and selected panes) exceeds 1000 and 200 respectively. You can expand and collapse the top and bottom panes.

Top Pane Toolbar Options

Toolbar Options	Description
Select Business Process	This drop-down menu lists all BPs that allow consolidations.
View	This drop-down menu is context-sensitive based on the selected BP.
Search	Enables users to search for specific line items. Search parameters seen here are based on the Find parameters set for the line item list. Search is performed on the database and works across all pages.
Find on Page	Enables users to find items on the displayed page. When you click this option, the system inserts a row that lets you enter filter parameters.
Consolidate from other locations	The Shell Picker window is displayed. Select shell.

Bottom Pane Toolbar Options

Toolbar Options	Description
Select Tab	For a non-workflow BP, displays the line item tabs visible in the form. For a workflow BP, which might contain multiple

	forms, displays the line items tabs for the end form of the workflow. Select a tab.
Group By	Group line items by column header. This drop-down menu lists all log columns for the selected log view of the BP. By default, the <record_no label> is selected.
Search	Enables users to search for specific line items. Search parameters seen here will be based on the Find parameters set for the line item list. Search criteria defined for each for each tab's log layout will appear as search parameters. Search will be a database search and will work across all the pages.
Find on Page	Enables users to find items on the displayed page. When you click this option, the system inserts a row that lets you enter filter parameters.
Include Attachments	This option will be checked by default. When this option is checked, attachments if any existing in the line items will get copied over.

To consolidate line items:

1) Select a line item tab.
2) From the **Actions** menu, select **Consolidate Line Items**.
3) From the **Select Business Process** drop-down top menu, select a BP.
4) Select one or more BP records in the **Records from All Locations** section.
5) From the **Available Line Item List** pane, select the line item tab.
6) Select the line items and click the arrows to move it to the Selected line Items pane.
7) Click **Done**.

Additional Information:

- If you open a record from the shell and try to consolidate line items, you will see the shell picker (BP location picker).
- If you open a record from a project, when you try to consolidate line items, you will not be able to see the BP location picker.
- If you are opening the record at the company level, when you try to consolidate line items, you will not be able to see the BP location picker.
- If data picker is configured for a BP, line item consolidation displays records across all projects/shells. This is applicable for a source BP that is associated with a project/shell.
- If there is a source BP that is associated with a data picker, the system hides the shell location picker.

- If the records are displayed based on data picker configuration for a shell, the “Records from [Shell Name]” label changes to “Records from All Locations” label.

You can consolidate line items that have Line Item Data Pickers. While copying, the system runs the query condition defined for the Line Item Data Picker, under the destination business process configuration.

- If the query condition does not return the value that is getting copied, the Line Item Data Picker value will not be copied over.
- If the query conditions are met, only the Line Item Data Picker value will be copied in to destination line item and any other auto-population based on this picker will be populated.

If in the destination BP Line Item Data Picker the tab is hidden, and you are copying line items from another BP record where the Line Item Data Picker has that tab line item selected, the line item will be copied without the picker value.

The Line Item Data Picker value from the source line items cannot be copied in to the destination if in the destination the record BP Data Picker has a different record or no record selected.

- When consolidating line items from a Cost BP to a SPA type commits BP, if the Cost Line Item Type in the source BP record is the Variable Unit Cost, and the destination design does not have the uuu_quantity and the uuu_unit_price, the system will display this message: Cost Line Item Type of Variable Unit Cost cannot be created. Detail Form design for this tab must include the data elements uuu_unit_price and uuu_quantity. The functionality is the same in the case with the auto-creation of the SPA commit record, from non-SPA BP.
- When consolidating line items, from a non-SPA BP to SPA type commit BP and in the destination if the amount data element is not defined as formula of uuu_unit_cost * uuu_quantity, the amount value in the copied line item will be zero (0).
- Validations to be considered when consolidating or auto-creating line items into SPA BP:
  - The costed amount total must be equal to the line item amount, based on the form properties in the design.
  - All the fields that are marked as required must have data in the destination line item.
- When the line items are auto-created from a non-SPA BP, if the CBS Code does not exist in the destination, the BP record will be created in the I-step. In this case, only the summary line will be created.

Grouping Line Items

If your BP design allows adding or copying of line items, you can also choose to group line items into meaningful categories. You can select one or more line items to add to a group and each group displays the line items under it. The groups are displayed in alphabetical order, and the line items that are not part of a group are displayed under the group **Not Grouped**. You can change the name of the groups and move line items between groups. When a record or line items are copied, the groups are also copied.

Notes:

- The Manage Groups option is available for Line Item and Cost BP types. The Manage Groups option is not available for SOV type BP (Summary Payment Applications).
- By design, you cannot move a group from the Selected Columns section to the Available Columns section.

To create a group:

1) After the line items are created, open a business process record, and select a line item tab (for example, **Line Item List** tab).
2) Select one or more line items.
3) Click the **Actions** drop-down menu and select **Manage Groups** to open the **Manage Groups** window.
4) In the **Manage Groups** window, click the plus icon (⊕) to create a group on a new row.
5) Enter a name, and description, for the new group.

Note: Avoid using the "<" character while naming a group.

6) Select one of the following options:

- **Cancel**: If you make any changes to the groups and click **Cancel**, the window closes without any changes saved.
- **Save**: If you make changes and click **Save**, your changes will be saved, but the **Manage Groups** window will still be available to make more changes.
- **Save & Close**: If you make changes and click **Save & Close**, your changes will be saved, and the **Manage Groups** window closes.

To edit group property:

1) From the line item tab, select a group by hovering over the group name.
2) From the *gear menu* (⚙), select **Edit Group Properties**.
3) Change the name or description of the group, and select **Save**.

Note: Avoid using the "<" character while naming a group.

You cannot change the properties of the default group **Not Grouped**.

To add line items to a group:

1) Open a business process record, and select a line item tab.
2) Select one or more line items. To select multiple line items, you have to click **Cancel** or **Save**.
3) From the *gear menu* (⚙), select **Add to Group** and select a group.

   The group line item will appear at the top of the line items area of the business process form in bold. The **Amount** column will show the sum total of the line items you added.

   If a line item has been copied and the copy source is already in a group, the new copied line item will be in the same group.

   If the option is enabled, in the **Line Items** tab, the **Amount** column displays the total amount (only the amount value).

To remove line items added to a group:

Select a line item and from the *gear menu* (⚙), select **Add to Group** and select **Not Grouped**. You can also choose to move line items to other groups.

To manage groups:

From the toolbar, select **Actions**, and then select **Manage Groups** to open the **Manage Groups** window and display all the existing groups, excluding the Not Grouped items. The sorting order is ascending, by default.

The **Manage Groups** option is only available for Line Item type BP and Cost type BP (excluding the SPA type BP). When there is a flat list of line items in line item log, the **Manage Groups** option is not available. The **Manage Groups** option is available when there is at least one group available to select.

In the **Manage Groups** window, you can delete existing groups, also (click a row and click the trash-can icon). You can select multiple groups, right-click (or click the *gear menu* [⚙]), and select **Remove**, to move the groups to the Not Grouped items.

The groups are sorted in alphabetical order. The sort order of the line items within the group will be governed by the Line Item List Sort as set in uDesigner.

To expand or Collapse Groups:

From the line items tab, select the ⊖ **Collapse all Groups** or ⊕ **Expand all Groups** icons.

To create line item groups by using CSV:

You can group line items by CSV import.

The system inserts an additional column in the CSV file, **Tab Name**, D row. The cell under the **Group Name** column contains the line item group name. It is optional to enter a value. The column is provided so that you can assign line items to the groups, at the time of creation.

When you import a line item, if the group name that you enter in the template exists in the record, the system adds a line to the group.

If the CSV template has multiple line items, and if a few lines have **Group Name** value and others do not, the ones with the empty **Group Name** will be in the "Not Grouped" group at runtime.

If the CSV template has no **Group Name** specified for any of the line items, the line items will not be grouped.

Example

In the CSV template below, the user is attempting to create a Daily Report record.

The user has entered H for the upper form details and wants to create the record with line items in Equipments, Materials, and Visitors tabs.

1) Six line items have been entered against the Equipments tab, and four of the line items belong to a Group called "All Equipments." The subsequent columns in the D rows pertain to the line item details.
2) The two line items that do not have any group mentioned will go under "Not Grouped," post import.
3) The two line items have been entered for the Materials tab. Post a successful import, the group "Reinforcements" will be created.
4) One line item has been entered against the Visitors tab, and the user does not want to group this one line item. As a result, the Group Name value has been left blank, intentionally.

Import Business Process Records								
Note: Do not change column structure								
Do not enter symbols, such as currency or digit grouping, in the numeric fields.								
Enter a negative numeric value using these formats only: -123456.99 or -123456,99.								
Please enter the attachment names separated by ';' in the next available column after the last data element present for Record or Line Item respectively.								
Equipment	Description		Model		Type	Item Quantity	Work Area	Remarks
Materials	Description		Item Quantity		Remarks	Short Description	Delivery Time	Material Name
Visitors	Remarks		Short Description		Time	Company Name of V	Visitor Name	Company Represen
Workforce	Work Area		Remarks		Source	Short Description	Contractor	Work Performed
Note: Detail will be listed as D with union of all elements across tabs								
H	Record Number	Title	Creator	Creation Date	Due Date	Contract Reference	Superintendent	Daily Activity Date
D	Tab Name	Group Name	Description	Model	Type	Item Quantity	Work Area	Remarks
H		Daily Report for 03/07		3/8/2018				
D	Equipments	All Equipments	Starmark Partners BackH	Hyundai	Backhoe	1	East Wing	
D	Equipments	All Equipments	Starmark Partners Dippe	CAT	Dipper	1	East Wing	
D	Equipments	All Equipments	Starmark Partners Excav	CAT	Excavator	1	East Wing	
D	Equipments	All Equipments	Starmark Partners Digge	CAT	Digger	1	East Wing	
D	Equipments			Power Generator	Electrical	5	East Wing	
D	Equipments			Battery Backup	Electrical	10	East Wing	
D	Materials	Reinforcements		ACC concrete	Cement	100	East Wing	
D	Materials	Reinforcements		Steel	Steel High grade		East Wing	
D	Visitors	Workforce					25	East Wing

Viewing Groups when Referencing Line Items by Way of Line Item Data Picker

You can create line item groups under each line item tab in a business process record and view the line items by group. When referencing a line item within a source BP record, you can also select a line item (from the line item data picker) that belongs to a specific group (for example, contract type). This is, if your selected source record line items have groups, the line item data picker shows the line items along with the group names; otherwise, a flat list of line items (that match the query conditions) is displayed.

In the line item data picker:

- The groups are displayed in ascending order.

- The line items that do not belong to any group will be displayed under "Not Grouped" column, similar to the line item log.
- In a line item data picker, when line items are filtered using query conditions defined for your environment, group names should be shown along with filtered line items. The same behavior is applicable if additional user filters record using Search or Find on Page in the line item data picker.
- When line items are filtered (using query conditions defined for your environment), the group names are displayed along with the filtered line items. The same condition applies if you filter a record using the **Search** or **Find on Page** options in the line item data picker.

If you select a group node in the line item data picker, the select option will not be enabled; therefore, you cannot pick a group from the line item data picker.

The type-ahead feature of the line item data picker displays:

- Display element value
- Line number
- Group Name

Adding Line Item Attachments

After a line item is in the process of creation, the **Attachments** tab will be available in the right pane.

To add an attachment to a line item:

1) Go to the business process and click the **Line Items** tab.
2) Click **Add** to create a line item.
3) On the right pane, click the **Attachments** tab.
4) To select a file from your computer, select **Add Attachment**, and then select **Browse**.
   a. Drag and drop files from your computer, or click **Browse** and navigate to your file.
   b. Select if you want to revise the file automatically if a file with the same name exists.
   c. Click **Upload**. The date and time that the attachment upload is also displayed.
5) To select a file from Document Manager, select **Add Attachment**, and then select **Document Manager**.
   a. Select a file. You can use **Find on Page** to help you find a file. You can expand and collapse the document structure to navigate to your file.
   b. Select the **Copy Comments** check box to copy the comments that are associated with the file you are attaching.
   c. Click **Select**.

Removing Line Item Attachments

The ability to remove an attachment depends on certain conditions. When you are assigned to a task that has a line item attachment, you can remove the attachment *if you have uploaded the attachment yourself*; otherwise, only the record owner (the creator) of the Business Process (BP) record can remove the attachments.

> **Note**: If you are working in the Classic View, you (the assignee) can delete attachments uploaded by yourself as well as deleting attachments uploaded by other assignees, users after the current user (you) accepts the task.

To remove a line item attachment:

1) Go to the business process and click the **Line Items** tab.
2) Select a line item from the log.
3) On the right pane, click the **Attachments** tab.
4) Click the *gear menu* (⚙) and select **Remove**.

Restricting Line Items by Using Copy with Conditions Option

You can use the **Copy with Conditions** option (from the *gear menu* [⚙] next to the record) to copy a specific line item, rather than copying all line items. You can also use this option to:

- Include, or exclude attachments
- Include linked records
- Retain or remove references to auto-created records or line items

These copy options are set up by your administrator and will appear in a list that you can choose from.

If no copy options have been created, the Copy with Conditions submenu option will be disabled.

To restrict line items using the Copy with Conditions option:

> **Note:** The following is applicable to Company, Project/Shell, and master logs. This option is not available in the **Tasks** log.

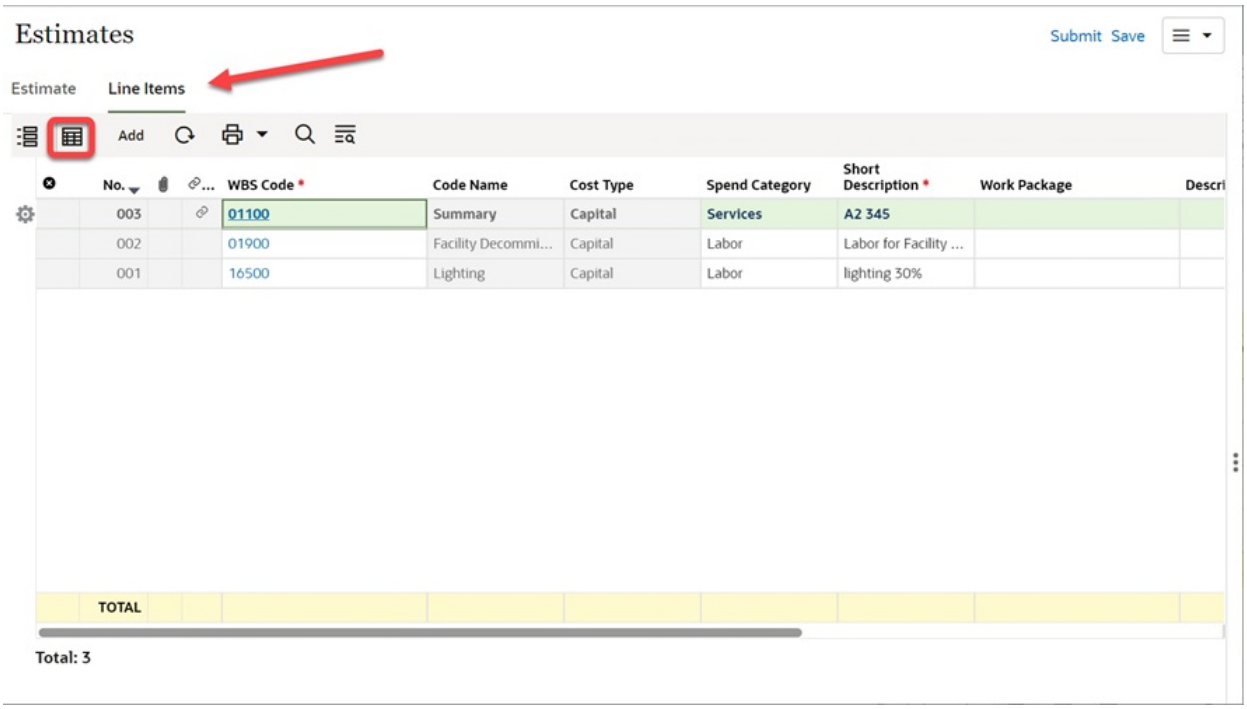
1) Select a BP and open the BP log.
2) Click the *gear menu* (⚙) next to the record that you want to copy and select **Copy with Conditions**.
3) Follow the prompts to complete copying your record for use.

Adding and Managing Line Items Using the Grid View Feature

For Line Item business processes, the system provides a grid feature (**Grid View**) that shows the line-item entry form in a lateral sheet view, where you can enter the data directly without having to open a line item form. In this regard, the sheet works the same way the line-item entry form works—rows might not be editable because of their statuses, auto-populated fields will be filled in for single-record BPs, if a yet-to-buy amount has already rolled up from a cost BP to the cost sheet, you will not be allowed to modify the line item, and so on.

Note: The Grid feature is best used for short line items.

The following shows the Standard View of the Grid View:



If a line item has any attachments, you will see a paper clip icon next to the line item number, which you can click to view a list of all attachments connected to the line item. If a line item has been linked to another business process record, a link icon will appear in the column directly to the right of the attachments column. If you scroll to the right, you can see the total amount of all line item attachments in the BP record.

Note: Attachments, linked records, and the Total Amount will only be visible if the BP has been designed to allow these line item fields.

The grid feature (**Grid View**) shows the line item number and all the fields on the line item entry form, including fields that are required, formulaic, or populated, as well as fields that are part of a dynamic data set. The fields on this grid work the same way they do on a line item entry form—pickers display picker windows, menus display lists, formula fields produce calculations, date picker fields display calendars, and so on; however, radio buttons will appear as drop-down (pull-down) menus, and image, hyperlink, and BP Creator fields have special behaviors.

You can resize the columns by dragging, and sort the data by column (except for Row and image fields). You can use the **Tab** and arrow keys to move from field to field and open them. For business processes that include many line items, you can use the **Search** function to filter the list to display only certain line items.

The grid feature (**Grid View**) is not available on:

- RFB bidder forms
- Line Item with CBS Code BPs (Transfer classification)

- Standard tab of Payment Application Line Item with CBS Code BPs
- Line Item with Asset Code BPs
- Line Item with Multiple Codes BPs (Transfer and Lease classifications)
- Simple type BPs
- Text type BPs
- Document type BPs with Folder Structure
- Resource Booking type BPs for project/shell
- Project/Shell Creation BPs (Simple sub-type)

What is not available on the grid:

- Summary row functions: Summary line items do not appear on the grid and cannot be created on the grid. In addition, line items within the summary do not appear.
- Transaction currencies
- Line item consolidation
- Import function

Behavior Set DEs in the Grid Feature

Because fields displayed in the grid feature (**Grid View**) can come from DDS, the behavior set DEs can be seen in the grid. If you select **Disabled and Clear** for a behavior set that is present on the grid, the updated value is displayed in the grid. This value is either populated with a value or left blank.

Last One to Save Over-Writes Other Edits (Except for Deleted Rows)

The Grid feature can be used simultaneously by multiple users. To accommodate multiple editors using the grid simultaneously, the commit order of saved edits is on a line-by-line basis, not on the entire grid view. If two users are editing the same line item, but different fields, at the same time, the edits made by the last user to save that line item are the edits the system will commit to the record.

For example, if User 1 changes an amount field from 15,000 to 23,000 and saves the change, and User 2 changes a different field, but does not touch the amount field, when User 2 saves the grid, the system will commit User 2's edits; and the amount field will show 15,000 rather than 23,000.

The order of saved edits is particularly important for deleted rows on the grid. After a row is deleted, it cannot be reinstated with a later edit. For example, if User 1 deletes a row and saves the grid view, and User 2 changes the amount field in that row from 15,000 to 23,000 and saves the grid view, the row will **not** be reinstated with the new amount of 23,000.

Error messages

If the system detects errors when you save line items, error messages will appear in a pop-up window, with a red x marking which line item contains the errors.

Add Line Items using the Grid

1) On the business process form, select the tab containing the line items you want to add to.
2) On the Line Item window, click the **Grid** button. The Grid window opens, showing a new, empty row at the bottom of the list to use for the new line item.
3) To enter data into the grid, double-click a cell in the new row. The cell opens for editing.

   As soon as you begin adding a line, a change icon appears in the first column as a reminder that a line item has been added to the record, and the **Save** button becomes active.
4) Fill in the fields on the grid as necessary.
5) (Optional) To include an attachment to a line item, click the **Attach** button in the right pane. Select either **Browse**, to attach a file from your computer, or **Document Manager**, to attach a file from the document manager.
6) To save the line item to the record, click **Save**.

   When you save the line item, the system:
   - Refreshes the grid view.
   - Removes the change icon.
   - Adds the line item to the list.
   - Inserts a blank line at the bottom of the list for another new line item.
   - Updates the line items on the business process form.
   - Updates summary if configured to do so.
   - Line item summaries, for totals and summary averages, update in real time.
7) To add additional line items, repeat steps 3 through 6.

Link Line Items to other Business Process Records

After you begin the process of creating a line item, you can link the line item to a business process record in the **Linked Records** tab.

To link a line item to a BP record:

1) On the BP form, select the tab containing the line item you want to link to a record.
2) Select the line item you want to link and click the **Linked Records** tab in the right pane.
3) Click **Add**. The Add Records window opens.
4) Move records from the **Available Records** list to the **Selected Records** list with the arrows between the two lists. You can narrow your search with the options in the top toolbar.
5) Click **Done**.

   When you link a business process record, the Linked Records tab shows the Current View for all records and provides the following details:
   - Direction
   - Type

     The contents of the Type column indicates whether the linked record has been associated automatically (by way of Line Item Consolidation), or manually (by way of manual linking).
   - Business Process

- Record Number
- Record Title
- Record Location

  - If the BP is a company-level BP, the Record Location shows the Company Workspace tab name.
  - If the BP is a Project-level BP, the Record Location shows the Project name.
  - If the BP is a Shell-level BP, the Record Location shows the Shell location.

Notes:

- You cannot remove the link Type: Line Item Consolidation.
- If there are multiple line items consolidated from the same BP record, the BP record will be seen as a linked record for that many line items.
- If the line item with the link Type: Line Item Consolidation moves to the status, "Previously consolidated lines are available when terminal status equals" in uDesigner or is terminated, the link will be automatically removed.
- If using a Detail form, click Linked Records in the lower-right corner of the Detail form. You do not need to save the line item to link a record.

Edit Line Items using the Grid

To edit line items using the line item grid:

1) On the BP form, select the tab containing the line items you want to edit.
2) Click the **Grid View** icon.
3) On the Grid, double-click the cell you want to edit. The cell opens for editing.

   As soon as you begin editing, a red change icon appears in the first column as a reminder that the line item has been modified, and the **Save** button becomes active.
4) Click **Save**.

   When you save the line item, the system refreshes the grid view, removes the change icon, and updates the line items on the BP form.
5) To edit additional line items, repeat steps 1 and 2.

Notes:

- When editing the element of Dynamic Data Set, use the drop-down list to select the values or labels.
- When editing the element of Multi-line Text Data Element (DE)/field,

use the text box to conduct your in-line editing. You can change the width of the box, but the height of the box is set according to the DE properties (that is, Number of lines).

When you edit a line item grid, the row counts (at the bottom left corner of the grid) capture the following actions:

- **New**

  The count will depend upon the **Add** action and the **Copy** action on the line item. The number gets updated when you add new line items.

- **Deleted**

  The count will depend on the **Remove** action on the line item.

Note: These counts will not appear when the grid is in view only mode.

To edit an image field on a line item grid:

An image field on the grid displays only an image icon: however, you can see a thumbnail of the image if you double-click the icon. If you want to change or remove the image, double-click the cell anywhere but on the icon. The system displays a menu, from which you can choose to upload a different image, or move the image.

To edit a hyperlink field on a line item grid:

If you want to change a hyperlink, double-click the cell anywhere but on the hyperlink. The system displays the Hyperlink window, where you can change or remove the link.

To edit a check box field on a line item grid:

When the field is opened in **Grid View**, it is rendered as a box that you can select or deselect.

If the list of line items is opened in **From View**, all the line items for a given tab are displayed. Similar to **Grid View**, the check box in the line item list is also rendered as a disabled box with the value.

The **Find on Page** option in the grid renders the check box field as a text box that lets you enter **Yes** or **No**. If you enter **Yes**, the system selects the check box, and the line item associated with the check box is displayed along with the selected check box. If you enter **No**, the system does not select the check box, and the line item associated with the check box is displayed along with the deselected check box.

Insert a Row into the Grid

Inserting a row in the grid can be convenient if you have a long list of line items. The system automatically opens a new line item at the top of the list, but if the list is long, it can be more convenient to insert line items wherever you are in the list. When you save the grid view, the system re-sorts the added rows into their proper place.

To insert a row or rows:

1) On the Grid, select a row and click **Add** on the toolbar.

To insert multiple rows, click **Add** again. The system inserts the row(s) below the row you selected.

2) Fill in the line item fields and click **Save**.

   The system reassigns the line numbers as follows:

   - If any rows have been deleted during an edit, the line numbers are reused so that the line numbering remains continuous. (*Exception*: If the amount on a CBS line item has been rolled up to the cost sheet, the line number will not be reused.)
   - After deleted line numbers have been reused, any new line items are assigned numbers in ascending or descending order, depending on how the sort order was specified when the Item log was created.

Manually create a business process from the Grid

A BP Creator field configured for automatic creation mode will appear as a read-only field on the grid. But if the field is configured for manual creation, you can set up the business process creation from the Grid. The new business process will be created when you finish editing the form, or send the form on to the next step in the workflow.

To manually create a business process from the Grid:

1) Double-click the BP Creator field.

   The field will display the words "**Pending Creation**."

2) Click **Close Window** to close the Grid and return to the form.
3) On the form, click **Submit** (if this is a non-workflow BP), or **Send** to send the BP form on to the next step in the workflow.

   The system creates the business process. After the business process has been created, this field will show a hyperlink to the new business process.

To prevent a business process from being created:

1) Double-click the BP Creator field.

   The field will display the words "**Pending Creation**."

2) Double-click the BP Creator field again.

   The system clears the text from the field and will not create the business process.

Copy a Line Item on the Grid

1) On the form, select the tab containing the line item you want to copy.
2) On the Line Item window, click the **Grid** button. The **Grid** window opens
3) Select the line item (or items, using the **Ctrl** key) you want to copy and click **Copy** in the *gear menu (* *)*.
4) The system pastes the copied line item(s) into the row(s) above the selected line. Edit values in each column as necessary.
5) Click **Save**. The system renumbers the line item(s) with the next incremental number(s) and updates the line items on the form.

You can copy cell values by way of:

a) Dragging cell value

When you click a field (cell) in a line item grid that is editable, the system displays a small blue square icon (indicator) on the lower-right corner of the cell. The indicator is available for fields that are editable.

You can drag the indicator to copy the cell value onto the cell below. After you copy the value, the value in the recipient cell appears as modified (the font will be purple in color, and the format will be italic.

When you drag the cell values for multiple cells, the pattern of values of the copied cells will also be copied.

If you select two cells and drag the values into three cells, the system will replace the value of the third cell with the value of the first cell that was copied.

b) Changing cell value

When you want to change the value of a field (cell) that is editable in multiple line items, use the **Shift** key to select the consecutive (adjacent) line items, click the cell, in one of the line items, enter the value that you want, and click **Enter**. You can use the **Ctrl** key to select inconsecutive (not adjacent) line items.

> **Note:** The search functionality is not available when the grid is being edited.

Adding and Managing Line Items in Document-type BP Without Folder Structure

Creating a Document-type Business Process Line Item Record

You can create a Document-type BP line item record:

- Through **Form View** (a single line item and without importing attachments):
  - You cannot submit the record to the next level without completing the required fields. If you try to save the line item without completing the fields, the system will not create the line item.
- Through **Form View** (importing attachments):
  - You can submit the record to the next level without completing the required fields, in the line item, by way of the “import attachments” option.
  - When you open the same line items that were created in the Form View, from the Grid View, you can send the record to the next level without completing the required fields.
- Through **Grid View**:
  - You cannot submit the record to the next level without completing the required fields for a single line item or for multiple line items created through bulk upload.

Adding and Managing Comments

Business processes provide a general comments section that allows you to add text comments that are like notes that accompany the business process but do not become part of it.

Depending upon the workflow setup and your permission settings:

- During the Creation step, you can specify whether to prevent users from adding or deleting hidden comments.
- You can hide comments entered by other users.
- You can add, update, hide, display, or delete your own comments.
- You can attach supporting documents to your comments, which do not become part of the attachments of the BP itself, or mark up attached documents. See ***Working with File Attachments and Markups*** (on page 166).
- You can add general comments if you are a task assignee or if you have been copied (cc'd) on the business process.
- You can add comments to a business process at the **End step**, and also at any status in a workflow, including **Terminated** (which means the business process was stopped at some point in the workflow). To add comments at those points in a workflow, you must have the **Add General Comments** permission.

> **Note:** Some users, such as project managers, may have an additional permission that allows them to add general comments to any form (workflow or non-workflow) that they can view, without accepting the task.

You can add comments if you are not a task assignee, provided that you have the following permissions for business process records:

- **View**
- **Add General Comments**

In this scenario:

- You can only add general comments when the business process record is in View mode.
- You will not be able to hide comments. The Hide Comment option is available for task assignees who are working on an accepted task (an Action form associated with the workflow step).

Add Comments to a Business Process Form

When you add a new comment to a business process form, it remains as a draft until you send the form to the next step in the workflow. Comments are editable in the draft stage; you cannot modify the comment after it has been sent to the next step. Comments that are in draft mode can be edited by right-clicking the-comment and clicking **Edit**. By default, comments you post are automatically hidden; you can deselect the **Hide** box to make comments public. Private draft comments have the following hidden icon next to them; when the record moves to the next step in the workflow, the hidden icon changes to red .

To add comments to the business process form:

1) Open a business process record.

2) Select the main form (**Record Details**) tab.
3) From the right pane, select the **Comments** tab.
4) Enter your comments in the **Comments** box.
5) To add an attachment to a comment from your computer, click **Attachment** and then select **Browse**.
   a. Drag and drop files from your computer, or click **Browse** and navigate to your file.
   b. Select if you want to revise the file automatically if a file with the same name exists.
   c. Click **Upload**.
6) To add an attachment from Document Manager, click **Attachment** and then select **Document Manager**.
   a. Select a file. You can select the **Find on Page** icon to help you find a file. You can expand and collapse the document structure to navigate to your file.
   b. Click **Select**.
7) Deselect the **Hide** check box to post a public comment.
8) Click **Post**.

> **Note:** The Comments box does not recognize formatting, including line breaks. Even if you press the Enter key to make a new line in the Text Comments section, the final comment will not reflect the new line.

If the **Comments** tab of the business process form contains any comments, a **Comment** indicator is displayed. If the tab contains no comments, the right pane is refreshed and the indicator is no longer displayed.

Copying Comments

To copy your comments:

1) From the Comments tab, right-click a comment and select **Copy**. A new comment row is created.
2) Use the **Comments** box to add or edit the comment.
3) To add attachments, click **Attachment** and select **Browse** or **Document Manager**.
4) Click **Post**.

> **Notes:**
>
> - Click an attachment to open it.
> - To download and attachment, select the arrow next to the attachment and select **Download**.
> - To delete an attachment, select the arrow next the attachment and select **Delete**.

Add Comments to a Document Type Business Process

To add comments to a document type business process:

1) Open the document.
2) On the right of the screen, there will be a **Comments** widget. Enter your comments in the **Comments** box.
3) To add an attachment to a comment from your computer, click **Attachment** and then select **Browse**. Open a file from your computer.
4) To add an attachment to a comment from the document manager, click **Attachment** and then select **Browse**. From the Document Manager, select the file that you want to attach.
5) Click **Post**.

This process also applies to documents attached to business process records.

> **Note**: If the document type BP has been designed to use line item status, and a specified status has already been reached (for example, approved), the line item may no longer be editable, and you may not be able to add comments to it.

View Comments

To view comments:

1) Open a business process record.
2) Select the **Comments** tab from the right pane.

   A list of comments is displayed on the right pane. The name of the user who posted the comment, the company name of the user, and the timestamp when the comment was added or updated are displayed. You can also view the attachments associated with the comment. When the tab is expanded, the left pane displays the grid and the right pane displays the content of the selected comment.
3) To filter the comments, use the **Posted By** drop-down menu to view comments by a specific user or by all users.

Edit or Delete Comments

Comments on a business process record are displayed in the **Comments** tab.

When you add a new comment to a BP form, it remains as a draft until you send the form to the next step in the workflow. Comments are editable in the draft stage; you cannot modify the comment after it has been sent to the next step. Comments can be deleted after being sent, only if the BP workflow has been set up to allow deletion of comments.

To edit a comment:

1) From the **Comments** tab, select a comment.
2) Right-click a comment, and select **Edit**.
3) Update your comments.
4) Click **Post**.

To delete a comment:

1) From the **Comments** tab, select a comment.
2) Right-click a comment, and select **Remove**.

   Deleting a comment will create an entry in the **Audit Log** tab for the business process.

   - The Date column will list the date that the comment was deleted.
   - The Event column will state that this event occurred in the comments of the business process.
   - The Action column will state that the comment was deleted.
   - The New Value column will list the comment that was deleted.

Hide Comments

You can hide comments that you do not want to be generally viewed on workflow business processes. If you have permissions, you can view previously hidden comments. Other users will not be able to see the hidden comments unless they have the View Hidden Comments permission set, and using that permission, can also unhide the hidden comments. As the creator of the comment, you can view your own hidden comments, whether or not you have the View Hidden Comments permission (until the comments are published).

> **Note:** Hidden comments are never included in the PDF attached to emails, regardless of a user's view permissions.

To hide or unhide comments:

1) From the Comments window, right-click the comment, and click **Edit**.
2) Select the **Hide** check box.
3) Click **Post**.

> **Note:** Due the nature of end steps, you cannot hide or delete comments on the end step of the workflow, even if the end step is an action (editable) form.

Working with Query-Based Tabs

Query-based tab (QBT) enables the user to:

- View a filtered list of business process records associated with the parent business process.

  Once the QBT in a business process is correctly configured and deployed, the QBT appears in the business process for which the QBT has been configured.
- Create a new business process from the QBT in the same Project/Shell, where the parent business process resides.

  Users can create new business process records from the QBT provided that the users have permission to create business process records for the Project/Shell that contains the business process.
- Copy a business process in the same location as the parent business process.

  Users can copy a business process either with or without attachments. In addition, a user can copy any of the records in the QBT and create a new business process record.

Notes:

- Only one record at a time can be copied.
- You cannot copy attachments for document BPs. Line items of records are treated as attachments, so details of line items and forms are not copied to document-type BPs.

When the user copies a business process record to create a new business process, the new business process record contains all the information present in the copied/based business process record. So, in case of business records with attachments, the user has the option of including or excluding (copying or not copying) the attachments when copying a business process record.

- Search for business process records based on user-entered criteria.

  Users can find any record from the list of records included in the QBT.

Notes:

- The fields available for the Find feature must be defined for the business process.
- The source Business Process/Space/Level of the QBT must be active for the tab to display.

Using or Viewing a Query-Based Tab

To use or view a Query-Based Tab (QBT):

1) Navigate to the parent Business Process log in your Project/Shell.
2) Open a record to view the QBT.

Note: The source Business Process/Space/Level of the QBT must be active for the tab to display.

3) Click New or Copy to create a record. The new record will display if query conditions are met.

As a pre-process to defining the Query tab in the business process (applicable for Line Item, Cost, and Document-type business processes), you must use a reference picker in one of the upper forms of the business process, Space, or Level from where you want to create the Query tab. For defining a Query tab, click on the **Query Tabs** link in uDesigner, click **New**, and select a business process, Space, or Level. The system allows you to create a maximum of 8 tabs in uDesigner, including the QBT.

Format of the Currency for Query-Based Data Element (QBDE)

When the values for the query conditions are set, you can see the QBDE values according to the values that had been set up in the **Modify Data Element** window (selecting, or deselecting, the **Hide Currency Symbol in Cost type Business Process** option). Go to your project (**User** mode) and click the item.

When you open the record, you will see the same QBDE value in the user interface. You can print the record. In the Classic View, the **Upper Form** contains the values, accordingly.

> **Note:** When using QBDE, be aware that query elements are rounded off to use two decimal places, even if the Base Currency and various defined currency fields are different.

Administrator

Go to the **Company Workspace** tab and switch to **Admin** mode.

In the left Navigator, select **Configuration**, and then select **Business Process**.

Click a BP to open the **Configuration** window.

Click the **Query** tab.

Under the **Query Conditions** block, click the query element name, and click **Modify**.

Define the values under the **Definition** and **Condition** blocks and deploy.

Creating a Record from the Query-Based Tab

When creating a record from its own BP log, the “SYS Numeric Query Based” Data Definition is updated when the user picks a reference process.

When creating a record from the Query Based tab of another BP (that auto-populates data to the record being created), the “SYS Numeric Query Based” Data Definition is not updated, unless the user:

- Manually changes the value.

- Uses a triggering element.

You cannot create a company-level business process record within a project, from a Query-Based tab.

Using Query-Based Tab Logs

From the Query-Based tab log, you can view, create, and copy BP records. The following toolbar options are displayed in the log.

Toolbar Options	Description
Create	Create records from the QBT. This button is seen only if you have permissions to create the record. Click the arrow to select a workflow if multiple workflows exist for the BP
Refresh	Refresh and reload the page

Toolbar Options	Description
Print	Prints the list view. You can choose from: **Print**, **Export To CSV**, **Export To Excel**. **Notes:** ▸ For export to Microsoft Excel, the system currently supports only Euro (EUR) and United States Dollar (USD) currency symbols. ▸ If you export data from a business process (BP) record, sheet (such as an Activity Sheet), or log (such as Company Funding Sheet Log) to Excel, be aware that depending on how your negative values are formatted, you might need to configure your columns in Excel to match the correct data type (Number). Otherwise, the columns will not be treated as numeric and will not sum as expected. One supported format includes placing the negative sign between the currency symbol and the amount (for example, $-1,000).
Find on Page	Lets you find items on the displayed page. When you click this option, the system inserts a row that lets you enter filter parameters.
Search	Lets you search for specific line items across all pages.

The *gear menu* (⚙) displays next to each record and contains all available actions that you can perform on the record. The following options are displayed in the *gear menu*: **Open**, **Copy**, **Copy With Attachments**, and **Copy Without Attachments**. The copy options are displayed only if you have permissions to create records in the current shell.

Query Based Data Element (QBDE) Evaluation

The Query Based Data Elements (QBDEs) are evaluated through one of the following ways:

a) Based on the refresh conditions, when the record is opened (even from the draft).

b) Based on the manual editing of the trigger elements, through user interface (this does not include the situation in which the record is initially created).

c) Based on when the record is created. That is, the system evaluates QBDE values based on trigger element population, when a new record is created.

When you create a business process (BP) record (creation step of a BP record), the system evaluates the QBDEs:

- When the trigger element is edited manually on the form in the creation step.
- When the trigger element is auto-populated.

However, QBDE query conditions with null or empty values are ignored when dynamic values are selected in the following areas: Data pickers, Autocreation (BP Creator and BP Line item creator), Gates, Auto updates status setup, and Planning sheets.

Notes:

- Because the system evaluates QBDEs in a random order, Oracle recommends that you do not create a QBDE that uses a formula that references another QBDE.
- DEs that have been defined as a QBDE trigger element should not be evaluated as part of QBDE calculation.
- If a BP Data Picker (BP Picker) or any Data Picker is selected as a trigger element for QBDE and the picker value is automatically populated (auto populated) instead of manually entered, the QBDE element will not be evaluated.
- Query conditions ignore the Timestamp for Date-type data elements. Therefore, at run-time, when queried on a date picker, search results display records that satisfy only the date criteria. For example, *all* records updated on April 10, 2024 display, regardless of the time they were updated.
- When using QBDE, be aware that query elements are rounded off to use two decimal places, even if the Base Currency and various defined currency fields are different.

QBDE Evaluation in BP Records Created through CSV import or RESTful Services

The system evaluates the QBDEs when the trigger element is populated by way of a record that has been created through CSV, RESTful service (if the trigger element is entered in the input CSV request), BP templates, and Bypass I Step or S Step auto-creation.

QBDE Evaluation in BP Records Created through Auto-Creation

When a BP record is auto-created through Bypass I Step and S Step, the system evaluates the QBDE values in the auto-created records based on the trigger element population. When a trigger element is used for QBDEs, and the trigger element is auto-populated, the system evaluates the QBDE values in the creation step of the auto-created record.

In the case of Bypass I Step auto-creation, if the auto-created record resides in Initiation Step, the system does not evaluate the QBDEs.

The system evaluates formulas that use QBDE in the creation step of the BP form.

If the QBDEs are used in the workflow routing conditions, the QBDE values will be populated in the log and view form (if they are added after the successful creation of records). In this scenario, the system evaluates the QBDE values after evaluating the auto-populated DEs and formula DEs on the form.

You can use the QBDEs in BPs in the workflow routing condition, which lets you determine the route of the workflow based on the value of the data element.

The system evaluates the formulas in QBDEs, in the creation step of a BP record.

The system will not evaluate the QBDE values based on trigger element population in BP records that have been created by way of copy (with or without attachments). For example, when you create a Budget Item BP, you can view the QBDE Assigned Budget value, evaluated from the project cost sheet in the creation step.

In uDesigner, the trigger element "Contract No" is defined for QBDE in the "Assigned Budget" and is set to auto-populate from a constant value. (To access this information, go to the Company Workspace tab and switch to **Admin** mode; in the left Navigator, select **uDesigner**, and then select **Business Processes**; open **Budget Items**; in the left Navigator, select **Upper Forms**, and then open the applicable Form.)

You can view the QBDE in the "Assigned Budget" value when a new record is created—in creation step as a trigger element "Contract No" is populated.

To do so:

1. Go to the **Company Workspace** tab and switch to **Admin** mode.
2. In the left Navigator, select **uDesigner**, and then select **Business Processes**.
3. Open the applicable BP.
4. In the left Navigator, select **Upper Forms**.
5. Open the applicable form.
6. From the toolbar, click **Properties**.
7. Double-click the field that should be set as the trigger element for QBDE.
8. Select **Auto-Populate Source**.
9. In the Auto Populate window, set the following:
    - Source Name: Set to **Constant Value**.
    - Source Value: Select the applicable value.
10. Select the above element that will serve as a trigger for the QBDE, and ensure that it is set to auto-populate from a constant value.

When you create a new Budget Item BP record, the system evaluates the QBDE in the "Assigned Budget" value at runtime and displays the total amount (from project cost sheet column) based on the trigger element auto-population.

The system evaluates the QBDE values in the creation step of a BP record if the trigger element is auto-populated by way of any source such as a single record BP, shell attributes, and so forth.

The system evaluates the QBDE values for the BP records that have been created through the schedule BP creation template, whenever the trigger element is populated.

In the creation step, the draft BP records can have their QBDE values re-evaluated only if the trigger element field is not null. The QBDE value will be populated in the BP log when the BP record is created or saved as draft.

Working with File Attachments and Markups

You can attach files to be routed with a business process (BP) form. These attachments may be supporting documents that are attached to a BP record. You can also include attachments to the Comments section of the BP.

Unifier Viewer supports a wide range of document file types. The Native viewer lets you view most file formats in the application in which you created or regularly view them. If your Company Administrator enabled Office 365 integration, you can also use Microsoft 365 to view and update documents, including working on attachments for Generic Line Item, Cost type with Line items with CBS code, Document Type, and Simple BPs. For more information regarding settings, see **Choosing a Viewer Option** in the *Unifier General User Guide*. For more information on working with documents, see **Creating and Managing Documents** in the *Unifier Managers User Guide*.

By default, files attached to business processes are placed in the **Unpublished Documents** folder in the **Document Manager**. A **Publish Path** data element can be designed in business processes to specify the automatic publishing of documents to a specified path and override the default. For details about automatic publishing of documents, see the *Unifier Managers User Guide*.

Drawing files attached to Document-type business processes may be accompanied by multiple reference files, which may need to be resolved when attaching a drawing file.

Notes:

- Before sending a workflow BP to the next step or submitting a non-workflow BP, you can rename an attachment. If you change the name of an attachment, make sure that you do not change the file extension, which can render the file inaccessible in Unifier Viewer. For example, do not change an extension from .txt to .docx.
- You cannot upload and attach two documents with the same name to a BP record.
- For security, the Company Administrators can use the **Security** tab on the **Company Settings** node to specify the types and size of files that can be uploaded to the system by users and per company policy. Contact your Company Administrator for more information.

Antivirus scanning of files

If you are using an Oracle Cloud-based deployment, Unifier includes a virus scanner. To prevent virus attacks from infiltrating your system through external files, the system scans each file that is uploaded. Until the scan is completed, the file remains in a Scan Pending state.

At a minimum, the system scans each file that is uploaded, submitted, or attached through the following channels:

- Document Manager
- Business processes (BPs)
- Image pickers
- Cells within forms or sheets
- Custom Templates for use with custom prints and reports
- XML Localization Interchange File Format (XLIFF) files used for translation support
- Custom Help files, such as those provided through a uDesigner object
- Bluebeam sessions
- Webservice Get calls
- Import of comma-separated values (CSV) or Microsoft Excel files

Depending on how your environment is configured, the following actions might occur:

- If the virus scanner detects an issue with a file that a user is uploading, the system sends an email to the user who uploaded the file and the designated company contact. Depending on the location of the infected file, the system might display a bug icon (if the system is configured to display alerts) or an ellipsis icon (if the system is configured to prevent the display of alerts).
- If a user tries to access or download a file that has not yet been scanned and the environment is configured to display alerts, the system displays a Confirmation message that requires a response to continue. If a Confirmation message appears, the user can wait and try to access the file later.
- If the virus scanner detects an issue with a file that a user is trying to view or download, an alert is displayed that indicates the file contains a threat. If multiple files were selected for download, the uninfected files are downloaded.

> **Note:** If you are using an Oracle Cloud-based Unifier deployment, see **Edit Company (Security Tab)** in the *Unifier General Administration Guide* for more information about configuring the environment to allow the display of messages regarding Scan Pending states.

Adding Attachments

To add attachments to the main form of a business process record:

1) Open a business process record.
2) Select the **Attachments** tab from the right pane.
3) To select a file from your computer, select **Attachment** and then select **Browse**.
   a. Drag and drop files from your computer to the **Drag and Drop** box, or click anywhere in the **Drag and Drop** box and navigate to your file.

b. Select if you want to revise the file automatically if a file with the same name exists.
c. Click **Upload**. The date and time that the attachment upload is also displayed.

4) To select a file from Document Manager, select **Attachment** and then select **Document Manager**.
   a. Select a file. You can select the **Find on Page** icon to help you find a file. You can expand and collapse the document structure to navigate to your file.
   b. Select the **Copy Comments** check box to copy the comments that are associated with the file you are attaching.
   c. Click **Select**.

The Publish to Document Manager check box is disabled for documents that have been added from the Document Manager. For files attached from your local system, the Publish to Document Manager check box is automatically selected; if you clear it, the attachment is not published to the Document Manager.

If the **Attachments** tab of the business process form contains any attachments, an **Attachment** indicator is displayed. If the tab contains no attachments, the right pane is refreshed and the indicator is no longer displayed.

Additional Information about Adding BP Record Attachments

Text-type BPs do not support record-level attachments; therefore, you cannot add attachments to upper form or action form.

> **Note**: You cannot add record-level attachments to text-type BPs through integration, using CSV (Excel) import or SOAP or RESTful services.

Main Form: The main form, also referred to as the upper form, is the upper portion of a BP form. The main form contains the basic information that the form is managing, such as the name of a record and its description, who created the record and when, and so on. It also contains general data entry, informational, or reference fields for the BP form.

Action Form: The action form is the version of the BP form that opens when the recipient accepts the task implicit in the form. As a BP arrives at each step in a workflow, the system notifies the appropriate users, if they are involved in the step. When they open the notification, the system displays a view-only form of the step's task. If the user accepts the task, the form becomes an action form where the user can enter or edit information and attach additional documents. See also “View Form” in the *Unifier Data Reference Guide.*

You can include attachments in all other types of BP records, by using the Attachments tab. To include comments and comment attachments, go to the Comments tab.

You can add attachments to the text entry form, along with your comments. These attachments can be viewed, in the response list. Attachments to comments are available in the unpublished documents section.

You can also add attachments to line items. For more information, see ***Adding Line Item Attachments***.

Opening an Attachment

Before a task is accepted, you can review or download attachments. After it is accepted you can review, download, revise, rename, and remove attachments (depending on the properties of the form.

To open an attachment:

1) In the right pane, select the **Attachments** tab.

   The tab displays a list of attachments. If there are revisions, the Revised column includes a check mark. If you review the attachment, the revisions are displayed in the list of attachments. The Reference Record tab is displayed only if there are references to drawing file attachments.

2) Select an attachment, and then do one of the following:
   - If the attachment is a drawing file, select ⚙ and then select **Open in AutoVue** or double-click the name of the attachment.
   - For all other attachments, double-click the name of the attachment. The attachment opens either in the Native or Unifier Viewer, depending on your default setting. If Native is your default viewer, your Company Administrator enabled Office 365 integration, and the attachment is a CSV, DOCX, PPTX, or XLXS file, the attachment opens in Microsoft 365 (Office for the web).

For more information on adding annotations and markups, see ***Add Markups to a Business Process Attachment***.

Renaming an Attachment

Before sending a workflow BP or submitting a non-workflow BP, you can update the name of (rename) an attachment.

1) In the right pane, select the **Attachments** tab.

   A list of attachments is displayed.

2) For the attachment in the **Unpublished Attachments** list that you want to rename, click the *gear menu* (⚙), and select **Rename**.
3) In the **Rename Attachments** dialog box, update the name, and click **Save**.

   Note: When you change the name of an attachment, make sure that you do not change the file extension, which can render the file inaccessible in Unifier Viewer. For example, do not change an extension from .txt to .docx.

4) When the **Notification** message appears, click **OK**.

Attach Files to Comments Section of a Business Process

The **Comments** tab lets you enter your comments and attach documents or files that can provide more information about a BP record.

> **Note:** The Comments option cannot be used for updating any BP record.

To use the Comments option to enter your comment and attach files or documents:

1) Go to the shell tab and switch to **User** mode.
2) Open the Business Process (BP) record.

   A BP record could be in a folder such as Project Delivery, Cost Manager, Cost Controls, and so forth, in the left Navigator.
3) In the right pane of the BP record, click the **Comments** tab.
4) Click the **Attach Files** button (paperclip) and select one of the following options:
   - Browse
   - Document Manager
5) When you are finished adding attachments, click **Post**.

> **Note:** The attachment sources (**My Computer** and **Unifier Folder**) are available based on the BP design; these two options may not be available for a given BP.

The following topics explain the file attachment options in detail.

Attach Files to a Document-type BP from My Computer

This option lets you attach files from your computer or your local system onto a Document-type Business Process record.

After you select this option, the **Upload Files** window opens. You can add files to this list with the **Browse** button. This will open your system's file manager where you can select files to open.

You can either drag and drop files into the attachment list or use your system's file manager to add the files to the list. You cannot upload two files with the same name. After all files have been added, click **Upload** to add them to the attachment list in the Comments tab.

> **Note**: The system does not attach folders. If you select a folder, the system attaches the contents of the selected folder, in a flat list.

By default, files attached to a business process are placed in the **Unpublished Documents** folder in the Document Manager grouping node.

A Publish Path data element can be designed in Business Processes to specify the automatic publishing of documents to a specified path and override the default. For details about automatic publishing of documents, see the *Unifier Managers User Guide*.

Attach Files to a Document-type BP from Unifier Folder

This option lets you attach files from the **Document Manager** (Documents folder).

When you select this option, the **Select Files** window opens, which displays all the folders of the Project/Shell documents.

Navigate through the listed folders to find documents to attach. You can highlight multiple files with Ctrl or Shift. After you have gathered all the applicable files, click **Select**.

Notes:

- Folders are not attached. Instead, the contents of a selected folder are attached in a flat list.
- The system does not allow attaching files with duplicate file names.

By default, files attached to a business process are placed in the **Unpublished Documents** folder in the Document Manager grouping node.

To access this folder:

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Document Manager**, and then select **Unpublished Documents**.

A Publish Path data element can be designed in Business Processes to specify the automatic publishing of documents to a specified path and override the default. Refer to *Unifier Managers User Guide* for details about automatic publishing of documents.

Document-Type Business Process Forms (Without Folder Structure)

A Document-type BP *without* folder structure does not maintain the folder structure of the attached documents and folders, and the files (within the attached folders and sub-folders) are listed in a flat list.

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Logs** and open a Document-type BP *without* folder structure.
3) Open a record. By default, the record properties window (**General** tab) opens.

Note: Document BP without attribute form is not supported in the user interface.

The following explains each tab.

General tab

On the upper-right side of the record window, you can **Accept** or **Decline**, and use the **Menu Options** icon (three horizontal lines) to perform and access the following:

- **Add more assignees**
- **Auto-create**
- **CC more users**
- **Email as Attachment**
- **Print (HTML, PDF, Custom)**
- **AutoVue Review**

- **Terminate Record**
- **Transfer Ownership**
- **Help (record help and User Productivity Kit)**
- **Close**

On the left pane, you have the following options:

- **Record No.**
- **Status**
- **Title**
- **Revision no.**
- **Issue Date**
- **BP Creator**
- Other fields

On the right pane, you have the following tabs:

- **Comments**
- **Linked Records**
- **Linked Mail**
- **Workflow Progress**
- **Audit Log**
- **Reference Records**

The **Maximize** icon is also available to expand the screen.

Line Items <line items> tab. The line items for Document-type BP are displayed according to the line item log designed in uDesigner.

On the upper-right side of the record window, you can **Accept** or **Decline**, and use the **Menu Options** icon (three horizontal lines) to perform and access the following:

- **Add more assignees**
- **Auto-create**
- **CC more users**
- **Email as Attachment**
- **Print (HTML, PDF, Custom)**
- **AutoVue Review**
- **Terminate Record**
- **Transfer Ownership**
- **Help (record help and User Productivity Kit)**
- **Close**

On the left pane, you have the following toolbar options:

- **View Comments by**
- **Download**
- **Refresh**
- **Print**

- **Search**
- **Find on Page**

  The following columns are also displayed:
  - **Name**
  - **Record Comments** (callout icon)
  - **Draft Comments** (pen icon)
  - **Line Item Status**
  - **Short Description**
  - Other fields

On the right pane, you have the following tabs:

- **Line Item Details**
- **Attachments**
- **Linked Records**

Refer to *Unifier Managers User Guide* for more details.

Adding Attachments to the Line Item

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Logs** and open a Document-type BP *without* folder structure.
3) Open a record. The record **General** tab opens, by default.
4) Click the **Line Items** <line items> tab.
5) On the right pane, click the **Attachments** tab.

Attachments tab

When you create a line item, the system allows you to use the paper-clip icon to attach a file to your record. After you save the line item, the **Attachments** tab appears for the record.

The **Attachments** tab provides additional details about an attachment in the following columns:

> **Note:** You can preview the file in the **Attachments** tab. Click the expand icon to expand the window and see the file preview.

- **Publish** (select or deselect)
- **Name**
- **Bluebeam Session Status**
- **Comments**
- **Envelope Code**
- **Revised**
- **Title**
- **Pub. No.**
- **Rev. No.**
- **Issue Date**
- **Size**

- **Location**

In addition, if there is a revision to an attachment, the following columns are displayed in the **Revisions** block:

- **Publish** (select or deselect)
- **Name**
- **Comments**
- **Ref.**
- **Pub. No.**
- **Upload Date**
- **Size**
- **Upload By**
- **Rev. No.**
- **Issue Date**

Use the *gear menu* (⚙) next to the file to:

> **Note:** After saving the line item, you must use the *gear menu*, next to the attachment (file), to remove the attachment. Use the trash can icon to remove your attachment prior to saving the line item.

- **Review**
- **Open in AutoVue** (You can also open an attachment by double-clicking the name of the attachment)
- **Download**
- **Revise**
- **Remove**

Importing Attachments (Without Folder Structure)

You can create line items in a Document Type BP without folder structure record and import attachments into the line items (go to a Document Type BP without folders record, click **Actions**, and select **Import Attachments**). For any Workflow, Non-Workflow, or Document Type BP without folder structure record, you must ensure that all the required fields have values.

Document-Type Business Process Forms (With Folder Structure)

A Document-type BPs *with* folder structure maintains the folder structure of the attached documents and folders, and the files (within the attached folders and sub-folders) are listed in a flat list.

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Logs** and open a Document-type BP *with* folder structure.
3) Open a record. By default, the record properties window (**General** tab) opens.

> **Note**: Document BP without attribute form is not supported in the user interface.

The following explains each tab.

General tab.

On the upper-right side of the record window, you can **Submit** or **Decline**, and use the **Menu Options** icon (☰) to perform and access the following:

- **Email as Attachment**
- **Print (HTML, PDF, Custom)**
- **AutoVue Review**
- **Transfer Ownership**
- **View Record Location**
- **Help (record help and User Productivity Kit)**
- **Close**

On the left pane, you have the following options:

- **Record No.**
- **Status**
- **Publish Path**
- **Issue Date**
- Other fields

On the right pane, you have the following tabs:

- **Comments** (use the paper clip icon to **Browse** uploaded files or go to **Document Manager** to select files)
- **Linked Records**
- **Linked Mail**
- **Reference Records**

The **Maximize** icon is also available to expand the screen.

Line Items <line items> tab. The line items for Document-type BP are displayed according to the line item log designed in uDesigner.

On the upper-right side of the record window, you can **Submit** or **Decline**, and use the **Menu Options** icon (☰) to perform and access the following:

- **Email as Attachment**
- **Print (HTML, PDF, Custom)**

- **AutoVue Review**
- **Transfer Ownership**
- **View Record Location**
- **Help (record help and User Productivity Kit)**
- **Close**

On the left pane, you have the following options:

- **View Comments by**
- **Refresh**
- **Print**
- **Search**
- **Find on Page**
- **Expand All Groups**

  The following columns are also displayed:

  - **Name**
  - **Record Comments** (callout icon)
  - **Line Item Status**
  - **Issue Date**
  - Other fields

On the right pane, you have the following tabs:

- **Folder Details**

Refer to the *Unifier Managers User Guide* for more details.

Adding Attachments to the Line Item

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Logs** and open a Document-type BP *without* folder structure.
3) Open a record. The record **General** tab opens, by default.
4) Click the **Line Items** <line items> tab.
5) On the right pane, click the **Attachments** tab.

Attachments tab

When you create a line item, the system allows you to use the paper-clip icon to attach a file to your record. After you save the line item, the **Attachments** tab appears for the record.

The **Attachments** tab provides additional details about an attachment in the following columns:

> **Note:** You can preview the file in the **Attachments** tab. Click the expand icon to expand the window and see the file preview.

- **Publish** (select or deselect)
- **Name**
- **Bluebeam Session Status**
- **Comments**
- **Envelope Code**
- **Revised**
- **Title**
- **Pub. No.**
- **Rev. No.**
- **Issue Date**
- **Size**
- **Location**

In addition, if there is a revision to an attachment, the following columns are displayed in the **Revisions** block:

- **Publish** (select or deselect)
- **Name**
- **Comments**
- **Ref.**
- **Pub. No.**
- **Upload Date**
- **Size**
- **Upload By**
- **Rev. No.**
- **Issue Date**

Use the *gear menu* (⚙) next to the file to:

> **Note:** After saving the line item, you must use the *gear menu*, next to the attachment (file), to remove the attachment. Use the trash can icon to remove your attachment prior to saving the line item.

- **Review**
- **Open in AutoVue** (You can also open an attachment by double-clicking the name of the attachment)
- **Download**
- **Revise**
- **Remove**

Importing Attachments (With Folder Structure)

You can create line items in a Document Type BP with folder structure record and import attachments into the line items (go to a Document Type BP with folders record, open the folder, open the record, click **Actions**, and select **Import Attachments**).

If the **Enforce validations on Detail form** option has been enabled in uDesigner, the **Validate Attachments** dialog will display after you upload.

To upload attachments for import:

1) Drag and drop files from your computer to the **Drag and Drop** box, or click anywhere in the **Drag and Drop** box and navigate to your file.
2) Select one or more files using the Shift or the CTRL keys.
3) Click **Upload**.

   Each file is displayed as a line item.
4) In the **Validate Attachments** dialog, perform any of the following actions for each line item:
   - Click **Error Check** to review all errors flagged for the uploaded attachments.
   - Click **Save** if no errors display or all errors have been resolved.
   - Click **Cancel** to discontinue the import.

For any Workflow, or Non-Workflow, Document Type BP with folder structure record you must ensure that all the required fields have values.

Copying Folder (Standard View)

If you have permission to create folders in a Document-Type Business Process For (With Folder Structure), you can see an additional option in the *gear menu (* ⚙ *)*: Copy. The *gear menu* options will be:

- **Add Sub Folder**
- **Move**
- **Copy**
- **Delete**

> **Note:** The above *gear menu* options apply to the customer-created folders only and not to the system-defined root folder, "Attachments."

Using the "Copy" option lets you copy a folder into the same path where it currently exists. In this case, the name of the newly created folder will be: "Copy of <original folder name>."

> **Notes:**
>
> - The bracket ">" symbol between the source folder and the destination folder has the hover over text: "Copy to."
> - The option "Copy" remains disabled until you select a destination folder.
> - When the copy action is complete for a folder, the original source folder continues to show as the selected folder in the grid.

Attach Files to Document-Type Business Process Forms

Document-type business processes, such as Transmittals or Submittals, can be used for routing documents such as specifications or drawings for review.

> **Note**: Comments and graphic markups can be added to individual files, and the document list is easily accessible from the BP form.

Document-type BPs can be designed such that files can be added to individual line items. This feature lets you assign line-item status to individual documents. If the status of the line item (and therefore, the associated document) reaches a specified status, for example, Approved, the BP can be set up so that the line item is no longer editable. At this point, attachments and comments to that line item are no longer allowed.

There are two subtypes of Document-type BPs:

- **Document-type BPs with folder structure**

  A Document-type BPs *with* folder structure maintains the folder structure of the attached documents and folders, and the folder structure is displayed in the lower-left pane of the form.

  For Document-type BPs *with* folder structure, the designer can specify that a configured folder path be appended to the folder structure. This appended path is based on the path configured in the **uuu_dm_publish_path** data element on the business process form, and the selection of the **Append Line Items Folder Structure** to **AutoPublish Path** option, which is documented in the *Unifier uDesigner User Guide*.

- **Document-type BPs without folder structure**

  A Document-type BPs *without* folder structure does not maintain the folder structure of the attached documents and folders, and the files (within the attached folders and sub-folders) are listed in a flat list.

To attach files to a Document-type BP:

1) Go to the shell tab and switch to **User** mode.
2) Open the BP record.

> **Note**: A Business Process (BP) record could be in a folder such as Project Delivery, Cost Manager, Cost Controls, and so forth, in the right Navigator.

3) Go to the **Line Item** tab <tab name> (the very last tab) and click and open a line item.
4) Click the **Attachments** tab in the right pane, click **Attach Files**, and select one of the following options:
   - **Browse** (local system)
   - **Document Manager** (Document Management)

> **Note**: The attachment sources are available based on the BP design and both of these two options may not be available for a given BP.

The following explains each option in detail.

Attaching files to a Document-type business process with Browse

This option lets you attach files, from your computer or your local system.

After the **Upload Files** window opens, click **Browse** to open your system files.

Select the document that you want to attach.

> **Note**: You cannot select a folder.

After you select the file, click **Open .** All selected files will be added to the **Upload Files** window. When you have selected all files that you want to upload, click **Upload** in the lower-right corner.

After you attach your files, you can see the files listed in the **Attachments** tab, within the **Line Item** tab. The **Line Item** tab <tab name> (the very last tab) has two panes. The pane on the left displays the line items. The pane on the right displays the line item details, all attached files, and any linked records.

When you upload a file from My Computer as an attachment, to be able to enter file-related values for that attachment, the Detail Form design of Document Type with Folder Structure BP (Advanced Document Type BP), must have the following fields:

- **uuu_title**
- **uuu_revision_no**
- **uuu_issue_date**

> **Note**: When attaching files from the Document Manager, some fields on the line item may auto-populate with data from the document or folder Properties window. Document-type BPs can be designed to auto-populate certain data elements on the detail form with data from matching data elements on the Document Attribute Form.

By default, files attached to a business process are placed in the **Unpublished Documents** folder in the **Document Manager** grouping node.

To access this folder:

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Document Manager**, and then select **Unpublished Documents**.

A **Publish Path** data element can be designed in business processes to specify the automatic publishing of documents to a specified path and override the default. Refer to the *Unifier Managers User Guide* for details about automatic publishing of documents.

Attaching files to a Document-type business process with Document Manager

This option lets you attach files from the **Document Manager** (Documents folder).

When you select this option, the **Select Files** window opens, which displays all the folders of the Project/Shell documents.

Navigate through the listed folders to find documents to attach. You can highlight multiple files with Ctrl or Shift. After you have gathered all the applicable files, click **Select**.

Notes:

- Folders are not attached. Instead, the contents of a selected folder are attached in a flat list.
- The system does not allow attaching files with duplicate file names.

By default, files attached to a business process are placed in the **Unpublished Documents** folder in the **Document Manager** grouping node (go to the shell tab and switch to **User** mode; in the left Navigator, select **Document Manager** and then select **Unpublished Documents**).

A **Publish Path** data element can be designed in business processes to specify the automatic publishing of documents to a specified path and override the default. Refer to the *Unifier Managers User Guide* for details about automatic publishing of documents.

Add Markups to a Business Process Attachment

You can add markups, such as circles or other graphical elements as well as text, to a document, which display directly on the document, but do not alter the document itself. Markups are layered on top of a file, as if the markups had been done on an acetate sheet that had been placed on top of the file. Each user who adds a markup is adding a new layer to the file.

For more information about replacing and reviewing attachments, see ***Reviewing Attachments in a Business Process*** (on page 183) and ***Revising Attachments in a Business Process***.

To add a markup to an attachment on a business process:

1) To open the BP record that contains the attachment, accept the task or click **Edit** (for a non-workflow BP record).
2) On the **Attachments** tab in the right pane, select the applicable attachment.
3) To open the attachment, click the *gear menu* (⚙) and select **Review**.
4) To review existing markups, select the previous comments below the **Comments** box on the right.
5) Enter your comments and post your comments on the document.
   a. To activate an additional set of tools, such as **Pan**, **Select**, **View**, **Annotate**, and so on, click anywhere in the **Comments** box.

      For example, to annotate a document, from the toolbar, click **Annotate**, and then click one of the tool buttons located below it, such as Highlight. After you select a tool, additional options appear in the container section to the right of the toolbar. If you selected Highlight, you might also want to select a specific color to use.
   b. Use the applicable tools to mark up the attachment.
   c. If applicable, enter your comments in the **Comments** box.

d. To add attachments to your comments, click the **Attachment** icon and upload the applicable attachment.
e. When you are done, click **Post**.

> **Note:** You can add comments in one document and then move on to the next document.

6) Close the window when finished.

If you would like to change markups, right-click the comment and select **Edit**. Markups can be removed or reinstated with **Undo** and **Redo.** New annotations can be added as well. When you have finished editing, click **Post**.

Viewing and Adding New Markups in AutoVue

In addition to adding markups to a BP attachment, you can add and view old markups simultaneously. With this functionality, multiple members can add various markups across shared files throughout the life cycle of a design document.

When you select **AutoVue Review** in the **Gear** menu of the **Attachments** tab, a **View All Markups** option is available in the **File Viewer** of the **Comments** section. If you select **View All Markups**, the document is displayed in View-Only mode.

You can also choose the markups that are displayed by selecting the check box next to each markup. After selecting **OK**, all the chosen markups are displayed.

View Attachments in a Business Process

To view attachments:

1) Open the BP record that contains the attachment.
2) On the **Attachments** tab in the right pane, select the applicable attachment.
3) To view the **Revisions** and the **References** tabs, maximize the right pane. The **References** tab is displayed only if there are references to drawing file attachments.

   When you maximize the **Attachments** tab, the system selects the first file in the grid, by default, and a preview of the file is displayed on the right side of the window.

   The **Previous** and **Next** page buttons let you navigate between multiple pages.

The **Revisions** tab, located under the **Attachments** tab grid, lets you access the previous version of the file that you have selected, if available.

The preview screen displays the following file types:

- Image
- PDF

The audio and video files cannot be previewed. You cannot preview DLL and SWF files, but you can open them in AutoVue or download the attachment.

Download Attachments in a Business Process

Note: If you are using an Oracle Cloud-based deployment, the system displays a message when you choose to view or download files or attachments that have not been scanned for viruses. To continue, you must select **Yes** or **No**. If you select **Yes** and the system determines that the file is infected, the download is stopped; otherwise, the download completes successfully.

To download an attachment:

1) Select or open a business process record.
2) On the **Attachments** tab in the right pane, select the applicable attachment.
3) From the *gear menu* (⚙), select **Download**.

To download all attachments on a business process record:

1) Highlight the business process record from the log.
2) Select the **Attachments** tab from the right pane.
3) Click the **Download All** button on the top toolbar.

All attached files will be downloaded in a zip file, containing all the downloaded attachments.

Record level attachments are placed in the root folder while attachments belonging to line item tabs will be bundled under respective sub-folders in the zip file, with the name of the folder being the name of the line item tab.

If multiple files have the same name, a numerical suffix may be added to the file name. If more than 100 files have the same name, the suffix for the 101st file will have a time stamp as the suffix instead.

Reviewing Attachments in a Business Process

If you have a BP record that has several attachments (documents) attached to the BP record, as well as Line Items, you can review all the attached files in one place.

When you click and select a document, use the *gear menu* (⚙) to perform the following operations:

- **Review**
- **Open in AutoVue** (You can also open an attachment by double-clicking the name of the attachment.)
- **Open in Office for the web**
- **Download**
- **Revise**
- **Remove**

If you click **Review**, the **File Viewer** window opens. This window has the following sections:

- **Attachment grid:** After you add an attachment to, or remove an attachment from, the upper form, the Attachment grid will display the total number of the attachments upon clicking **Upload**. There is no need to save, send, or submit the form to see the attachment count.
- **File viewer:** Use the File viewer to perform the following operations, using the icons on top:
  - **Maximize:** To expand the viewer.
  - **Download:** To download a raw file.
  - **Zoom**
  - **Rotate:** To rotate the attached graphic.

    Rotation happens clockwise, by 90 degrees.

    Context-sensitive **Cancel** and **Save** options are made available when the system detects rotation. The **Save** option lets you save the rotational changes, and the **Cancel** option lets you reset the image back to its original state.

    Rotation will not be permitted after the first annotation is complete.
  - **Comments:** To open the Comments pane. The Comments pane lets you insert your comments and annotate the file.

a. To activate an additional set of tools, such as **Pan**, **Select**, **View**, **Annotate**, and so on, click anywhere in the **Comments** box.

b. Use the applicable tools to mark up the attachment.

c. If applicable, enter your comments in the **Comments** box.

d. To add attachments to your comments, click the **Attachment** icon and upload the applicable attachment.

e. When you are done, click **Post**.

   You can also review the comments posted by others. If a listed comment was entered using the previous Oracle Outside In Technology (OIT) technology, the comment is labeled OIT Comment and is displayed in a read-only format.

To review an attachment:

1) Open the BP record that has attachments.
2) Click the *gear menu* (⚙), and choose one of the following:
   - To open attachments in the default Unifier Viewer, select **Review**. The Review option is available for an Action Form as well as a View Form.
   - To open attachments in AutoVue, select **AutoVue Review.** This option is displayed only if your Unifier server is configured to use AutoVue.
   - If your Company Administrator enabled Office 365 integration and the attachment is a CSV, DOCX, PPTX, or XLXS file, select **Open in Office for the web**.

   The attachments and comments are displayed in the BP Attachment Viewer.
3) Review the comments posted by others.

   If a listed comment was entered using the previous Oracle Outside In Technology (OIT) technology, the comment is labeled OIT Comment and is displayed in a read-only format.

4) Enter your comments and post your comments on the document.

   Using the Unifier Viewer:

   a. To activate an additional set of tools, such as **Pan**, **Select**, **View**, **Annotate**, and so on, click anywhere in the **Comments** box.
   b. Use the applicable tools to mark up the attachment.
   c. If applicable, enter your comments in the **Comments** box.
   d. To add attachments to your comments, click the **Attachment** icon and upload the applicable attachment.
   e. When you are done, click **Post**.

   Using AutoVue:

   f. Click the **Markup** icon in the **Comments and Revision** window.
   g. Use the markup toolbar displayed in the **Document** window to mark up your document.
   h. Enter your comments in the **Comments and Revisions** window and click **Post**.
   i. Click the paper clip icon to attach files to the comment.

5) Undo changes with the toolbar option or Ctrl+z.
6) Redo changes with the toolbar option or Ctrl+y.

Notes:

- You can add comments in one document and then move on to the next document.
- All comments are displayed in both viewers regardless of which viewer the comments were added in. Markups are visible only in the viewer they were made in.
- You can consolidate attachments and multiple comments (and their respective mark ups). This option is available if you are viewing the file in AutoVue.
- You can only make changes in comments that are in draft status. You cannot make changes on existing comments.

7) Close the window when finished.

Additional information about the Review screen

If a BP record has reached a terminal status (Terminal Status or Terminated Status), the Review window opens in Read-Only mode.

If a hidden tab on a BP record contains attachments, the review screen does not display those attachments.

If the attachments present on a Query-based tab (QBT) on a BP record contain attachments, the review screen does not display those attachments.

The Review screen does not display the line times for Cost BP Records of Summary Payment Application (SPA) Schedule of Values (SOV) type. For this type of BP, you can include comments in the General Comments field.

The Review screen lists all document revisions for each revised document.

The Review window lists all the BP Record-level and Line Item-level attachments grouped first by BP Record attachments and then by Line Item attachments, according to the tab order.

When you select a file in the Review screen, the system displays the files content in the AutoVue section of the screen. If you click the comment icon, the system opens the comments window.

Revising Attachments in a Business Process

You can revise/edit documents that are attached to any BP record or Line Item. If your Company Administrator enabled Office 365 integration, you can use Microsoft 365 (Office for the web) to revise attachments for Generic Line Item, Cost type with Line items with CBS code, Document Type, and Simple BPs.

Notes:

- Revising a document replaces the existing file (with the same name) in a BP record or Line Item.
- If the terminal status of a BP record has been reached, the system disables the document revision option.

To revise an attachment by uploading it from your local machine:

1) Open a business process record.
2) In the right pane, select the **Attachments** tab.
3) Select an attachment, click ⚙ , and then select **Revise**.
4) Select the file you want to revise, click ⚙ , and then select **Browse**.
5) Select the revised file to upload and click **Open**.
6) Click **Upload**.

   To see a list of revised documents, maximize the Attachments tab on the right pane.

   If the name of a file that you attach to a BP record, or Line Item, matches the name of a file that exists in the BP record, or Line Item, the system lets you automatically revise the existing file (**Revise automatically if file with same name exists**) with the newly attached file.

To revise an attachment using Microsoft 365:

1) Open a business process record.
2) In the right pane, select the **Attachments** tab.
3) Select an attachment, click ⚙ , and then select **Open in Office for the web**.

4) Make the applicable changes and click **Save**.

To see a list of revised documents, maximize the Attachments tab on the right pane.

View Graphic Markups in a Business Process Attachment

To view graphic markups:

1) From the BP Attachment Viewer, locate the comments pane. Markups are associated with a specific comment.
2) Click a comment to view markups associated with the comment. Comments that have markups display the **Annotation** icon in the comment listing.

> **Note:** All comments are displayed in both viewers regardless of which viewer the comments were added in. Markups are visible only in the viewer they were made in.

Publish Attachments or Revised Attachments in a Business Process

By default, documents attached to BP record, or Line Item are published in the **Unpublished Documents** folder. For Document-type BP record, or Line Item, with Folder Structure, the Company Administrator can specify that a configured folder path be appended to the folder structure. Refer to the *Unifier Data Reference Guide* for details.

The system publishes to the Document Manager:

- Documents attached to the BP record.
- Documents attached to the Line Item of the BP record.

> **Note**: Comments related to a document attached to the BP record and its Line Item are not carried over to the Document Manager when published.

You can auto-publish attachments if a BP has been set up to **Override DM Permissions** by your administrator or, you can include the **uuu_dm_publish_path** Data Element in the BP record, or Line Item. Alternatively, if the folder path in the business process is invalid, navigate to the **Unpublished Documents** node, select your file, and click **Publish**.

Remove Attachments from a Business Process

To delete an attachment:

1) Open a BP record.
2) Select the **Attachments** tab from the right pane.
3) Select an attachment, click , and then select **Remove**.

Comparing File Attachments

The system lets you compare different revisions of a file that is attached to a:

- Business Process (BP) record.
- BP Line Item.
- Document in Document Manager.

To compare different revisions of a file or document that is attached to BP record and BP Line Item:

1) Open the BP that has attachments.
2) Click **Review** to open the **BP Attachment Viewer** window.
3) Select an attachment.
4) Click **Analysis** and select **Compare**.
5) Select the revision that you want to compare the current version with.
6) Follow the prompts and click **Finish** when done.

To compare different revisions of a file or document in **Document Manager**:

1) Go to **Document Manager** and open the folder.
2) Select a file that has revisions and click **Open** to open the **View File** window.
3) Click **Analysis** and select **Compare**.
4) Select the revision that you want to compare the current version with.
5) Follow the prompts and click **Finish** when done.

The system also lets you compare any Unifier file with a file on your local system.

1) Open the BP that has attachments.
2) Click **Review** to open the **BP Attachment Viewer** window.
3) Select an attachment.
4) Click **Analysis** and select **Compare**.
5) Deselect the check box for revisions.
6) Click **Browse** to select the file from your local system.
7) Follow the prompts and click **Finish** when done.

To compare a file or document in **Document Manager** with a file on your local system:

1) Go to **Document Manager** and open the folder.
2) Select a file that has revisions and click **Open** to open the **View File** window.
3) Click **Analysis** and select **Compare**.
4) Deselect the check box for selecting revisions.
5) Click **Browse** to select the file from your local system.
6) Follow the prompts and click **Finish** when done.

Republishing DM Document from BP Record

When a BP type lets you select **Republish if Publish Path is different from current location** (**Move** or **Copy**), then:

Note: This option is not available for the Text-type BPs (because these types of BPs do not support attachments) and RFB BPs bidder upper action form.

You can change the Publish option (in the **Publish to Document Manager** section) in the BP record in any attachment that you add from the Document Manager (DM).

When you select the Publish option, you can **Move**, or **Copy**, the attachment to a location (publish path as captured in the uuu_dm_publish_path). You can check **Automatically select all existing Record and Line Item Attachments for Republish.** The user can also Select all or deselect all attachments by checking or unchecking the check box in the column heading of the attachments grid.

If the uuu_dm_publish_path is the same as the current location of the file in DM, the file in DM stays as is, and there will be no revision or republish.

If the uuu_dm_publish_path is different from the current location of file in DM, then:

- If the **Move** option has been selected (in uDesigner), the file (with all its revisions) can be moved from the original DM location to the new uuu_dm_publish_path. This type of move is the same as a manual move of a file from one location to another location in DM, and it is captured in the Audit Log. Furthermore, the BP record assignee (the user who initiated the move action) is also captured in the Audit Log.
- If the BP step assignee does not have Add Folder or Add Documents permission, then if the BP step assignee:
  - Selects Send or Finish Editing, the system displays the following alert:

  The following attachment(s) cannot be moved to <label of DE uuu_dm_publish_path> as you do not have permissions:

  <File 1 Name>

  <File 2 Name>

  ...

  Do you want to proceed?

  If the answer is **Yes**, the record is sent to the next step or finish edit without moving the file.

  If the answer is **No**, the record is not moved to next step or finish edit, and the record stays at the current step giving the BP step assignee a chance to change the publish path or take other action.

> **Note:** If the source file is locked or checked out, then the source file remains in the same state, at the destination after the move.

- If the **Copy** option has been selected (in uDesigner), the latest revision of the file (from the original DM location) is copied into the uuu_dm_publish_path. The new copied file, at a new DM location, is linked to the BP record. The original file (with all its revisions) remains in the original DM location, as is, and it is not linked to the BP record.
- If the BP step assignee does not have Add Folder or Add Documents permission, then if the BP step assignee:
  - Selects **Send** or **Finish Editing**, the system displays the following alert:

  The following attachment(s) cannot be copied to <label of DE uuu_dm_publish_path> as you do not have permissions:

  <File 1 Name>

  <File 2 Name>

  ...

  Do you want to copy these attachment(s) to Unpublished Documents?

  If the answer is **Cancel**, then the record stays at the current step.

  If the answer is **Skip**, then the file (or files) will not be copied and stay as is. The original file shows as an attachment and linked to the BP record. The record can be moved to the next step or finish edit.

  If the answer is **Copy**, then the file (or files) will be copied to the Unpublished Documents for the project/shell. This new file in the Unpublished Documents is linked to the BP record. The original file stays as is, and it is not linked to the BP record. The record can be moved to the next step or finish edit.

For both the **Move** and **Copy** option, if the destination location already has a file with the same name as the file that is being moved or copied, the existing file will be revised with the new file from the BP. And if:

- The same name file in the destination is already checked out, the system revises the checked-out file with new file from BP and leaves this new file as checked out in the new location.
- The same name file in destination is locked, the system revises the locked file and the newly revised file will be locked (same as if a user revises a locked DM file attached to a BP record).
- The source file is in a checked out, or locked state, and at the destination the same name file is also checked out or locked, the destination file state remains (the final file at destination location shows as locked or checked out based on its previous state in same location). In these scenarios (when destination location has a file with same name), the permission to revise the destination file has to be selected.

If the user has the permission:

- In the case of **Move**, the source file revises the destination file with all its revisions. As a result, if source file has two revisions, and the destination file has three revisions, the final file in the destination location after the move will have five revisions (two revisions from source file added on top of the three revisions in destination file).
- In the case of **Copy**, only the latest revision of the source file revises the destination file.

If the user does not have the permission:

- In the case of move, if **Send** or **Submit** is selected, the system displays the following alert:

  The following attachment(s) cannot be moved to <label of DE uuu_dm_publish_path> as you do not have permissions:

  <File 1 Name>

  <File 2 Name>

  ...

  Do you want to proceed?
- In the case of **Copy**, if **Send** or **Submit** is selected, the system displays the following alert:

  The following attachment(s) cannot be copied to <label of DE uuu_dm_publish_path> as you do not have permissions:

  <File 1 Name>

  <File 2 Name>

  ...

  Do you want to copy these attachment(s) to Unpublished Documents?

If the uuu_dm_publish_path is blank, then:

- If the republish option as **Move** is selected, the file stays at the original location, and the file will not be moved to Unpublished documents.
- If the republish option as **Copy** is selected, the latest revision of that file is copied into the Unpublished Documents.

> **Note:** The above scenarios apply to both Upper Forms and Detail form attachments of a BP record.

When a BP record moves from one step to the next (in uDesigner the Publish Path is different from current location option is selected):

- If the next step form has the option **Publish Path is different from current location** checked, the same process occurs (as stated above). If you select **Publish** for an already published attachment again, that attachment will be published to the uuu_dm_publish_path again.

> **Note:** This is the same as when the destination already has a file with the same name as the one being published is triggered (as stated above).

- If the next step form does not have the option **Publish Path is different from current location** checked, the same process occurs as for attachments from DM on a BP record.

Note: If you add any attachment to the BP record from the DM, the attachment moves into the Published Attachments group, on the log. If you add an attachment from a local area, the attachment moves into the Unpublished Attachments group. As the unpublished attachments get published to the DM (upon clicking Submit or routing the record to next step), those attachments move into the Published group.

About Linking Business Process Records to other Business Process Records

You can create a link from one business process to another, or from a line item to a business process. Other users will be able to click the link and view the referenced business process. Linked records are added and viewed from the Linked Records link at the bottom of the BP form. If records have been linked, the number of records will appear next to the Linked Records link.

Note: This option is available only in BPs that have been designed to accommodate linked records. A user's ability to view a linked BP record is based on the user's permissions. If users cannot see the record in the log, they cannot see it in the link.

Linking BP Records to other BP Records

To link a business process record to another business process:

1) Open an existing BP record or create a record.
2) In the right pane of the BP form, click the **Linked Records** tab.
3) Click **Add** ( ) **.** The **Add Records** window will open.
4) In the **Select Business Process** drop-down menu, select the type of business process of the record you want to link. You can use the **View** drop-down menu or **Find on Page** options to filter the list of available records.
5) From the resulting list of BP records, select the record(s) to link to the open business process form click the single arrow pointing to the right to add it to the **Selected Records** area. You can click the single arrow pointing to the left to remove records from the **Selected Records** area, or press the double arrows in either direction to add or remove all records in the log.
6) Click **Done** when finished.

To link a line item to a business process record:

1) Open an existing BP record or create a record.
2) In the left pane of the BP form, click the **Line Items** tab.
3) Select a line item from the log to link to a BP record.
4) In the right pane of the BP form, click the **Linked Records** tab.
5) Click **Add.** The **Add Records** window will open.
6) In the **Select Business Process** drop-down menu, select the type of business process of the record you want to link.

7) From the resulting list of BP records, select the record(s) to link to the open business process form click the single arrow pointing to the right to add it to the **Selected Records** area. You can click the single arrow pointing to the left to remove records from the **Selected Records** area, or press the double arrows in either direction to add or remove all records in the log.
8) Click **Done** when finished.

To link a line item from a business process record to another business process record by way of consolidation, use the **Actions** drop-down, select **Consolidate Line Items**, and create a line item.

> **Note:** The "Prevent consolidating the same line item across multiple records" option must be enabled to prevent the user from consolidating line items that have already been consolidated. If this option is enabled, the line Items cannot be edited, later. The system ensures that the line items can be consolidated only once, across all the business.

When you link a business process record, using any of the methods explained above, the Linked Records tab shows the Current View for all records and provide the following details:

- Direction
- Type

  The contents of the Type column indicates whether the linked record has been associated automatically (by way of Line Item Consolidation), or manually (by way of manual linking).
- Business Process
- Record Number
- Record Title
- Record Location

  - If the BP is a company-level BP, the Record Location shows the Company Workspace tab name.

  - If the BP is a Project-level BP, the Record Location shows the Project name.

  - If the BP is a Shell-level BP, the Record Location shows the Shell location.

> **Notes:**
>
> - You cannot remove the link Type: Line Item Consolidation.
> - If there are multiple line items consolidated from the same BP record, then the BP record will be seen as a linked record for that many line items.
> - If the line item with the link Type: Line Item Consolidation moves to the status, "Previously consolidated lines are available when terminal status equals" in uDesigner, or is terminated, the link will be automatically removed.

Manage Linked Records

To view a linked record:

1) Open a BP record and click the **Linked Records** tab in the right pane. If you are opening a linked record associated with a line item, select a line item tab and select the line item.
2) From the Links Log, hover over the record link, click the *gear menu* ( ), and click **Open**.

To remove a linked record:

1) Open a BP record and click the **Linked Records** tab in the right pane.
2) From the Links window, hover over the record link, click the *gear menu* ( ), and click **Delete**.

> **Note:** From this window, you cannot delete a record with a From direction. To delete the record, you must open that record, click the **Linked Records** tab, and remove it from the Links window.

Working with Linked Mail

The **Linked Mail** tab lets you link existing emails (Mailbox items) or compose new emails to a BP record. On any action form, you can view the referenced mail. Click the **Add** drop-down menu to view the following options:

- **Mailbox:** To link mail from your Mailbox
- **Project Mailbox:** To link mail from the Project Mailbox
- **New Mail:** To compose emails and add attachments from your computer or Document Manager. After the mail is submitted, it gets linked to the record and displayed in the **Linked Mail** tab.

When the **Linked Mail** tab is maximized, the left section displays the grid, and the right displays the functions, content, and attachments of the selected mail. If you are a participant in the email, you can see the action buttons: **Reply**, **Reply all**, and **Forward**, as well as the **More** drop-down menu, which has options to **Flag**, **Clear Flag**, **Print**, and **Delete**. If you are not a participant in the mail, you can see the option to **Print**.

Opening or Deleting mail

From the grid, click the *gear menu* ( ) and select **Open** or **Delete**. Alternatively, you can double-click the mail, in the grid. When you select multiple mailbox items, the only option available is **Delete**.

Viewing content of the linked record

To view the full content of the linked record, double-click an entry in the grid.

Composing Linked Mail

You can create and send a Mailbox message from the BP record. You must send the message before sending the BP to automatically link it to the BP record. The Mailbox message will be stored in the Project Inbox, the **Sent Items** node in the Home tab (Home workspace), and the Inbox of recipients. In addition, if you or the recipient reply to the message, the reply will also automatically be linked to the BP record.

> **Note:** If you create a Mailbox message and save it without sending, it will remain in your Mailbox Draft log in the current project/shell.

To compose a message to link to a BP record:

1) Select a BP record.
2) From the right pane, select the **Linked Mail** tab.
3) Click **Add** and select **New Mail**.
4) Compose your message and click **Send**. The following additional options are displayed: **Save**, **Delete**, **Attach**, **Flag**, **Clear Flag**, **Print**, **CC**, and **Bcc**.

After the mail is sent or saved, it will appear in the Linked Mail grid.

Adding from Project Mailbox

In addition to composing linked mail, you can link mail that exists within a mailbox to a business process. The Project Mailbox option will be seen only if user has permissions to the Project Mailbox.

To link message from the Project Mailbox to a BP record:

1) Select a BP record.
2) From the right pane, select the **Linked Mail** tab.
3) Click **Add** and select **Mailbox** or **Project Mailbox**. The Add from Mailbox window is displayed.
4) Use arrows to select the messages you want to link from the Available Items column to the Selected Items column.
5) Click **Done**.

Manage Linked Mail

You can view or remove linked Mailbox messages.

To view linked Mailbox messages:

From the Linked Mail window, click the *gear menu (*), and then click **Open** or double-click the email. The Message window opens.

To remove a linked Mailbox message:

From the Linked Mail window, click the *gear menu (* *)*, and then click **Delete**.

Reply To or Forward a Linked Mailbox Message

If you receive a Mailbox message with the caption, **This mail and any future replies are linked to business process records**, beneath the subject line, that Mailbox message is linked to one or more BP records. If you click **Reply**, **Reply All**, or **Forward** and then send your response, the reply will also automatically be linked to the BP record.

View the List of Linked BPs from a Mailbox Message

To view linked BP records from a Mailbox message:

1) Open the business process record.
2) Click the **Linked Mail** tab. The Linked Mail window opens, showing the emails that are attached to the record.
3) Select the email you want to view, and use the *gear menu* (⚙) to click **Open** or double-click the email. The system opens the email.
4) Below the Subject line is an information icon with the following caption:

   This Mailbox and any future replies are linked to business process records.
5) Click the **business process records** link. The system opens the Linked Business Process Records window, which shows a list of all business process records to which this email is attached.

   You can select a business process record from the list to view its record details in the right pane.

Send and Manage Linked Mailbox from RFB Forms

The ***Request for Bid (RFB) Business Processes*** (on page 364) have special linked Mailbox functionality within the **Proposal Management** tab. For RFB business processes, the creator of the RFB form is allowed to correspond with internal users or with RFB bidders. Unopened emails are displayed in boldface type to indicate that they have not been viewed.

When you *send* an email to a bidder, the system includes information in the subject line that helps the recipient identify that the message is for an RFB and it lists the RFB Record Number. The body of the message includes additional information, such as the Record Number and Title, and indicates the type of change made to the RFB.

When you *receive* an email from a bidder, the system includes information in the subject line that helps you identify that the message is for an RFB, it lists the RFB Record Number, and it indicates that the recipient received the original RFB request. The body of the message includes additional information, such as the Project Name and Project Number, critical bidder information such as the name of the company, first and last name of the contact, and the contact's email address, and a text field in which the bidder has entered additional information.

To send a Mailbox message from an RFB form:

Open the RFB BP form and click the **Proposal Management** tab. You can send a message to internal users of the system, which includes your Unifier project/shell team, or to invited bidders.

To send a message to an internal user:

1) Click the **Mail** tab in the right pane.
2) Click **Add** and select Mailbox or Project Mailbox to add existing mail from another mailbox, or select New Mail to compose a new message.

To send a message to a bidder:

1) In the left pane, hover over the desired bidder and click the *gear menu* ( ).
2) Click **Send Mail** to compose a message.

> **Note:** You will not be able to save a draft copy of composed mail if it is being sent to a bidder.

Bidders will be allowed to view and access Mailbox after they are signed in to the system using a special sign in.

Bidders can also create and add Mailbox messages from the RFB form. The **To** field is auto-populated with the requestor name. The **Cc** and **Bcc** buttons are not available; however, bidders can fill in external **Cc** and **Bcc** fields with external email addresses. When bidders reply or forward Mailbox messages, these will be linked with the record.

Bidders will not be able to create any new Mailbox after the bid due date.

To view a list of emails sent:

1) Click the **Mail** tab in the right pane.
2) Use the column headings to sort the list by **From**, **To**, **Bidder Company**, **Subject**, or **Date**, or use **Find on Page** to specify search criteria.

Attaching External Emails from the Project or Shell Mailbox to a Record

The system collects all external emails it receives for a project/shell in a dedicated mailbox. You can attach these external emails directly to a business process record. Other users can view the email from a link on the record. A single email can be attached to more than one business process record.

External emails that have been blind copied (Bcc'd) are not collected by the **Mailbox**.

To attach an external email to a record:

1) Open the business process record to which you want to attach the email.
2) Click the **Linked Mail** link at the bottom of the form. The Linked Mail window opens.
3) Click **Add** and choose **Mailbox** or **Project Mailbox**. The **Add from Mailbox** or **Add from Project Mailbox** window opens, showing a list of the external emails that have been received for the project/shell.
4) Select the emails you want to attach to the record, and click the **right arrow** button.
   The system adds the email to the Linked Mail window.
5) Click **done**.

To open an external email attached to a record:

1) Open the business process record.
2) Click the **Linked Mail** link at the bottom of the form. The Linked Mail window opens, showing the emails that are attached to the record.
3) Select the email you want to view, and use the *gear menu* (⚙) to click **Open**. The system opens the email.

   From this email window, you can:

   - Reply to the sender
   - Forward the email to others in the project/shell
   - Flag the email for follow-up
   - Clear a Flag from the email
   - Delete the email
   - Print the email

> **Note:** You must have permissions to view, reply to, or delete external emails.

To view linked BP records from a Mailbox message:

1) Open the business process record.
2) Click the **Linked Mail** button. The Linked Mail window opens, showing the emails that are attached to the record.
3) Select the email you want to view, and use the *gear menu* (⚙) to click **Open** or double-click the email. The system opens the email.
4) Below the Subject line is an information icon with the following caption:

   This Mailbox and any future replies are linked to business process records.
5) Click the **business process records** link. The system opens the Linked Business Process Records window, which shows a list of all business process records to which this email is attached.

   You can select a business process record from the list to view its record details in the right pane.

Sending Attachments for E-Signature

If your administrator has used the **Integration** node to configure and activate **DocuSign** or **Acrobat Sign**, then when you access your BP record Upper Form or Detail Form and open the properties window, you can use the **Attachments** tab to send the attachment for signature.

The toolbar options and column headings for the **Attachments** tab are:

Item	Description
Attach Files (paper clip icon drop-down)	Lets you select a file by way of: - **Browse** - **Document Manager** - **Custom Print**

Item	Description
Publish to Document Manager	This column displays the hierarchy and the location of the attachment.
Name	This column displays the name of the attachment.
Comments	This column displays the comments associated with the attachment.
Revise	This column displays the revision information about the attachment.
Envelope Code	If you are using envelopes in DocuSign or Acrobat Sign and a document or group of documents was submitted for an e-signature request, this column displays the code assigned to the envelope that contains the applicable documents. If an envelope is resubmitted for signatures, the code is overwritten with a new code.
Upload Date	This column displays the date that the attachment was uploaded.
Title	This column displays the title of the attachment.
Other information about the attachment	These columns display other information related to the attachment such as Pub. No., Rev. No, and so on.

When you select an attachment in the **Attachments** tab, you can click the *gear menu* (⚙) and conduct the following operations:

- **Review**
- **AutoVue Review**
- **Open in Office for the web**
- **Download**
- **Revise**
- **Rename**
- **Remove**

If DocuSign or Acrobat Sign is enabled for use, the *gear menu* also includes **Self-sign**, **Send for E-Signature**, and **Recall E-Sign Request** options, which are displayed or hidden depending on the status of the attachment. To sign documents within Document Manager and Business Processes using DocuSign or Acrobat Sign, you can select one or more documents and send them to one or more assignees for an electronic signature (e-signature). If you are using envelopes in DocuSign or Acrobat Sign, you can group documents into a single envelope. When the documents included in an envelope are returned to Unifier, they are consolidated into a single PDF instead of returning as individual attachments.

In addition, you can select a document in the Document Manager or a Business Process and self-sign it using DocuSign or Acrobat Sign. The **Self-sign** option is available for BP record upper as well as line item attachments. When you conduct a self-sign, the file opens in DocuSign or Acrobat Sign. The status of the signature is reflected in the **Attachments** tab log, **E-signatures** column. After the file is signed (E-Signature status = Completed), the signed file gets added as a revision of the original file (as a pdf file and name appended by "_signed" and indicating the number of times the file was sent for e-signature).

Business Process records

In the **Attachments** tab for BP Upper form, or detail form:

- If you select multiple attachments for which the E-Signature process has not started, or it is complete, the system displays the **Send for E-Signature** option. After you select this option, the **Send for E-Signature** dialog box appears and you can complete the following steps:
  1. In the **To** field, enter the names of Unifier users who should review and sign. (You can also use the pick list to select recipients.) If there are non-Unifier users who should review and sign, enter their email addresses in the **External** field.
  2. Complete the **Subject** and **Message** fields, and click **Send**.

     If the number of files selected or the size of the files exceeds the limits defined by DocuSign or Acrobat Sign, the system displays an error message. Make the applicable adjustments and try again.
- If the E-Signature process of any of the selected attachments is ongoing, the system hides the **Send for E-Signature** option.
- If you select multiple attachments such that their E-Signature process for at least one of them is In-Progress, when you right-click, the system displays the **Recall E-Sign Request** option. If you select this option, a confirmation message appears that indicates *all* files associated with the selected envelope (or envelopes) will be recalled. If you click **Yes**, the files are recalled and the E-Signature status is set to Recalled on the Document Manager log, E-Signature node, Attachments tab, and File Viewer.

> **Note:** Adding an attachment as a custom print is available regardless of whether E-signatures have been configured for the company or not.

In the **Attachments Review** tab:

- The E-Signature status in the Review window is set as recalled.

- For each selected attachment with E-Signature status as complete, or not started, the system ignores the recall request.

The Review window (similar to the Attachments tab for BP Upper form, or detail form) displays the Send for E-Signature and Recall E-Sign Request actions by way of the:

- Gear menu (⚙)
- Right-click

  The right-click options will be visible based on the E-Sign Status of selected attachments. Use the right-click options to send, or recall, multiple attachments for E-signatures. The **Recall E-Sign Request** option is available only to the:

  - E-Signature request sender
  - Document Owner

> **Note:** Other users will not be able to view or act even if all other conditions are met.

E-Signature Log (Declining an E-Signature)

If a signee declines an E-signature request, the E-Signature log captures the E-Signature status as Declined. When the E-Signature Status = Declined, the tooltip (triggered by placing the pointer on the status), or the *gear menus (* ⚙), displays the reason for decline.

E-Signature Node (E-Signature request)

When you select an E-Signature request from the E-Signatures node, you can see the E-Sign log in the right pane (E-Sign Log). This contains the message that was sent at the time of sending the E-Signature request and a log of all signature requests' statuses. When you expand the Attachments tab for BP Upper form, or detail form, if a file has E-Signature requests associated with it, the right pane displays the E-Sign Log tab next to the preview tab.

Publish from BP to DM

If you attach a file in the DM to a BP record and send it for E-Signature from the BP record, the revised (signed) file will be published back into the DM at the same location from where the original file was attached. This is irrespective of the publish path on the BP record.

The ability to re-publish DM Document from a BP record lets you choose to republish (move or copy) a revised DM attachment. If this option is selected in uDesigner, the signed file will be published using the Publish Path.

Adding or Viewing a Map (Geocoding)

If the functionality is configured in uDesigner for a business process, you can add an interactive map to a record. The location is based on a property address or longitude and latitude (Geocoding). You can add or view maps from the upper form of these business process types:

- Line item
- Simple

- Text
- Document
- Cost (classification generic)

Maps are supported on company- and project/shell-level BPs. You can also search for a map by an address, longitude, or latitude.

To add a map to a business process:

1) In the BP form, click the location pin icon ( ) next to the **Latitude** and **Longitude** fields. The Latitude/Longitude picker window displays with a map that you can manipulate as needed.
2) Do one of the following:
   - Enter the address of the property to compute the latitude and longitude, and click the **Map It** button.
   - Enter the numbers for latitude and longitude in degrees, or in degrees, minutes, and seconds, and click the **Map It** button.
   - Click the map to compute latitude and longitude. A map pin displays the location of your click.
3) Click **Done** when finished computing latitude and longitude. Latitude and longitude are populated in the corresponding fields on the BP in decimal degrees.
4) If you click the pin icon again, the latitude and longitude values are displayed in the Latitude Longitude picker window and are retained there until you calculate a new latitude and longitude. A map pin on the map indicates the location of the property represented by the current latitude and longitude displayed in the picker.

To view maps from the business process log:

1) Navigate to a business process log.
2) Select one or more records.
3) Click **View Record Location** ( ) from the top toolbar. If no records have been mapped, this icon is not visible. A map opens displaying the various locations that are mapped, indicated by map pins. If the locations indicated on the map are far apart, the map zooms to the closest location.
4) Click a map pin for location details.
5) Click **Close** to close the map.

> **Note:** If multiple records are selected that have the same latitude and longitude, the map will show only one pin marker.

To view a map for a specific business process record:

1) Navigate to a BP record and click **View Record Location** ( ). If the BP has latitude and longitude address details, a map opens displaying the property location, indicated by a map pin.
2) Click the map pin for location details.
3) Click **Close** to close the map.

Adding an Image

In some forms, you can add an image to your project/shell. For example, you can add an image that shows progress on the project/shell information record, pictures of assets related to a specific asset record, or a photo of an employee in the Resource Manager. You can add images to attribute forms in projects/shells, companies, and business processes.

If the Image picker functionality has been added to your project/shell, forms with the functionality display the image name and a virtual box that will hold the uploaded image.

> **Note**: The image name is based on the data element name provided in the design.

To add an image:

1) Open a BP form.
2) Locate the **Image** section of the form from the main tab.
3) Select **Browse**, to search for a file from your computer, or **Document Manager**, to search for a file from the Document Manager.

   Valid image file types are:

   - .jpg
   - .jpeg
   - .gif
   - .png
   - .tif

   You can change the image by replacing it with another uploaded image. Images appear on the HTML or PDF formats of printed forms. They appear in print preview as well. The Image picker can be added to all forms except for those in the Cost Manager, Generic Cost Manager, Schedule Manager, and the Document Manager.

> **Note**: The image appears online in the system, but it is not available for printing. Also, images do not appear in UDRs or email notifications.

Adding or Updating a Hyperlink

In some forms, you can add a hyperlink to your project. For example, you can add a hyperlink to equipment documentation, details on a resource, or external websites that contain information pertinent to a BP record. You can add hyperlinks to attribute forms in projects/shells, companies, and BPs.

If the Hyperlink picker functionality has been added to your project, forms with the functionality display a hyperlink name, such as vendor website or internal web page.

To add a hyperlink:

1) Click the hyperlink area on the form (blue link).
2) Enter the hyperlink name and the Uniform Resource Locator (URL).

   Only the URL is required. If you enter the name and the URL, the hyperlink displays as the name you entered. If you only enter the URL, the hyperlink displays as the URL.
3) Make sure that the URL adheres to accepted formats, such as starting with an approved protocol, followed by **://**, and then followed by a host name or domain name.

   The system validates the specified URL based on the Uniform Resource Identifier (URI) provided by the administrator for your organization, if applicable, and on current standards for URLs.

   Examples of HTTP and HTTPS URLs:

   http://MyCompany.com

   https://YourCompany.net

   Examples of URLs that might include URIs authorized for use by your administrator:

   ftp://UserName:Password@MyCompany.edu

   ftp://private.ftp-servers.sample.com/MyDirectory/MyFile.txt

   > **Note**: The URL should not reference the same domain that Unifier is using for operation. If you attempt to use the same domain, a warning message will result.

4) Click **Done**.

To update a hyperlink:

1) Click the hyperlink area on the form (blue link).
2) Below the **URL** text box, click **Clear** to remove the existing hyperlink.
3) Enter a new hyperlink name and URL.
4) Click **Done**.

Viewing Referencing Records

For any business process with referencing records, the system can show you a Reference Records window that displays a graph and a list of the records that the record you are viewing refers to, as well as those records that refer to the record you are viewing. (To see the records, you must have view permissions.)

For example, you might want to view all the change orders that refer to a particular purchase order. For other examples, you could view:

- All the invoices that a commit business process **refers to** so that you can reconcile all the invoices against the purchase order
- All the change order requests that are **referred to by** a specific change commit business process to track the progress of a construction project
- All the lease payment requests that **refer to** a Master Lease, to view and reconcile all payment records for a lease
- All the base commits that are **referred to by** a vendor record to review payment progress

- All the work order BPs refer to a Preventive Maintenance type BP to view all the work orders for a Preventive Maintenance Book (PM Book).

Business process records can reference other records and be referenced using the following features:

- A BP picker on a business process record, including line items
- A BP line item picker on a business process record
- Auto-creation of a record through the workflow (S-Step)
- Auto-creation of a record through meeting specific criteria set up by your administrator
- A data picker

View a List of Referencing Records

The Reference and Linked Records section of the reference records window displays the reference records and the linked records associated with the BP record (both from the Upper form and Detail forms), but the graphical section of the reference records window does not display the linked records.

The grid section of the reference window lists all the linked records associated with the line items including the ones established by means of consolidation.

The record details of the consolidated line item are also displayed in the grid section, and you will be able to open the record from the grid.

To view a list of referencing records:

1) From the business process log, open the record.
2) In the right pane, click the right arrow until you see the **Reference Records** tab. The Reference Records window opens.

   The Reference Records window has two components, a graphical representation of the referenced records and a list. The records shown on this window include records from across shells.

   The graphic displays:

   - Records that the business process references (that is, references to other business processes)
   - Records that reference the business process (that is, other business processes that reference the BP you are looking at)

   The list displays:

   - Records that the business process references (that is, references to other business processes)
   - Records that reference the business process (that is, other business processes that reference the BP you are looking at)

- Records that have been linked to the business process via the Linked Records feature (***About Linking Business Process Records to other Business Process Records*** (on page 192))
- Line items that have been linked to the business process via the Linked Records feature.

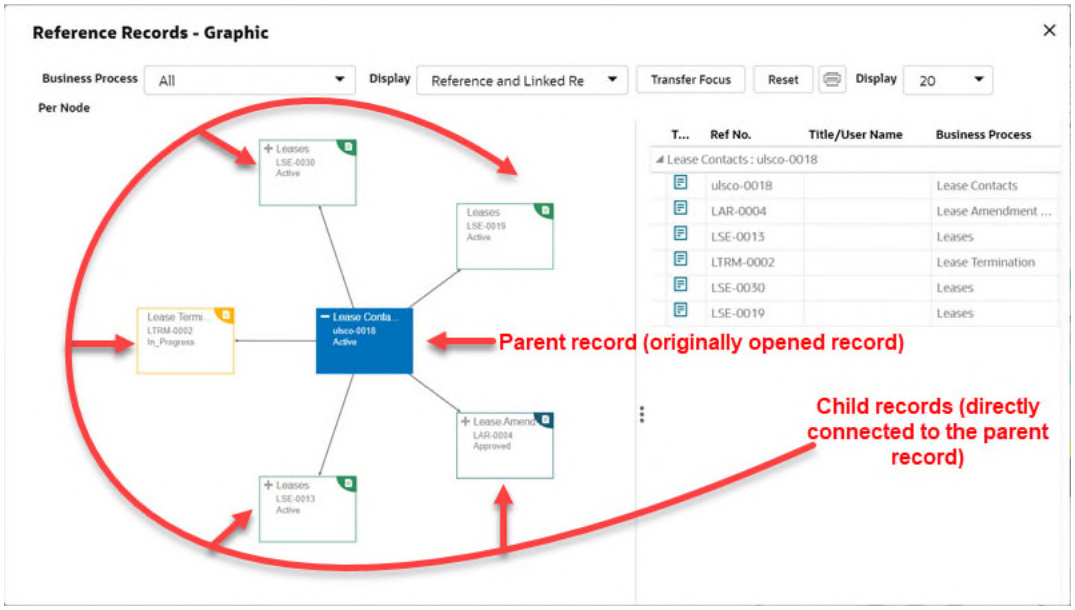
> **Note**: If the record does not reference any records, the only item in the **Reference Records** log will be itself.

What you can do on the Reference Records Graphic window

With the Reference Records Graphic, you can:

- **View high-level record information**

  When you first open the graphic, it displays the original parent record that you opened, along with all child records that are directly attached to it. Child records are color coded based on their BP type. If you hover over a record, the system will display the type of record, record number, and record status. The direction of the connection is indicated by a gray arrow, pointing from the parent record to the child record.



  On the right pane is a log that displays all the visible referenced records, as well as linked records and line items. Each parent record has a list of all connected child records underneath, which can be collapsed or expanded by clicking the gray arrow next to the record name. The icon in the first column indicates the type of connection that exists between records. If it is a referenced record, a blue page icon is displayed. If it is a linked record, a blue link icon is displayed. If it is a linked line item, a yellow link icon is displayed.

- **Rearrange records**

  You can rearrange records by clicking and dragging each record to a desired space in the graphic window.

Note: You cannot click and drag multiple records at a time. Each record must be rearranged individually.

- **Expand the graphic**

  You can expand the records in the graphic by clicking the **Plus** icon in the top left corner of a record. All records that are connected to that record will appear with arrows connected to them. If the expanded record is also connected to a record that is already visible, an arrow will appear connecting the two. After it is expanded, the **Plus** icon will be replaced with a **Minus** icon, which you can use to collapse the record. If there is no icon, that means there are no more child records to that record.

- **Move the display (convenient for large graphics)**

  You can click and drag any open space in the graphic to move the display, using the mouse wheel to zoom in and zoom out.

- **Filter visible items on the graphic**

  There are many ways to filter information on the graphic to focus on specific information. As information is updated on the graphic, the log in the right pane is updated as well. The **Business Process** drop-down menu lets you hide all records except for records of the selected business process type. You can also change the **Display** of the graphic based on the:

  - Type of connection
  - Number of connected records

  In the first **Display** drop-down menu, you can filter the graphic to view only linked records, reference records, or both. In the second **Display** drop-down menu, you can restrict the number of child records that can appear when expanding a record by setting the value to 20, 50, 100, or 200.

- **View or edit a record (if you have permissions)**

  From the graphic, you can open a record by double-clicking it from the log or the graphic. In addition, if you have permissions, you can edit and act on the record the same way you would by opening the record directly from a Unifier log. When you finish the edits and close the form, the system will return to the Reference Graphic window. The records you can edit must be at the same level as the focused record. If the referenced record that you open from the graphic resides at another level (such as in a different project/shell or at the company level), you will not be able to edit it; it will open in view mode only, regardless of your permissions.

Notes:

- If you change the record (including referencing links, linked records, title, status, and so on), the graphic and the reference list on the right pane will not reflect these changes until you click the Expand, Collapse, Reset, or Transfer Focus buttons.
- The edits and actions you take on the form from the Reference Graphic window will behave in the same way they would if you opened the record from a log; that is, roll-ups will occur, workflow actions and auto-creations will proceed, email notifications will be sent, and so on.
- If you have only view permissions, regardless of where the record is in the workflow, the system will display the view form from the End step of the workflow.

- **Print the graphic**

  Click the **Print** button to open the standard print window for your browser.
- **Transfer the focus of the graphic to another record and its references**

  You can change the focus of the graphic to another record and display all its referencing records. The record you transfer to will change to blue to indicate that all referencing records shown on the graphic are now connected to the new record. In addition, the list on the right panel will change accordingly.
- **Reset the graphic**

  To set the graphic back to its original state, click **Reset**. This will undo all display changes, record expansions, and focus transfers.

Participating in a Workflow

Each step in the workflow is set up individually. Step-by-step, the administrator can define responsibilities for users and groups through task assignments, completion policies and resolving action settings, and email notification settings. Non-administrative users can complete business process forms, select **Workflow Actions**, and assign task recipients. They can track business process routing between steps and trace a record's path through the workflow.

Completion Policies and Resolving Actions

Your administrator sets a "completion policy" on each step in a workflow. This policy determines when the step is complete and where the step proceeds from there. A step can be complete under the conditions listed below.

- **Single** completion policy: Any single user can accept a task and complete it, and the record will move forward to the next step.
- **All-Majority** completion policy: All assignees to the task have responded to it and a majority has agreed on the action that moves the record forward to the next step. If there is no clear majority on the action, the system will use a *resolving action* to determine how the record moves forward.

- **All-Consensus** completion policy: All assignees to the task have responded to it and all assignees have agreed on the action that moves the record forward to the next step. If there is no consensus on the action, the system will use a *resolving action* to determine how the record moves forward.

> **Note:** If the Completion Policy for a step is set to **All-Consensus** and **Auto Creation** is enabled, automatic creation of the applicable items begins after *all* assignees have agreed on the action.

A **resolving action** moves the step to either a following step, a previous step, or a conditional step that essentially "re-addresses" or "revisits" the task. This step must be completed before the workflow can continue. The assignees on this resolving action step can include the original task assignees and can also include new assignees.

If there is only one action in the Workflow Actions drop-down list, the system defaults the selection. As a result, the system updates the **To** and **CC** fields with the relevant users and groups. When you click **Send**, if the list of users changes based on either an assignee filter in the workflow setup or via conditional routing, the system displays a window informing you that the list of users will change. After the list of users is changed, you must click Send again. The list of assignees changes to reflect the change in the next step and will be displayed when you save the workflow BP record.

> **Note:** Clicking **Send** will not route the BP record if the conditional routing is not resolved.

If the Admin sets up the Business Process policy, you can choose that a step be completed without all assignees having to act on it, if the result can be determined without the assignee action. This is to prevent unnecessary delays in waiting for all users to act on the record before moving it to next step.

If the Admin sets the Completion Policy for a step in a business process workflow setup as **All - Majority** and checks the option **Advance workflow when next step is determined**, then during runtime, when a record for this business process reaches this step, as soon as the majority of the step assignees take the same action at this step, the step will be completed and the workflow moves to the selected step.

> **Note:** One or more assignees on the step could choose to decline acting on their tasks. In this case, the majority count is determined by dismissing the count of users who declined the task.

Example

There are four assignees on a step. Two of the assignees take the same action. The third assignee declines the task. As soon as the third assignee declines, because the majority (two of the assignees) have taken the same action, the record will move to the next selected step.

In addition, the **Workflow Progress** tab (in the BP log and within the BP record) gets updated correctly (with the correct "Status" and "Action") for all the users who acted on the step. For all users who did not act on the step:

- The "Status" gets updated as: Closed.

- The "Action" remains blank.

If the Admin sets the Completion Policy for a step in a business process workflow setup as **All - Consensus**, and checks the **Advance workflow when next step is determined** option, then during runtime:

When a record for this business process reaches this step, and:

- As soon as one assignee on the step takes the "Resolving action" as chosen in the BP setup in Admin mode, or
- As soon as two assignees on the step take two different actions on the step

Then, this step will be completed, and the workflow moves to the "Resolving action" step; otherwise, if all the assignees take the same action (which might be different from the resolving action), the record moves to the step, as chosen by the assignees.

The "Workflow Progress" tab (in the BP log and within the BP record) gets updated correctly (with the correct "Status" and "Action") for all the users who acted on the step. For all users who did not act on the step:

- The "Status" gets updated as: Closed.
- The "Action" remains blank.

For both **All - Majority** and **All - Consensus** completion policies, if an assignee accepts the task and has been working on a draft record, and while the assignee has been working on a draft record a majority or consensus has been reached, the draft will be deleted, and the record moves to the next step.

> **Note:** In case the assignee has who has worked on the draft had added new line items, or edited existing line items, the changes will be retained when the record moves to the next step.

Statuses

The statuses you see on this window are internal to the system and are used only to display the status of the workflow step **relative to the completion policy**. These statuses are:

Status	Description
Not Started	The assignee has not accepted the task.
In Progress	The assignee has accepted the task.
Locked	This status is used when the step has a single completion policy and one of the assignees accepted the task. This status denotes those assignees who were also assigned to the task, but because of the single completion policy, the task was locked and these assignees no longer have access to it.
View Only	This status indicates that this user was cc'd on the task, but is not expected to act

Status	Description
	on the task.
Completed	This status is given to an assignee's action if the task was finished and needed no resolving action. At any step, a task can have only one status of "Completed."
Closed	This status is given to an assignee's action if the task was finished but triggered a resolving action. The task will either return to a previous step, move forward to a next step, or divert to a conditional step, which will resolve the condition and move the task forward in the workflow. The step the action moves to for resolution will show a status of "Not Started." The number of times the task shows a "Closed" status indicates the number of times the step has been revisited.

Working with Tasks

The system helps you collaborate with your team members through business processes. Your tasks are business processes that are in process and with which you are involved.

After you create and send a workflow business process, the system creates a task for each of the assignees in the next step in the workflow and sends a message to each user that has been Cc'd.

In general, you are assigned a task when you are part of a BP workflow, and you are requested, or required, to take some sort of action.

The following tasks are *not* listed in your **Tasks** log:

- Tasks for view-only.
- Tasks for inactive Projects/Shells.

If you are designated as an assignee on a task, you will receive an email notification, and the task will appear in your Tasks log.

Taking Action on Your Task

To act on your task, you can use the following sub-options of the **Actions** option:

- **Action with Preview**
- **Action without Preview**

For **Action with Preview**:

1) Go to your **Tasks** log and Ctrl+click the tasks that you want to modify.

2) Click the **Actions** drop-down list and select **Action Preview**.

   The system opens the record that you have selected in a separate window.

3) Modify the record.
4) Click **Save**.
5) Click **Close Window**.

If your tasks have been accepted, the **Action with Preview** option will not be available.

For **Action without Preview**:

1) Go to your **Tasks** log and Ctrl+click the tasks that you want to modify.
2) Click the **Actions** drop-down list and select **Action without Preview** to open the **Action Without Preview** window.

   The **Action Without Preview** window is divided into two panes:

   - Use the left pane to edit the **Upper Form** of your business process and perform workflow action (**Workflow Actions**).

     Use the **Workflow Actions** to send records to the next step in the workflow, after completing the task, and assign record status such as pending, in-review, and so forth.

     The system automatically selects the check box under the **Update** column when you type into or modify a field. You can deselect it if you do not want to modify the field at this time.

     The system updates the field values if you select the check box under the **Update** column of that field.

     - If you change the value of a field and select the check box under the **Update** column of that field, the system will update the value of that field.

     - If you erase the value of a field (blank) and select the check box under the **Update** column of that field, the system erases the pre-existing value of that field.

   - Use the right pane to preview the status of the task (**Action Status**).

     The Action Status indicates whether your update was a success or not (using a green check-mark symbol or a red x symbol, respectively), and a message explaining why an update has failed.

     You can use Action without Preview to create multiple shells using the Project/Shell Creation business process. The Action without Preview functionality in the **Tasks** log supports data elements such as Shell Location and Shell Template pickers (existing in the Upper Form) that are required for shell creation.

3) When finished, click **Close**. The system will update the tasks.

For more information, see ***Editing Business Process Records*** (on page 229).

Taking Action on Multiple Tasks at the Same Time

Use the **Actions** option to take similar actions for multiple tasks.

You can select multiple tasks (Ctrl+click), click **Actions** drop-down list, and perform the following actions:

- **Accept**
- **Undo Accept**
- **Hide**

- **Unhide All**
- **Print**

You can use the following options to modify multiple records:

- **Action with Preview**
  - To open multiple records (one record at a time) and modify the contents.
  - The **Action with Preview** option can be used when records belong to different business processes and different workflow steps.
- **Action without Preview**
  - To open multiple records in **Action Without Preview** window and modify the contents.
  - The **Action Without Preview** option can be used when records belong to the same business process, records have the same workflow name, and records are on the same workflow step.
  - When tasks are updated through the **Action Without Preview** option (in the **Tasks** log), the values of the Data Elements (DEs) that have "Reset" property will not be reset.

The following provides more details about modification of multiple records.

Taking similar actions for multiple tasks that belong to the same business process, and the same step

1) Go to your **Tasks** log and Ctrl+click the tasks that you want to modify.
2) From the toolbar, click **Actions**, and select **Action without Preview** to open the **Action Without Preview** window.

   The **Action Without Preview** window is divided into two panes:

   - Use the left pane to edit the **Upper Form** of your business process and perform workflow action (**Workflow Actions**).

     Use the **Workflow Actions** to send records to the next step in the workflow, after completing the task, and assign record status such as pending, in-review, and so forth.

     The system displays Master DE, value set DE, and the behavior set DEs (Required, Disabled, Disabled and Clear). If the data element is disabled, it is based on the Master DE and value set DE in the DDS configuration.

     - The elements of a DDS, especially behavior set DEs, play a role on many of these actions. This is due to Bulk Update retaining any change brought on by a behavior set DE. For example, if the fields become **Disabled and Clear** based on the values selected in the Master Data Element, the fields become disabled with no values.
     - When you select **Disabled and Clear**, other formula fields are re-evaluated.
     - A similar reaction occurs when updating records, as the **Update** check box also becomes disabled.

     The system automatically selects the check box under the **Update** column when you type into or modify a field. You can deselect it if you do not want to modify the field at this time.

     The system updates the field values if you select the check box under the **Update** column of that field.

     - If you change the value of a field and select the check box under the **Update** column of that field, the system will update the value of that field.

- If you erase the value of a field (blank) and select the check box under the **Update** column of that field, the system erases the pre-existing value of that field.

- Use the right pane to preview the status of the task (**Action Status**).

  When working with multiple tasks, you (the assignee) can select multiple records of the same business process and same step and perform the action in one place.

  The Action Status indicates whether your update was a success or not (using a green check-mark symbol or a red x symbol, respectively), and a message explaining why an update has failed.

3) When finished, click **Close**. The system will update the tasks.

Taking similar actions for multiple tasks that do not belong to the same business process, and the same step

The **Action without Preview** option can be used to take bulk action on tasks that belong to different business processes, or on the tasks that belong to the same business process and workflow, but are on different steps in the workflow.

1) Go to your **Tasks** log and Ctrl+click the tasks that you want to modify.
2) From the toolbar, click **Actions,** and select **Action Without Preview**.

   The system opens each record that you have selected in a separate window.
3) Modify the record.
4) Click **Save**.
5) Click **Close Window**. The system opens the window of the next record.
6) Continue modifying the records, **Save**, and click **Close Window** until finished.

If your tasks have been accepted, the **Action with Preview** option will not be available.

Additional information about taking actions for multiple records

- You can update a maximum of 200 records using Workflow update (**Workflow Actions** in the **Action Without Preview** window).
- Only the Upper Form is modified during Workflow update (**Workflow Actions** setting in the **Action Without Preview** window).
- The Workflow update (**Workflow Actions** setting in the **Action Without Preview** window) is not supported on tasks that are on the Initiation step.
- When you send the record to the next step, the system performs validation for the required fields.
- At the company level and project level, when you are acting on multiple tasks, you must have **Allow Bulk Edit** permission for each task.
- For bulk update, the fields are from both Upper Form and Details forms (drawn from integration templates). Some business processes do not support integration. As a result, you cannot take multiple actions on these business processes because integration is used in multiple action.

For more information, see ***Editing Business Process Records*** (on page 229).

Accepting Your Tasks

You must accept a task to complete it.

The best way to accept a task is from the Home workspace: Go to the **Home** workspace and select **Tasks** in the left Navigator. You can also accept a task from the specific business process log, provided you have permission to the log (Company Workspace and Project/Shell). See ***Accepting Your Tasks*** (on page 214) for details on how to access the Tasks node in the Company Workspace or Project/Shell.

> **Note**: If the Project/Shell in which a business process resides becomes View-Only, any in-process records will be placed on the View form of the current step of the workflow. If the project/shell is re-activated, the business processes will revert to the Action form.

To *accept* a task from the Home workspace:

1) Go to **Home** workspace and click the **Tasks** node.
2) Hover over the record and click the *gear menu* (⚙).
3) Click **Accept**.

   Alternatively, you can also click **Actions** and then click **Accept**. or use the Task Status (the check-mark icon).

To *accept* a task from the specific business process log (Company Workspace and Project/Shell):

1) Go to your business process and open the log from the **Tasks** node.
2) Hover over the record and click the *gear menu* (⚙).
3) click **Accept**.

   Alternatively, you can also click **Actions** and then click **Accept**. or use the Task Status (the check-mark icon).

To *accept* multiple tasks (of the same BP and same workflow schema):

1) Go to Home workspace, or your business process, and open the log from the **Tasks** node.
2) Ctrl+click to select the necessary tasks.
3) Click **Actions** and then click **Accept**.

Every task you complete will be deleted from the **Tasks** log (**Tasks** node). Those you do not complete will remain on your **Tasks** log.

Additional information about accepting your tasks

Task Notifications

- If the task belongs to the Create step of a workflow, you will receive a message confirming that the record was (or was not) created successfully.
- If you open a task from a project/shell that is on-hold, the system will notify you and delete the task from the log.

Initiation Step

In general, if a business process has been auto-created and sent to an **Initiation Step**, you will usually need to select a workflow schema to launch the business process into the workflow. When you accept the task, the system displays a **Select Workflow** window, where you must choose the workflow schema this business process should use. See ***Creating a Business Process (BP) Record*** (on page 73) for more information.

The system does not display the **Select Workflow** window if:

- The BP is a non-workflow business process.
- There is only one workflow schema you can choose for this business process.

Undoing Accepting Your Tasks

If you change your mind after accepting a task, you can use the **Undo Accept** option, if:

- You are the last person on the task distribution list and everyone else has declined the task.
- You are the only task recipient.

The **Undo Accept** option restores the business process form, and data, back to the state it was in just prior to accepting the task, even if you have made some modifications to it. This applies only to additions or changes made between accepting the task and selecting **Undo Accept**.

> **Note:** The **Undo Accept** is not available for **Initiation Steps**.

The **Undo Accept** will roll back the following to their previous state:

- Changes to Upper Form fields
- Auto-populated fields
- Changes to the action details (To and Cc fields)

Any new additions of the following are removed:

- Summary, detail, or imported line items
- Comments
- File attachments
- Linked records

These changes are not rolled back:

- Changes made to existing line items.
- Anything that is deleted, such as attachments, linked records, linked Mailbox, and line items, cannot be restored. The exception is upper form fields, which will be restored to their previous state.
- Transfer ownership.
- Mailbox messages sent through linked Mailbox.

To *undo an accepted task* from the Home workspace:

1) Go to **Home** workspace and click the **Tasks** node.
2) Hover over the record and click the *gear menu* (⚙).
3) Click **Undo Accept**.

   Alternatively, you can also click **Actions** and then click **Undo Accept**, or use the Task Status (the check-mark icon).

To *undo an accepted task* from the specific business process log (Company Workspace and Project/Shell):

1) Go to your business process and open the log from the **Tasks** node.
2) Hover over the record and click the *gear menu* (⚙).
3) Click **Undo Accept**.

   Alternatively, you can also click **Actions** and then click **Undo Accept**, or use the Task Status (the check-mark icon).

To *accept* multiple tasks (of the same BP and same workflow schema):

1) Go to Home workspace, or your business process, and open the log from the **Tasks** node.
2) Ctrl+click to select the necessary tasks.
3) Click **Actions** and then click **Undo Accept**.

Declining a Task

Sometimes you have the option of declining a task. If you are the only person assigned to a step in the workflow, or if the creator of the workflow has not granted permission to decline a task, this is not an option.

To *decline* a task from the Home workspace:

1) Go to **Home** workspace and click the **Tasks** node.
2) Hover over the record and click the *gear menu* (⚙).
3) Click **Decline**.

To *decline* a task from the specific business process log (Company Workspace and Project/Shell):

1) Go to your business process and open the log from the **Tasks** node.
2) Hover over the record and click the *gear menu* (⚙).
3) Click **Decline**.

> **Note**: You cannot *decline* multiple tasks.

Completing a Business Process Form

To complete a business process form:

1) Review the form carefully. If you have the proper permissions, you can perform the following functions, if the business process is set up for them or is of the proper type to accommodate them.
   - Make changes or additions in editable fields of the business process.
   - Add, edit, or remove line items or summary line items (see ***Adding and Managing Line Items*** (on page 137)).
   - Add or view file attachments (see ***Working with File Attachments and Markups*** (on page 166)).
   - View or add general comments (see ***Adding and Managing Comments*** (on page 156)).

- Add or review graphic markups to an attached document (see ***Add Markups to a Business Process Attachment*** (on page 181)).
- Provide a link to another completed BP form. Other participants will be able to click the link and view the referenced BP form (see ***About Linking Business Process Records to other Business Process Records*** (on page 192)).

2) In the **Action Details** area of the form, designate the next assignees (users and groups) who will receive the next step in the workflow as a task. (See ***Assign users to the next step*** (see "***Assigning Users for the Next Step or Sending a Copy***" on page 218)) You can choose the next users to send the BP to if the BP has been set up this way. Some BPs have a fixed workflow. If this is the last step in the workflow, this is not applicable.

   You may also be able to designate the **Task Due Date** for the next assignees. (See ***Modifying Step Due Date*** (on page 222).)

3) When you have completed any necessary edits or additions, select an action or workflow action from the **Workflow Actions** drop-down list. If there is only one possible workflow action for a step, the action is auto-populated in the field. The action you take depends on the task assigned. For example, if this is a review step, an action that you may be able to take is "approve."

4) Click the **Send** button.
   - If the workflow is not yet complete, the form will be forwarded to the next team members in the workflow.
   - If the workflow is complete (that is, your input was the last step of the workflow), the record will appear as complete in the business process log.

> **Note:** You can also save your work as a draft at any point. This is recommended if you are going to leave your desk or have a lot of work to do on it. There is no autosave. If you change your mind after making a selection, click the **Undo Action** button, and then choose another action. In Classic View, after you have accepted the task or initiated an action, you can still review what you received prior to doing so without having to undo. Click **View** and then select **Received** or the **Click here to view latest content** button. The system displays another pop-up window of the original record as you received it. ***Assign users to the next step*** (see "***Assigning Users for the Next Step or Sending a Copy***" on page 218)

Assigning Users for the Next Step or Sending a Copy

Assigning users, and workflow routing, must be done after opening a record.

Depending upon the workflow configuration and your user permissions, you may select one or more users or groups to whom the form will be sent as the next step in the workflow. The assignee fields are:

- **To:** The users or groups that you choose will be assigned the next task in the workflow. Team members listed will receive an email notification of the task. This can include users designated as Editors on the task, as well as proxy users.
- **Cc:** These users and groups receive an email notification and a copy of the BP record in their Message log. They can review the record but cannot act on the workflow.

Depending on the workflow setup, you may also be able to set the due date for the next step.

Assigning Users for the Next Step

You can assign a user for the next step from the tasks log (**Tasks** functional node in Home Workspace, Company Workspace, and Project/Shell).

1) Go to your business process and open the log.
2) Select the record, click the *gear menu* ( ), and click **Open**.
3) When you are finished editing the form, click **Send** to open the **Workflow Action Details** window.
4) In the **To** field, click the **Select** button to the right of the text box. The **User and Group Picker** window opens. Alternatively, you can start typing in the text box for suggested users based on your entry.
5) Select names from the Available Items list and click **Add Selected** (singular right arrow), or **Add All** (double right arrow) if you would like to add everybody on the list.
6) Click **Done** when finished.

When the business process form is sent, each member will receive an email message regarding their task assignment and a copy of the BP form in their **Tasks** log.

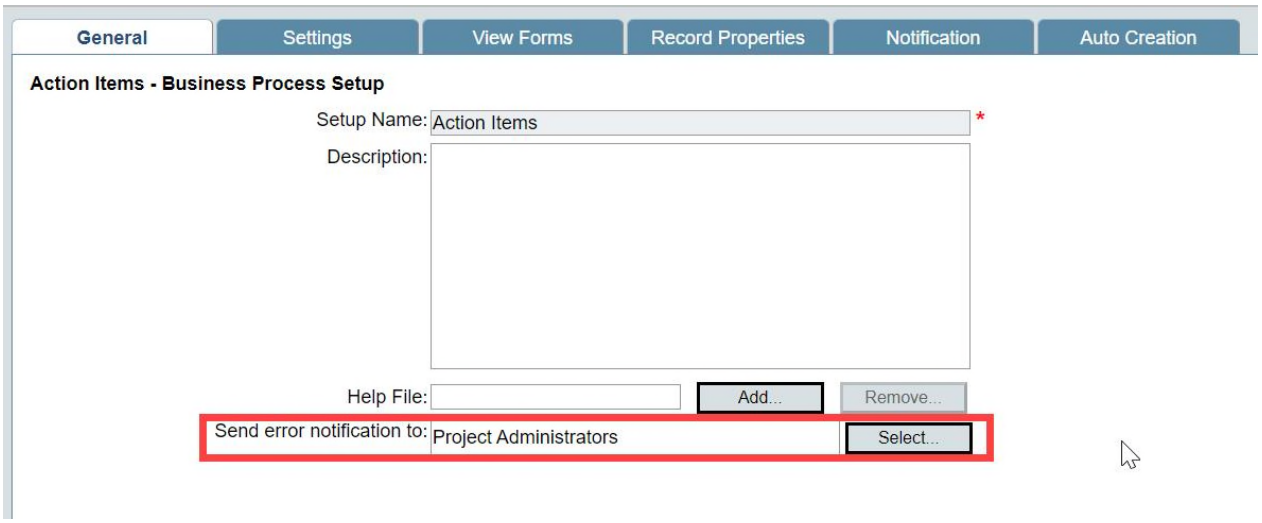
Notes regarding inactive users:

If a task is sent to other users for review, it may be sent back to the initial user for revision. In this case, if the **Include only previous action takers** option is selected for the business process, the match step setting determines the response.

- If Assignees is set to Dynamic with **match step <Creation>**, and the user that initiated the last step is *no longer active*, the system displays the following message:

  "The system cannot send the record to the next step as step assignee is no longer active. Do you want the system to send an email notification about the error and appropriate action to the Administrator?"

- If you select **Yes**, the message is dismissed and the system automatically sends an email to the administrator or administrative group specified in the Business Process setup, as shown in the following image. If the administrator or administrative group is not active, the system sends an email to the company or project/shell administrator. An administrator must transfer ownership of the record because the task cannot be reassigned.



- If you select **No**, the message is dismissed and no further action is taken.

In both of the preceding cases, the **To** field in the **Workflow Action Details** window is not populated with any user or group, and the workflow cannot progress until an administrator acts.

- If Assignees is set to Dynamic with **match step <any step>**, and the user that initiated the last step is *no longer active*, the system displays the following message:

  "The system cannot send the record to the next step as step assignee is no longer active in the project. Select another assignee who is currently active on this step."

  After you click **OK** to dismiss the message, the system displays the **Workflow Action Details** window again. In the **To** field, click **Select**, and select a different user based on the filter conditions defined for the workflow setup.

These issues can also occur when records are sent through REST, Bulk Action, Email Action, or using Unifier Mobile.

- Bulk Action with Preview and Mobile application: The system behaves as described earlier for match step <Creation> and match step <any step>.
- Bulk Action without preview, Email Action, and REST services (UpdateBPRecordV1 and UpdateBPRecordV2):
  - For **match step <Creation>**, the system displays: "The record cannot be sent to the next step as the assignee for {step name} step is no longer active. You can change the record ownership or change the Workflow Setup to send the task to an active user."
  - For **match step <any step>**, the system displays: "The record cannot be sent to the next step as the assignee for {step name} step is no longer active. You can change the Workflow Setup to send the task to an active user."

Sending a Copy of the Business Process Form

If you must send a copy of a business process form to another user:

1) Go to your business process and open the log.
2) Select the record, click the *gear menu* ( ), and click **Open**.
3) When you are finished editing the form, click **Send** to open the **Workflow Action Details** window.
4) In the **CC** field, click the **Select** button to the right of the text box. The **User and Group Picker** window opens. Alternatively, you can start typing in the text box for suggested users based on your entry.
5) Select names from the Available Items list and click **Add Selected** (singular right arrow), or **Add All** (double right arrow) if you would like to add everybody on the list.
6) Click **Done** when finished.

When the business process form is sent, each member will receive an email message and a copy of the BP form in their **Notifications** log.

> **Note:** The BP form may be set up to have pre-assigned **Cc** users. In this case, if the **Cc** button is enabled, you can add additional **Cc** users. If not, the BP is not set up to allow additional **Cc** users. You cannot remove pre-assigned **Cc** users.

User Picker and Group Picker

With the introduction of profile picture, the **User Picker**, **User Data Picker**, and **User** and **Group Picker** include the profile picture, before the User name.

User Picker

This picker has the list of users. For users who have uploaded their profile picture, their picture will be displayed. If there are no pictures, the system displays the initials of the user's first and last names.

User Data Picker

This picker has the list of users. For users who have uploaded their profile picture, their picture will be displayed. If there are no pictures, the system displays the initials of the user's first and last names.

Depending on how the business process (BP) form is configured, the user data picker, in any business process (BP) record, can be used to auto-populate the user attribute values of the fields corresponding to the selected user in the BP form.

User Group Picker

This picker has Groups followed by Users. For users who have uploaded their profile picture, their picture will be displayed. If there are no pictures, the system displays the initials of the user's first and last names.

View User Profile

The **View User Profile** window lets you see the profile for multiple users who are assigned to, or cc'd in, workflow tasks. This window opens when you select a highlighted user name within a form.

The left section of the **View User Profile** window lists the users, and the right section displays the following for the user:

- Basic Information
- Additional Information

You can view the user attributes from both the company and the shell directories.

If the **Apply values for the picker log from Project directory** option is selected, the system fetches the user attribute data from the project directory. The data that is displayed under the project directory (**User** mode) can be fetched from the shell level when the project directory option is selected. When the user's name is launched from the shell, the project/shell-level information is fetched as defined at the shell level.

Modifying Step Due Date

If the step duration and workflow override are enabled on the business process, you can also set the task due date for the next step.

To change the task due date:

1) In the Due Date Details section, click the **Calendar** icon. The Task Due Dates window opens.
2) Choose one of the following options:
   - **Set all task due dates as:** Lets you set the same due date for all assignees.
   - **Set individual task due dates:** Lets you assign different due dates for each assignee one at a time.
3) Click the **Calendar** icon to set the due date. For the second option, click the date listed in the **Task Due Date** column.
4) Select the month and year, and then click the date you want to select.

> **Note:** The workflow engine uses the company workday calendar. Grayed-out dates are those that have been set as non-working days (for example, weekends and holidays) by your company administrator. You cannot select non-working days for a task due date.

Adding Additional Assignee or Sending Additional Copy

The current step assignee can add assignees to the next step in the workflow. This is useful if you want to send a copy of the record or add another assignee before you act on it.

You can add additional assignees or copy users if:

- You have not yet accepted the task, and the form is still in view form. If you have already accepted the task, you can reverse the action by clicking the menu icon (three horizontal lines) and selecting **Undo Accept**.

- The business process workflow has been set up to allow adding assignees or allowing to Cc.

Adding Additional Assignee

You can add additional assignees or copy users from the tasks log (Tasks functional node of Home Workspace, Company Workspace, and Project/Shell).

> **Note:** Adding additional assignees must be done after opening a record.

To add an additional assignee to a task:

1) Go to your business process and open the log.
2) Select the record, click the *gear menu* (⚙), and click **Open**.
3) Click the **Menu Options** (☰) and choose **Add more assignees**. The User/Group picker window opens (to learn how to search and use the picker refer to *Unifier General User Guide*). The list displays the list of users or groups that can be assigned, according to the business process setup.
4) Follow the assign team members' procedure to select users or groups.
5) Click **Done**.

The user or group will be added to the list of assignees. The record will appear in each new user's Tasks log and applicable business process log, and users will receive an email informing them of the task, depending on their email subscription preferences.

Sending Additional Copy of Business Process Form

To send a copy of a business process to additional users:

1) Go to your business process and open the log.
2) Select the record, click the *gear menu* (⚙), and click **Open**.
3) Click the **Menu Options** (☰) and choose **CC more users**. The User/Group picker window opens. The list displays the list of users or groups that can be copied according to the business process setup.
4) Follow the assign team members procedure to select users or groups.
5) Click **Done**.

The user or group will be copied. This means that the record will appear in each new user's **Notifications** log and applicable business process log, and the users will receive an email informing them of the copy, depending on their email subscription preferences.

You can copy more users on the **End** step, if the following conditions are met:

- The signed in user is not a **Step Editor**, and
- The signed in user is not a **Record Editor**.

The restrictions for **Record Editor** and-or **Step Editor** are not applicable to creators. A creator can add more users because the creator is the owner of the record. This ability remains whether the creator belongs to the **Record Editor** group or the **Step Editor** group.

Completing Tasks via Email

You may receive BP-related email notifications that contain hyperlinks that represent actions in a BP workflow.

Actions you can take via email are shown as hyperlinks and represent actions you can take in a workflow step. When you click the hyperlink, an email reply is generated. Your reply text becomes a general comment in the BP record, except in the case of Document Type business processes; reply text is not attached for those business processes. Assignees need to be pre-assigned on the workflow steps for the email workflow action to occur. Attachments can be included in the workflow action replies if the BP is set up to include them. Email clients supported for workflow actions via email include HTML and text. If you are using a text client for your email, the possible actions are listed, but are static text (not hyperlinks). In that case, you can reply to the email manually and provide the appropriate To, Subject, and body text. Your subject should be the name of the action you want to take as shown in the email notification.

Your subject should be the name of the action you want to take as shown in the email notification.

Tasks that are assigned to you are listed in your **Tasks** logs. The **Tasks** logs display business process-related tasks in which you are being requested to participate. Refer to *Unifier General User Guide* for details about the **Tasks** log.

The following tasks may appear in your Tasks logs:

- You are part of a business process workflow and are requested or required to take some sort of action.
- You are designated as the Initiation step assignee for an auto-created business process.

Validation for email task flow actions are as follows:

- Email address must match that of the assignee
- Valid Notification ID/Password (NID)
- Active (Unifier) User
- BP record has not moved or been terminated
- Record has not already met completion policy
- Assignees must be Preassigned at the destination step

To respond to a workflow task directly from email:

1) Open the email notification.

   If **Response via email** has been enabled in the business process design, the email includes action links. The email message also displays data from the business process form.

2) Review the email, and then click an action link. In an email program such as Outlook, this will create a response email.

> **Note:** (1) Do not change the subject line of the email. Changing the subject line text will cause the email response to fail. (2) If you are using a text client for your email, you can open a new email message, copy the subject line of the notification, and paste it into the subject line of the response email.

3) If applicable, add text to the body of the email. This will create a **General Comment** on the business process record.

> **Note:** Email response text is not saved as General Comments for Document Type business processes.

4) If applicable, add file attachments to your email response.

   If the business process has been set up to accept attachments, they will be added to the record in the system. If the business process does not allow attachments, attachments you add to the email response will be ignored. If a file exists on the record with the same name as the file you are trying to send, your attachment will be ignored.

5) Send the email, which will send the action to Unifier.

For all Workflow Business Processes where the steps are enabled for "Enable Response via email," the following Workflow processes are completed when you perform, or approve, a task via email:

Capture of Workflow progress elements in the form:

- Taken By
- Action Name
- Taken On

Formula calculations on the form:

When the record progresses to the next step, the system evaluates the formulas on the form that are associated to the Workflow.

Form level validations:

Form-level validations are applied. If there are any errors, it will not advance the Workflow to the next step.

Additional form processing:

- Auto population (sum of line items)
- Dynamic Data Set (DDS) check: The system performs DDS checks prior to routing the record to the next step when action is taken through Email.

> **Note:** If the step where the action is being performed has a DDS behavior set field which is required, and that field is empty, the record will not progress to the next step.

Reset Form: Data Elements (DEs) in the form that have the Data Entry as Reset are processed when the record is progressed to the next step via email action.

Auto-Population for Behavior Set DEs

The data fields in a business process form can be updated through auto-population, including those in a behavior set of a DDS. Auto-population can occur during the creation of a form or during the selection of a picker value within a form. If the value of a Master Data Element clears a previously entered value of a behavior set data element and disables it, any fields auto-populated from the behavior set data element are re-evaluated.

Similarly, any formulas dependent on the behavior set data element are re-evaluated. For example, in an **Upper** or **Detail** form, when a behavior set DE changes, the auto-population fields do not change. In the case of selecting a picker value, when the value of a picker changes, the auto-population fields do change.

Additional Processing

Query and Summary DEs:

Query and summary-based DEs, in the subsequent forms of the Workflow, are populated correctly when the record is progressed to the next step via email action.

Other post processing logic:

- Reverse auto population
- Roll-up to Cost sheet
- Roll-ups to other sheets
- Auto Creation - S-Step
- Auto Creation - I-Step and so on

About Email Notifications for Business Processes

Email notifications are designed and set up by the Unifier Administrator. To initiate this feature for yourself, you must set up an option in your user preferences that specifies that you want to receive these notifications.

Refer to *Unifier General User Guide* for information about selecting email subscription options.

After you make this specification, you will be notified whenever a business process to which you have been assigned is created, modified, or closed.

In addition, if you are creating or editing a business process that has been set up for email notifications, you can notify additional users or groups at your discretion.

Users who receive email notification (based on events triggered) will see the data elements based on configured email notification elements which is across all view forms for Workflow BPs. For Non-workflow BPs, the email notification received will show all the data elements based on configured email notification elements set up across all upper forms.

Email Notifications for Workflow Business Processes

You may be notified by email when you have a new task, if you are late responding to an assigned task, you are an editor on the task (in which case, you receive notification each time a draft is created), or if you were the creator of the business process and someone has acted on their task.

Depending on your company Unifier email notification setup, and your own user preferences, you may receive such emails one at a time as the task is generated, or you may receive one daily email digest summarizing all the day's email notifications (including non-business process related notifications).

> **Note:** Email notifications can be configured in your user preferences.

If you receive an email notification

You may receive BP-related email notifications for the following:

- You have a new task. A task can be generated if you must act on a BP workflow step. Click the hyperlink at the bottom of the email. When you click the link, you will be directed to the Unifier sign in screen. After you sign in, the system will display the record, where you can complete the form and send it to the next step.
- You are late responding to an assigned task. The actions you can take are similar to when you have a new task.
- You are the owner or creator of the BP and someone has acted on their task. This is a notification only and no action is required.
- You are an Editor on a task (you receive notification each time a draft is created).
- You are designated as an active proxy user, and the user you are acting for has received a task.
- A BP workflow has been completed. This is a notification only and no action is required.
- You must take action during a BP workflow.

Email Notifications for Non-Workflow Business Processes

Your company may require that **non-workflow** business processes be acknowledged when they are created, modified, or closed (terminated).

Email notifications for non-workflow business processes include the fields from the business process that were chosen to appear on the email. The notification also includes a link you can click that will open the record for you to view.

When you click the hyperlink, you will be directed to the Unifier sign in screen. After you sign in, the system will display the record, where you can complete the form and send it to the next step.

The email will display summary information, such as:

- What record was created
- Which upper form fields have been modified
- Comments that have been added to the BP or a line item
- Line items that have been added, edited, or deleted
- General comments that have been added to the record (excluding any hidden comments)
- Attachments that have been added or removed

Managing Business Process Records

The following topics describe how to manage business process records.

Transferring Ownership - Business Process Records

If you are a BP record owner or creator, you can transfer ownership at any time in the workflow process, other than the initiation step, creation step, or after its termination step. The new owner will have all privileges of a BP owner, and the originator name on the BP form and the log will show the new owner.

To transfer ownership within a BP form:

1) Open the BP form.
2) Click **Menu Options** (☰).
3) Select **Transfer Ownership**. The **Transfer Ownership** window opens to display the **User Picker**.
4) Click **Select** (☑) to the right of the text field, or type a User Name into the text box. If you start typing, a list of suggested users will appear below.
5) If you clicked **Select**, click a user from the **User Picker** window and click **Select**.
6) Click **Transfer** when done.

To transfer ownership from a BP log:

1) Open the BP log.
2) Hover over a record and click the *gear menu* (⚙).
3) Select **Transfer Ownership**. The **Transfer Ownership** window opens to display the **User Picker**.
4) Click **Select** (☑) to the right of the text field, or type a User Name into the text box. If you start typing, a list of suggested users will appear below.
5) If you clicked **Select**, click a user from the **User Picker** window and click **Select**.
6) Click **Transfer** when done.

Alternatively, you can select **Transfer Ownership** in the **Actions** menu to complete the same process.

Granting or Updating Record Permissions for Non-Workflow Business Processes

To grant or update permissions:

1) Create a BP record in the Company Data Manager, Company General, or project/shell General log.
2) Select one or more BP records.
3) From the toolbar, click **Actions**, and then select **Permissions**. You can also click the *gear menu* (⚙) and select **Permissions** to assign permissions to only one BP Record. The Permissions window opens.
4) In the Permissions table, type the user or group name in the **Add** box and select the user or group to grant access.
5) By default, each listed user or group will be granted **View** permission, allowing them to open the BP Record. To grant additional permissions, select the check boxes that correspond to the user or group:
   - **All**: User will have **View**, **Edit**, and **Modify Permission**.
   - **Modify Permissions:** Allows user to control the BP record's permission settings.
   - **Edit Data:** User can import BP record information, save a snapshot, edit BP record properties, and add columns.
   - **View**: User can view the BP record.
6) Click **Save**, or click **Save & Next** to go to the next worksheet.

   When you change settings in the Permissions window, the **Save** button is enabled. After you click Save, a spinning wheel appears while your changes are saved and then the Save button is dimmed.

When editing one record at a time, click the **left arrow** to view the previous BP record or the **right arrow** to view the next BP record.

After exiting the Permissions window, the Permissions tab will be refreshed with the updated information.

> **Note:** You must have permissions for specific business process logs to create or view records. Contact your project/shell administrator if you are having trouble accessing BPs or BP logs to which you need access.

Editing Business Process Records

When a workflow business process (BP) is in route, depending upon your permission settings, you can add or edit information on the form. A non-workflow BP can be edited as needed, as well.

You can be designated as either a step editor on a specific step in a workflow, or as a record editor. As an editor, you must have at least the "View" permission to be able to view the record in the log and access it for editing.

- Step editors cannot edit a workflow record until the task assignee accepts the task and saves the draft.
- Edits made and saved by assignees are not viewable until the assignee sends the record on to the next step; however, edits made and saved by record editors are viewable at any time.
- Edits performed on the end step of a workflow BP affect the record directly, as no draft exists.

For details about editing your tasks records, see ***Taking Action on your Task***.

Behavior of the Due Date (due_date) Field

In the **Workflow Settings** field in the **Workflow Setup** of a BP, if the **Override Workflow Due Date** field is set as **Yes**, you *can* edit the due date in the creation step. If the **Override Workflow Due Date** field is set as **No**, you *cannot* edit the due date in the creation step. Also, you cannot edit the Due Date if the work has started or the work has moved to the next step (is in-flight) in the workflow process.

When you create workflow BP records through file imports (CSV or Microsoft Excel), the system currently sets the Due Date automatically based on the **Workflow Settings**; the Due Date provided in the input file is ignored. Also, when you update workflow BP records through file imports (CSV or Microsoft Excel), the system uses the Due Date that was based on the **Workflow Settings** and ignores the Due Date provided in the input file.

Editing a BP Record for Editors

You can be designated as either an Editor on a specific step in a workflow, or as a Record Editor. As an Editor, you must have at least view permission to be able to view the record in the log and access it for editing.

Notes:

- Step editors cannot edit a workflow record until the task assignee accepts the task and saves the draft.
- Edits made and saved by assignees are not viewable until the assignee sends the record on to the next step. However, edits made and saved by record editors are viewable at any time.
- Edits performed by editors are not audited; however, changes made by record editors are audited.
- Edits performed on the end step of a workflow business process affect the record directly, as no draft exists.

Concurrent editors in a business process

While a workflow BP is on a step, or a non-workflow BP is in Edit mode, the system saves edits to fields, but does not commit the changes. For example, if editor one revises fields 1 to 5 and then saves the record, and editor two revises fields 6 to 10 and saves, the record retains all 10 edits. However, if editor two revises field 4, and saves the record after editor one saved the record, the data from editor two overwrites editor one's revision.

Note: Non-workflow Cost BPs cannot be updated concurrently. If a Non-workflow Cost BP record is updated through the following means, and the record is being updated by a concurrent editor, there will be a slight delay in the process because the update call will need to wait until any previous transactions are completed.

- Upper form - updated via form view, bulk update, REST, RAP, Email action, as a result of Autocreation
- Lineitems - created via form and grid views, CSV, REST, lineitemcreator DE, consolidation, copy
- Lineitems - updated via UI, REST, RAP, as a result of Autocreation
- Lineitems - deleted via UI, REST

To edit a non-workflow BP that is complete, click to open the BP and click **Edit**.

Notes:

- If the BP is in a terminal status and you click **Submit**, the system disables the **Edit** button and the form can never be edited again.
- If you update a record for which the current Status has been set to Inactive, you must select a different Status to continue with the update.

You can edit a workflow BP during the workflow process.

Note: If a view form is used on a terminal step, further editing is not possible.

You can add comments if you are not a task assignee, provided that you have the following permissions for business process records:

- **View**
- **Add General Comments**

In this scenario:

- You only can add general comments when the business process record is in View mode.
- You will not be able to hide comments. The Hide Comment option is available for task assignees who are working on an accepted task (an Action form associated with the workflow step).

Editing a BP Record from Master Log - Business Processes Node

You can edit a Project/Shell BP record from the master log (**Master Log - Business Processes** grouping node), if you:

- Are an active member of the project, shell, or sub-shell
- Have the appropriate permissions in the associated project/shell.

> **Note**: The name of the **Master Log - Business Processes** grouping node can be customized.

When you open a BP record from the master log, the record will open in either **Edit** or **View** mode, depending on the user permissions associated with that record in the Project/Shell.

For editing workflow BP records:

- After you open a BP record from the master log, the Project/Shell permissions are in effect.
- You can accept a task and act on the workflow BP record by opening the BP record from the master log, if you are the assignee on the current workflow-step in the BP. If not, the BP record is opened in **View** mode only.
- You can add general comments if you are a cc user on a particular step.
- You can add general comments provided that the current step has general comments option enabled.
- If you are not an assignee on a particular step, you must have **Bulk Edit** permission on the BP record, in the master log, to edit data elements on the record.

For editing non-workflow Bp records:

- If you have **Edit Data** permissions for a non-workflow BP record, you can open the record from the master log and proceed to edit the BP record.
- If you are an **Editor** of a non-workflow BP record, you can open the record from the master log and proceed to edit the BP record.

To edit a BP record from the master log:

1) Go to **Home** workspace.
2) Click **Master Log - Business Processes** grouping node.
3) Select the BP record that you want to edit.
4) Click the *gear menu* (⚙) and select **Open** to open the BP record.
5) When finished editing, click **Save**.

Editing Multiple BP Records (Bulk Edit)

If you have many projects/shells with several business processes in the same state, you can edit/modify (update) multiple BP records (bulk edit) at once.

To edit/modify multiple BP (bulk edit) records through integration:

- An interface must have been defined.
- You must have permission to perform bulk edit (Allow Bulk Edit).

> **Notes:**
>
> - You can update a maximum of 200 records using bulk workflow update.
> - It is recommended to add those fields to integration which can be updated. Exclude fields such as formulas, and system fields such as **Record No**, **Creator**, and **Record Status** in workflow BPs.

You can edit/modify multiple BP records, both the workflow and non-workflow, at the following levels:

- Project
- Shell
- Company

You can edit/modify multiple BP records (bulk edit), both the workflow and non-workflow, from the following grouping nodes:

- **Company Logs**
- Project/Shell **Logs**

> **Note:** You cannot update the Bidders email addresses in bulk (bulk update through Bulk edit) or within multiple records. You can only change a Bidder's email address in a single record.

You can also update upper form data and line item records of multiple Simple and Line Item type BP records from the **Business Process Log** node.

Bulk Editing BP Records From the Company Log Node

To edit/modify multiple BP records (bulk edit), both the workflow and non-workflow, from the **Company Logs** node:

1) Go to the **Company Workspace** tab and switch to **User** mode.
2) In the left Navigator, expand the **Company Logs** grouping node.
3) Click the desired BP to open the BP log.
4) From the log, Ctrl+click to select the BP records that you want to edit.
5) Click **Actions** and click **Bulk Edit** to open the **Bulk Edit** window.
   a. In the left pane, edit the Upper Form of your business process.

      The system automatically selects the Update check box when you type into or modify a field. You can deselect it if you do not want to modify the field at this time.

   b. In the right pane, (Action Status), preview the status of each record.
6) When finished, click **Close**.

Bulk Editing BP Records From the Logs Node

To edit/modify multiple BP records (bulk edit), both the workflow and non-workflow, from the Project/Shell **Logs** node:

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, expand the **Logs** grouping node.
3) Click the desired BP to open the log.
4) From the log, Ctrl+click to select the BP records that you want to edit.
5) Click the BP to open the BP log.
6) From the log, Ctrl+click to select the BP records that you want to edit.
7) Click **Actions** and click **Bulk Edit** to open the **Bulk Edit** window.
   a. In the left pane, edit the Upper Form of your business process.

      The system automatically selects the **Update** check box when you type into or modify a field. You can deselect the **Update** check box if you do not want to modify the field at this time.
   b. In the right pane, (Action Status), preview the status of each record.

> **Note**: Bulk Edit ignores data elements with a formula. As a workaround, add the desired data element that does not have a formula to the integration form with the direction set as *Both* or *Input*. During bulk edit, add the desired value to that DE. For more details on updating the integration form, see the topic, *Creating an Upper Interface*, in the Online Help.

8) When finished, click **Close**.

Additional information about editing/modifying multiple BP records (bulk edit)

The **Bulk Edit** option (for multiple BP records) lets you edit the fields from the Action Form (Upper Form) of the current step in the workflow.

In a non-workflow BP, you can use Bulk Edit to update the Record Status if the record has not reached terminal status or the record is not terminated. The Bulk Edit window only shows active statuses.

You *cannot* use the **Bulk Edit** option for multiple BP records to edit:

- Initiation Step (I-Step) records
- Fields in a dynamic data set
- Fields from line items
- BP Line Item Data Picker
- BP Data Picker if it has an associated Line Item Data Picker configured
- System-defined fields, such as record number, status, or due date

> **Note:** If the Record Status defined for any of the targeted business processes been inactivated, an error is displayed, and those business processes will not be updated.

The **Bulk Edit** option for multiple BP records is *not available* for the following BPs:

- Resource Booking BP
- Timesheet BP
- Single-record BP

Fields that are configured for auto-sequencing are not available for bulk edit because the values for these fields are system-generated.

You *cannot* use the **Bulk Edit** option for single, or multiple, BP records to update a field that has value uniqueness configured.

You can update a maximum of 200 records using Workflow update (**Workflow Actions** in the **Action Without Preview** window).

Only the Upper Form is modified during Workflow update (**Workflow Actions** in the **Action Without Preview** window).

The Workflow update (**Workflow Actions** in the **Action Without Preview** window) is not supported on tasks that are on the Initiation step.

When you send the record to the next step, the system performs validation for the required fields.

At the company level and project level, when you are acting on multiple tasks, you must have **Allow Bulk Edit** permission for each task.

For bulk update, the fields are from both Upper Form and Details forms (drawn from integration templates). Some business processes do not support integration. As a result, you cannot take multiple actions on these business processes because integration is used in multiple action.

The system does not allow Bulk edit of Data Picker based on a query.

Editing Multiple BP Records (Bulk Edit) from Master Log - Business Process Node

If you have the **Allow Bulk Edit** permission, you can select one or more business process records from a master log (**Master Log - Business Processes** grouping node) and perform bulk edits on those selected records.

> **Note**: The name of the **Master Log - Business Processes** grouping node can be customized.

You can select records across projects/shells to perform bulk edit.

The following Data Definitions cannot be modified using Bulk Edit in a Master Log:

- Image Picker
- Company Picker

- Group Name Picker
- User Picker
- Project Picker
- BP Creator

To edit multiple BP records (bulk edit) from the master log (availability based on permission):

1) Go to **Home** workspace.
2) Click **Master Log - Business Processes** grouping node.
3) Select the BP record that you want to edit.
4) From the log, Ctrl+click to select the BP records that you want to edit.
5) Click **Actions** and click **Bulk Edit** to open the **Bulk Edit** window.

   The window is divided into two panes. Use the left pane to edit the Upper Form of your business process.

   The system automatically selects the Update check box when you type into or modify a field. You can deselect it if you do not want to modify the field at this time.

   Use the right pane (Action Status) to preview the status of each record.
6) When finished, click **Close**.
7) Proceed with your edits, save, and close the window.

> **Note**: In the **Home** tab, when records from different projects are opened from the **Drafts** log, **Tasks** log, or **Master Log - Business Processes** node, the message, *Leave site?*, is suppressed.

Additional information about editing/modifying multiple BP records (bulk edit)

The **Bulk Edit** option (for multiple BP records) lets you edit the fields from the Action Form (Upper Form) of the current step in the workflow.

You *cannot* use the **Bulk Edit** option for multiple BP records to edit:

- Fields in a dynamic data set
- Fields from line items
- System-defined fields, such as record number, status, or due date

> **Note:** If the Record Status defined for any of the targeted business processes been inactivated, an error is displayed, and those business processes will not be updated.

The **Bulk Edit** option for multiple BP records is *not available* for the following BPs:

- Resource Booking BP
- Timesheet BP
- Single-record BP

Fields that are configured for auto-sequencing are not available for bulk edit because the values for these fields are system-generated.

You cannot use the **Bulk Edit** option for single, or multiple, BP records to update a field that has value uniqueness configured.

You can update a maximum of 200 records using Workflow update (**Workflow Actions** in the **Action Without Preview** window).

Only the Upper Form is modified during Workflow update (**Workflow Actions** in the **Action Without Preview** window).

The Workflow update (**Workflow Actions** in the **Action Without Preview** window) is not supported on tasks that are on the Initiation step.

When you send the record to the next step, the system performs validation for the required fields.

At the company level and project level, when you are acting on multiple tasks, you must have **Allow Bulk Edit** permission for each task.

For bulk update, the fields are from both Upper Form and Details forms (drawn from integration templates). Some business processes do not support integration. As a result, you cannot take multiple actions on these business processes because integration is used in multiple action.

Exporting BP Records Using Bulk Update From Business Process Log Node

If you have the **Allow Bulk Edit** permission, you can select one or more business process records from the **Business Process Log** grouping node and perform a bulk update on those selected records.

A bulk update allows you to export multiple business process records and modify each record distinctly in a Microsoft Excel file (.xlsx). For a detailed list of supported BPs, see ***Business Processes Supported by the Bulk Update Export/Import Process*** (on page 240).

When you use Bulk Create or Bulk Update, you start by exporting the BP design structure to a Microsoft Excel or CSV file and then populating the required fields. If you leave a Data Picker Data Element (DE) field blank that is configured to Auto Populate, the system completes the field when you run a Bulk Create; however, it does not complete the field when you run a Bulk Update. To reduce confusion and maintain consistency for both Bulk Create and Bulk Update, the system uses the Excel or CSV file to populate the Data Picker field if the field is excluded from the Integration Form for the BP design.

> **Note:** Bulk Update is not currently supported for General Spends Classification of Cost BPs with Line item of CBS Code (both workflow and non-workflow) if breakdown rows exist in the referenced Schedule of Values (SOV).

Exclusions

For a business process selected in the **Logs** node, the following records are excluded in the right pane when you click **Bulk Update**, select **Export Data**, select **Selected Records**, and select **Main Form** in the toolbar in the right pane**:**

- Initiation step records
- Terminated records
- Initial draft records of non-workflow BPs as they are available from the **Business Process Log** node.

  However, terminal step records are additionally excluded only when you click **Bulk Update**, select **Export Data**, select **Selected Records**, and select **Main Form and All Line Items**
- Records with attachments

Bulk Update Export Process

To export data using bulk update:

1) Switch to **User** mode.
2) In the left Navigator, select **Logs**, and then select a business process (BP).
3) In the right pane, Ctrl+click to select multiple BPs you want to export and edit.
4) Depending on the type of business processes selected, select any of the following options from the toolbar:
   - To export only **Upper** form data from the selected records, click **Bulk Update**, select **Export Data**, select **Selected Records**, and select **Main Form**
   - To export **Upper** form and line item data from the selected records, click **Bulk Update**, select **Export Data**, select **Selected Records**, and select **Main Form and All Line Items**

   > **Note:** Terminal records (workflow or non-workflow) can be exported from the **Main Form**, regardless of whether the terminal status record has an **Action** Form or **View** Form. To export such terminal records, click **Bulk Update**, select **Export Data**, select **Selected Records**, and select **Main Form**.

5) Save the generated Excel file (.xlsx) file in a desired folder location. For more information, see ***Microsoft Excel File Format for Bulk Update Export/Import Process*** (on page 128).

   By default, files of business processes (BPs) with only Main form data are named in the format *<BP Name>_MainForm.xlsx* (for example, *Warranty_MainForm.xlsx*).

   By default, files for business processes (BPs) with Main form data and line item data are named in the format *<BP Name>_MainForm_LineItems.xlsx* (for example, *Warranty_MainForm_LineItems.xlsx*).

Updating BP Records in Excel for Bulk Update From Business Process Log Node

If you have the **Allow Bulk Edit** privilege, you can upload a batch of modified business process records using a Microsoft Excel file (.xlsx) from the **Business Process Log** grouping node.

A bulk update allows you to update and import multiple business process records that have been distinctly modified in a Microsoft Excel file (.xlsx). For a list of business processes supported by the Bulk Update menu options, see ***Business Processes Supported by the Bulk Update Export/Import Process*** (on page 240).

Notes:

- Bulk Import data relies on V1 REST services. Therefore the system displays an error in the **Import Error details** window.
- Bulk workflow actions follow REST V2 services.
- Email is not generated through Bulk Update when bulk workflow actions are taken for multiple records.
- Line items that are part of the input file are ignored if the record does not have those line items.
- Bulk Update is not currently supported for General Spends Classification of Cost BPs with Line item of CBS Code (both workflow and non-workflow) if breakdown rows exist in the referenced Schedule of Values (SOV).

Recommendation

To import BPs successfully, do not change the data formatting type in the *exported* file. For a detailed list of data elements that can and cannot be updated via Excel import, see ***Supported Data Elements For Bulk Update in Excel Import*** (on page 254).

Procedure

To update business process records through Bulk Update:

1) Modify the business process records in the Excel file.

   For more information, see ***Modifying the Excel File for Bulk Update*** (on page 251).
2) Import the data in the Excel file.

   For more information, see ***Importing the Excel File for Bulk Update*** (on page 253).
3) View the import history information of the bulk update process.

   For more information, see ***Viewing Bulk Update Import Data History Details*** (on page 255).
4) View error details of business process records, if any, associated with the bulk update process.

   For more information, see ***Viewing Error Details of the Bulk Update Import Process*** (on page 256).
5) Resolve the errors and re-import the business process records.

For more information, see ***Reusing the Error File For Bulk Update Import Process*** (on page 257)

Business Processes Supported by the Bulk Update Export/Import Process

If you have the **Allow Bulk Edit** permission, the toolbar of the business process you select in the **Logs** node displays the **Bulk Update** menu with the following three menu items:

- **Export Data**
- **Import Data**
- **Import History Details**

The Excel file generated by the Bulk Update export/import menu items displays the following worksheets for supported business processes listed below. For more information about each worksheet, see ***Microsoft Excel File Format For Bulk Update Export/Import Process***.

Supported Business Processes	SOV Type	Instructions Worksheet	Main Form Worksheet	Line Items Worksheet	Codes and Descriptions Worksheet	SOV Line Items Worksheet
Company-level Simple BPs (workflow and non-workflow)		Yes	Yes. For workflow BPs, the data elements are displayed from the **Integration** tab. The following fields also display: • **Workflow Name** • **Current Step Name** • **Workflow Action**	No	No	No

Supported Business Processes	SOV Type	Instructions Worksheet	Main Form Worksheet	Line Items Worksheet	Codes and Descriptions Worksheet	SOV Line Items Worksheet
Shell-level Simple BPs (workflow and non-workflow)		Yes	Yes. For workflow BPs, the data elements are displayed from the **Integration** tab. The following fields also display: ▸ **Workflow Name** ▸ **Current Step Name** ▸ **Workflow Action**	No	No	No

Supported Business Processes	SOV Type	Instructions Worksheet	Main Form Worksheet	Line Items Worksheet	Codes and Descriptions Worksheet	SOV Line Items Worksheet
Company-level *Line Item BPs, **Generic Classification** (workflow and non-workflow) *Excludes Vendor BPs		Yes	Yes For Line Item BPs with cost code data in the **Upper** form, the worksheet also displays a **Cost Code** field. For workflow BPs, the data elements are displayed from the **Integration** tab. The following fields also display: ▸ **Workflow Name** ▸ **Current Step Name** ▸ **Workflow Action**	Yes	No	No

Supported Business Processes	SOV Type	Instructions Worksheet	Main Form Worksheet	Line Items Worksheet	Codes and Descriptions Worksheet	SOV Line Items Worksheet
Shell level Line Item BPs (workflow and non-workflow)		Yes	Yes For workflow BPs, the data elements are displayed from the **Integration** tab. The following fields also display: ▸ **Workflow Name** ▸ **Current Step Name** ▸ **Workflow Action**	Yes	No	No

Supported Business Processes	SOV Type	Instructions Worksheet	Main Form Worksheet	Line Items Worksheet	Codes and Descriptions Worksheet	SOV Line Items Worksheet
Cost BPs, Line items with CBS Code, **Generic Classification,** (workflow and non-workflow)		Yes	Yes For workflow BPs, the data elements are displayed from the **Integration** tab. The following fields also display: ▸ **Workflow Name** ▸ **Current Step Name** ▸ **Workflow Action**	Yes If the work package picker is included in the BP, the worksheet includes a **Work Package** field with a drop-down list of values. You can edit the line item. If the BPO or BPO Line Item picker is included in the BP, the worksheet includes the **BPO** and **BPO Line Item** picker as read-only fields.	Yes	No

Supported Business Processes	SOV Type	Instructions Worksheet	Main Form Worksheet	Line Items Worksheet	Codes and Descriptions Worksheet	SOV Line Items Worksheet
Cost BPs, Line item with CBS Code, **Budget Transfer Classification** (workflow and non-workflow)		Yes	Yes For workflow BPs, the data elements are displayed from the **Integration** tab. The following fields also display: ▸ **Workflow Name** ▸ **Current Step Name** ▸ **Workflow Action**	Yes	Yes	No

Supported Business Processes	SOV Type	Instructions Worksheet	Main Form Worksheet	Line Items Worksheet	Codes and Descriptions Worksheet	SOV Line Items Worksheet
Cost BPs, Line item with CBS Code, **Base Commit Classification** (workflow and non-workflow)	General Spends SOV (with Individual Commit Line Items)	Yes	Yes For workflow BPs, the data elements are displayed from the **Integration** tab. The following fields also display: ▸ **Workflow Name** ▸ **Current Step Name** ▸ **Workflow Action** If you choose to export the Main form and line items, the worksheet also displays the following read-only fields by default: ▸ **currency picker** ▸ **rate in project currency** ▸ **rate in base currency** ▸ **overrid**	Yes	Yes Displays both active and inactive cost codes	No

Supported Business Processes	SOV Type	Instructions Worksheet	Main Form Worksheet	Line Items Worksheet	Codes and Descriptions Worksheet	SOV Line Items Worksheet
Cost BPs, Line item with CBS Code, **Base Commit Classification** (workflow and non-workflow)	Payment Applications SOV (with Individual Commit Line Items)	Yes	Yes For workflow BPs, the data elements are displayed from the **Integration** tab. The following fields also display: ▸ **Workflow Name** ▸ **Current Step Name** ▸ **Workflow Action** If you choose to export the Main form and line items, the worksheet also displays the following read-only fields by default: ▸ **currency picker** ▸ **rate in project currency** ▸ **rate in base currency** ▸ **overrid**	Yes	Yes Displays both active and inactive cost codes.	No

Supported Business Processes	SOV Type	Instructions Worksheet	Main Form Worksheet	Line Items Worksheet	Codes and Descriptions Worksheet	SOV Line Items Worksheet
Cost BPs, Line item with CBS Code, **Change Commit Classification** (workflow and non-workflow)	General Spends SOV	Yes	Yes For change commit records, the worksheet also displays a read-only **Reference Commit** field with values. For workflow BPs, the data elements are displayed from the **Integration** tab. The following fields also display: ▸ **Workflow Name** ▸ **Current Step Name** ▸ **Workflow Action**	Yes For in-flight records associated with the *same* contract, the worksheet also displays a **Reference** field with a list of all reference codes from the SOV sheet of the selected contract for that record. For multiple in-flight records that reference *different* contracts, the worksheet displays a **Reference** field with a list of all reference codes from the SOV sheet of the associated contract.	Yes	Yes The worksheet displays a list of all SOV values across all contracts.

Supported Business Processes	SOV Type	Instructions Worksheet	Main Form Worksheet	Line Items Worksheet	Codes and Descriptions Worksheet	SOV Line Items Worksheet
Cost BPs, Line item with CBS Code, **Change Commit Classification** (workflow and non-workflow)	Payment Applications SOV	Yes	Yes For change commit records, the worksheet also displays a read-only **Reference Commit** field with values. For workflow BPs, the data elements are displayed from the **Integration** tab. The following fields also display: ▸ **Workflow Name** ▸ **Current Step Name** ▸ **Workflow Action**	Yes For in-flight records associated with the *same* contract, the worksheet also displays a **Reference** field with a list of all reference codes from the SOV sheet of the selected contract for that record. For multiple in-flight records that reference *different* contracts, the worksheet displays a **Reference** field with a list of all reference codes from the SOV sheet of the associated contract.	Yes	Yes The worksheet displays a list of all SOV values across all contracts.

Supported Business Processes	SOV Type	Instructions Worksheet	Main Form Worksheet	Line Items Worksheet	Codes and Descriptions Worksheet	SOV Line Items Worksheet
Cost BPs, Line item with CBS Code, **General Spends Classification** (workflow and non-workflow)**		Yes	Yes Also displays a read-only **Reference Commit** field. It will also include record data from terminal status records if the end form is an **Action** form. For workflow BPs, the data elements are displayed from the **Integration** tab. The following fields additionally display: ▸ **Workflow Name** ▸ **Current Step Name** ▸ **Workflow Action**	Yes Displays CBS codes associated with the SOV referenced in all the exported line items.	Yes	Yes Displays all SOV line items across multiple contracts in the following fields: ▸ **refid** (Label of field) ▸ **Ref.** (label of **uuu_sovlinum** field) ▸ **CBS Code** ▸ **Commit Short Description**

**** Bulk Update is not currently supported for General Spends Classification of Cost BPs with Line item of CBS Code (both workflow and non-workflow) if breakdown rows exist in the referenced Schedule of Values (SOV).

Business Processes Not Supported by Bulk Update Export/Import Process

The following business processes are not supported by the Bulk Update process:

- Text
- Line item with CMx Pickers
- Lease
- RFB
- Vendor(Company level lineitem)
- Cost BP (Lineitem with CBS and Fund code)
- Cost BP (Lineitem with CBS and WBS code)
- Cost BP (Lineitem with Fund code)
- Cost BP (Lineitem with Account code)
- Cost BP (Lineitem with Multiple codes)
- Cost BP (Commit at company level)
- Preventive Maintenance BPs which are of Line item type
- Line item to filter company business processes

Modifying the Excel File for Bulk Update

To prepare your file for an import, modify the business process records in the following tabs of the Microsoft Excel file (.xlsx. or .xls):

- Main Form tab
- Relevant Line Item tabs

Ensure the Microsoft Excel file (.xlsx. or .xls) adheres to the ***Microsoft Excel File Format For Bulk Update Export/Import Process***.

Main Form Worksheet

For Workflow BPs, modify the records in the **Main Form** tab as follows:

1) Select a record and modify the data.
2) In the **Workflow Action** field, select any of the following actions:
   - **Blank**: This is the default action selected for the current step in the workflow
   - **<Workflow Action Name>**: Select the next action to move the business process from the current step in the workflow. For example, select **Approve**, **Approve without Review**, or **Cancel**.

Notes:

- The list of actions available for you select vary with each workflow.
- Only assignees can perform a bulk update of your workflow actions

provided you have **Bulk Edit** privilege.

- If records of different workflows are selected for bulk update, the **Workflow Action** field displays the actions available across all workflows.
- The **Assignment Policy** specified for a workflow is ignored for performing bulk workflow actions.

3) Save the Excel file.

Line Item Tab Worksheets

To modify line item records in the relevant Line Item tab:

1) Select a line item record, and modify the data.
2) In the **Action** field, select any of the following actions:
   - **Update**: Select this action if you modify field values for existing line items such as:
     - CBS Codes of inflight Base Commit or Change commit line items
     - CBS Codes (with SOV Reference picker) values of inflight General Spends line items. For workflow and non-workflow records, the cost sheet will reflect the updated amounts for the CBS code.
     - Commit line item picker(**reference picker**) values of inflight Change Commit line items
     - Ref commit picker values in Change commit line items
     - System data elements for referenced unit cost contract in change commit (**SOV Type** as *Payment Applications*) business process line items: **uuu_quantity** and **Amount** (if not formula)
     - Route Base Commit or Change Commit BP records to the next step in the workflow, or to the terminal step
     - Work Package picker values in line items of workflow and non-workflow Generic Cost BPs having Line items with CBS Code
     - CBS codes of inflight General Spends line item records

     Otherwise, by default, the line item will not be updated when set to a *Blank* value.
   - **Add**: Select this action to:
     - Add line items that have CBS codes for inflight Base Commit records
     - Add the following types of picker values to new line items in workflow and non-workflow Generic Cost BPs having Line items with CBS Code:
       - Work Package picker values
       - BPO picker values
       - BPO Line Item picker values
   - **Delete**: Select this action to:
     - Delete existing line items of inflight Base Commit records.
     - Delete the following types of picker values from new line items of workflow and non-workflow Generic Cost BPs having line items with CBS Code:
       - Work Package picker values

- BPO picker values
- BPO Line Item picker values

When you delete a line item, data elements that are set to receive values from line items in the **Main Form** tab are recalculated, any linked records associated with the deleted line item are removed from the **Main Form Linked Records** tab, attachments associated with the deleted line item are removed, and the audit log is correspondingly updated.

3) Save the Excel file.

When BP records and line items that have auto-populate data elements defined from pickers (all data pickers, BP picker) are updated through Excel update, the auto-populate data elements from the picker are *not* updated when the picker value is not included.

> **Note:** Auto-population is also not triggered if the picker element is in the Main form of the record, when the Excel update includes the same value for the picker.

Additionally, when a picker (destination picker) in a detail form is designed to be is auto-populated from another picker (source picker) from the **Upper** form, the system auto-populates the data elements from the former picker (destination picker) when a line item is created, only if a picker value (from the source picker) exists in the **Upper** form.

Importing the Excel File for Bulk Update

After ***Modifying the Excel File for Bulk Update*** (on page 251), import the data using Bulk Update as follows:

1) Switch to **User** mode.
2) In the left Navigator, select **Logs** and select a Business Process (BP).
   For example, select **Logs** and select **Change Orders**.
3) From the toolbar, click **Bulk Update** and select **Import Data**.
4) In the **Upload Microsoft Excel File** dialog box, navigate to the Excel file (.XLSX) and click **Upload**.
5) Review the status of the imported data in the email notification you receive.
   - If the import process is **Completed Successfully**, you will receive a success message.
   - If the import process is **Completed with Errors**, check the attached error file containing a list of erroneous records.

     Or
   - Click **Bulk Update** and select **Import Data History Details** to check for error details or update failures of records or line item updates if any.
6) Correct the errors identified in the error file and reuse the error file to re-import the data. For more information, see ***Reusing the Error File For Bulk Update Import Process*** (on page 257).

Notes:

- Attachments updates are not supported in the Excel import.
- A maximum of 50,000 records, including the column headers can be imported per Excel file.
- Resolve **Upper** form errors before resolving any line item errors.
- Required fields must be entered in the **Main Form** tab of the Microsoft Excel file prior to a bulk edit import process.
- Line items that do not exist will be ignored by the system during bulk import.
- All post-completion actions for a record are performed for workflow actions through bulk update.
- If you modify the design in the **Business Process Integration** form for a business process that is already loaded in the **BP Log** node in **User** mode, you must reload the **Business Process Log** node to ensure the most recent changes in the design are reflected.

Supported Data Elements For Bulk Update in Excel Import

The following are lists of data elements that are supported and not supported by the Bulk Update import process.

Supported Custom Data Elements

The following type of custom data elements that can be updated via Excel Import:

- Currency Data Elements
- Decimal Amount
- Integer Amount
- All types of pull downs and radio buttons (integer and string)
- Text, Long text ,multi select type data elements
- BP pickers
- CBS picker
- All types of Data Pickers
- Dynamic data set elements (Including behavior elements)
- Date Pickers
- Date-only pickers
- Activity Picker
- Hyperlink
- BP URL

Not Supported Data Elements

The following data elements cannot be updated via Excel Import:

- Record Number

- Line No
- Any data element whose integration is set as Output only
- Rich text data elements
- Linked data elements
- Standard elements
- Any uuu elements which currently cannot be updated using RestV1 services
- BP Creators, Lineitem Creators
- Image pickers
- Line item status
- Cost Line item type
- Tab Name
- Cmx Pickers
- Fund pickers
- Account code pickers
- WBS Picker
- OBS picker
- Currency Pickers

Viewing Bulk Update Import Data History Details

If you have the **Allow Bulk Edit** permission, you can view the import data history details for the files that you imported.

To view the import details history:

1) Switch to **User** mode.
2) In the left Navigator, select **Logs**, and select **Business Processes**.
3) In the right pane, click **Bulk Update** and select **Import Data History Details**.
4) Review the following information in the imported Excel file:
   - **Input File**: The name of the Microsoft Excel file (.xlsx) used for import.
   - **Upload Date**: The date on which the file was imported into the application.
   - **Start Date**: The start date and time of the import process.
   - **Finish Date**: The end date and time of the import process.
   - **Job Status**: Displays the job status of each imported file as any of the following:
     - **Not Started**: Indicates the import is yet to commence.
     - **Preempted**: If a job is not picked up by the system for some reason, the **Job Status** remains **Not Started**. After a period of time, the status changes to **Preempted**. When you click the **Job Status** field on the **Import Data History Details** page, the system displays a message similar to: `The system will continue the import process of the row data provided in the input file '<filename.xlsx>'. Do you want to continue?` To continue, click **Yes**. The status should update to **In Progress**.
     - **In Progress**: Indicates the import job is in process.
     - **Completed Successfully**: Indicates all records and line item data have been successfully updated.

- **Completed with Errors**: Indicates records were partially updated, or failed to update at least one record. For more information, see ***Viewing Error Details of the Bulk Update Import Process*** (on page 256).
- **Aborted**: Indicates the job could not progress due to system issues or server failures.

- **Error File**: Displays the name of the file containing the list of erroneous records. For more information, see ***Error File Format of Bulk Update Import Process*** (on page 132).
- **Records Processed**: The sum total of the BP records in the **Main Form** worksheet and the Line Item worksheets, if any, in the Excel file.

Viewing Error Details of the Bulk Update Import Process

The **Import Data History Details** window displays a log of all the files imported, and their outcomes for a business process.

If the import process is successful, the **Job Status** indicates *Completed Successfully*.

If the import process is *Completed with Errors*, you can either download the input file or the error file to correct the data and re-import.

If the import process is *Preempted*, you can continue the import process by clicking the **Job Status** field and selecting **Yes**.

If the import process is *Aborted*, you can continue importing the remaining data.

> **Note:** If you have the **Allow Bulk Edit** permission, you can view the import data history details for the files you imported.

To view the outcome of the import process:

1) Switch to **User** mode.
2) In the left Navigator, select **Logs**, and select a business process (BP). For example, select **Logs**, and select **Change Orders**.
3) In the right pane, click **Bulk Update**, select **Import Data History Details**.
4) If the import process is **Completed with Errors**, select that row to perform any of the following actions:
   - Download the *input file* using any of the following options:
     - Click the **gear menu** (⚙) of the row and select **Download Input File**.
     - From the toolbar, click**Download** (⬇), and select **Input File**.

     Correct the data in the input file and re-import as outlined in ***Updating BP Records in Excel for Bulk Update From Business Process Log Node*** (on page 239).
   - Download the *error file* using any of the following options:
     - Click the **gear menu** (⚙) of the row and select **Download Error File**.
     - From the toolbar, click**Download** (⬇), and select **Error File**.

     Correct the data in the error file to re-import as outlined in ***Reusing the Error File For Bulk Update Import Process*** (on page 257).

- Click **View Error Details** ( )to review a list of erroneous records in the **Import Error Details of <filename>** window.

5) If the import process is **Aborted**, click **Re-import** in the **Job Status** field of the import job to continue importing the remaining records.

   You can also perform any of the following actions:

   - Click **Refresh** to refresh the **Import Data History Details** window.
   - Click to open the **Search** window.
   - Click to search and locate a specific input file in the **Import Data History Details** window.
   - Click to print the list of entries displayed in the **Import Data History Details** window as PDF, or export and save in any of the following file formats: .html, .csv, or .xlsx.

Reusing the Error File For Bulk Update Import Process

If the bulk update import process is **Completed with Errors**, an error file (XLSX) is generated with a list of erroneous records identified by the import process. You can resolve these errors and reuse the error file to re-import the records.

> **Note:** You should have **Allow Bulk Edit** permission, to import or re-import BP records using a Microsoft Excel file (.xlsx) from the **Business Process Log** grouping node.

The generated error file adheres to ***Error File Format of Bulk Update Import Process*** (on page 132) by default.

To reuse the error file for re-import:

1) In the **Main Form** tab, resolve the errors identified for each BP record.
2) In the relevant **Line Item** tabs, if any, resolve errors corresponding to the BP record in the **Main Form** tab (Step 1).
3) In the **Action** field, select the **Update** option for each record. Otherwise, by default, the line item will not be updated when set to a **Blank** value.
4) After resolving all errors, delete **Column A** in the **Main Form** tab and relevant **Line Item** tabs to clear all identified errors.
5) Save the modified error file to prepare for import.
6) Import the error file as described in ***Updating BP Records in Excel for Bulk Update From Business Process Log Node*** (on page 239).

Auditing Business Processes (Audit Log)

The business process (BP) **Audit Log** tab lists the actions that have been taken on a specific BP record. The following table describes the events that are, or are not, captured in the **Audit Log** tab.

> **Note:** Unless noted otherwise, the following information applies to both workflow and non-workflow BPs.

The following events are captured in the BP Record Audit Log:

- Workflow - <*Action*> (via Bulk Update)
- Workflow steps

  When and to whom (To and Cc) each step was sent (workflow BPs)
- Record creation date (non-workflow BPs)
- General comments, including changes to the Hidden Comment check box and an entry that indicates whether a user deleted a comment
- File comments
- Linked Mailbox
- Linked records
- Add or manage Document-type BP folders: new, remove, rename, move
- Add, remove, open, view, or download file attachments
- Decline task
- Transfer ownership
- Add, modify, or delete a line item: detail or summary
- File attachments to existing line items
- Copied (cc) user views the record
- Updates performed on any part of the BP using the Reverse Auto-Population feature
- Update user web service calls

  When user(s) are added or removed using REST API services
- Bulk Update Import Data
- Record print

  The entries include:
  - Printing from BP record
  - Single & Bulk Printing from the BP log
  - Single & Bulk Printing from the Task log

  The log entries are:
  - Event - Print, and then select <Print Type>
  - Action - Run Print
  - User Name - User who ran the print

  The print type can be *PDF*, *HTML*, or *Custom Print*. For *Custom Print*, the format in Event is Print, select Custom, and then select <Template : Format>
- Disabled and Clear

  The Audit Log captures the number of clearing and disabling of data fields, based on the Disabled and Clear behavior set option in a DDS.

The following events that occur on the *Unifier Mobile App* are captured in the BP Record Audit Log:

- Record creation
- Record update
- Line Item addition
- Line Item update

The following events are *not* captured in the BP Record Audit Log:

- Actions undertaken at the creation step
- Accept task
- Undo accept task
- Add assignees or copy users between steps

Audit Log of Task Reassignments

When a Company Administrator reassigns a task, the BP Record Audit Log displays the following information:

- **Date:** Date and time stamp of the task reassignment
- **Event:** Task Reassignment
- **Action:** Task has been reassigned
- **Field:** Assignee
- **Old Value**: The user name of the previous assignee
- **New Value**: The user name of the new assignee
- **User Name**: The name of the administrator who reassigned the task

Printing and Distributing BP Forms

At times, you may need to print copies of a Business Process form, such as an invoice or a purchase order. You can save a copy of the form as a PDF file and print or email the file, print an HTML view, or print from a Word file if a custom print layout has been created for the form.

Notes:

- You can print a form that is in view mode or in edit mode.
- The print output is based on your permissions to certain data in the system. If you cannot see the hidden comments in a particular step within a Workflow, the hidden details will not be printed and will not be visible in the Custom Print.

Print a BP Form in Different Formats

When printing business process forms from PDF or HTML format, you can choose to include not only the information on the form itself, but also associated information such as general comments and information about file attachments. The print options are:

- Upper form data
- Workflow progress information (for business processes with a workflow)
- Line item list
- Line item data
- General comments made to the record
- Information about file attachments on the record or line items
- Comments made to file attachments

> **Note:** Some fonts may not be supported. Ensure that you adjust your language settings correctly (go to region format tab and review changing language topics in the Help) in cases of printing a BP form or attaching a pdf version of a BP form to an email when a workflow is routed.

If custom print layouts have been created for the business process, the form will print according to the layout that you select.

> **Note:** For PDF and HTML layouts, the ability to print hidden comments will respect permissions: if you can see hidden comments, you can print them. In custom print, hidden comments are not printed.

To preview and print a business process form:

> **Note:** Workflow Progress section in Print options is driven by permissions. If you can see workflow progress, you can print the workflow progress.

1) Open the BP record that you want to print.
2) From the **Menu Options** (☰), hover over **Print**, and then choose one of the following:
   - **HTML** to view the form in the browser which can then be printed.
   - **PDF** to open the form in Adobe Acrobat Reader, which can be saved or emailed as a PDF file, or printed process, you are asked to save the changes to the form.
   - **Custom** to select the Oracle Analytics Server, Microsoft Word, and PDF custom print templates from the same place as the current custom prints (Custom Format Print selection window).

   > **Note:** Even if you have not made any edits, you may be asked to save changes. This can occur if the form includes fields that are auto-populated or automatically updated, as these automatic functions are considered to be changes.

3) The Print Options window opens.

This window displays the business process record information that can be printed; see the table below. Select the check boxes for the information that you want to print. Only those options that are applicable to that business process design will appear on the Print Options window. For example, line items options are available for business process types that support line items, the Task Details option appears only for workflow business processes.

4) To select all the check boxes, click **Select All**. To deselect all, clear **Select All**.

   Selecting or deselecting this check box will have no effect on any Workflow Progress options you choose.

5) Click **Print**. The preview form opens in an HTML window, from which you can print.

   If you chose PDF, the PDF file may automatically download to your system based on your browser.

Print option	What it prints
Upper Form	Selected by default. This prints the information entered on the upper form.
Workflow Progress	Prints a log of the steps in a workflow, showing the step name, the assignee(s) on the step, the action that was taken on the step and the completion date. You have additional print options: All Steps will include all the steps in the workflow, whether or not users visited them. The steps will be listed in order according to the workflow setup. All assignees on each step will be listed in the log, whether or not they acted on the step. Visited Steps will include only those steps that have been visited by users. Only the assignees who acted on the steps will be listed. You can display the steps sorted by the completion date or the step name, in ascending or descending order.
Line Item List	Selected by default. This prints line information as it appears on the business process form itself. This is applicable for business processes that support line items. **Note**: The number of line items determines the time taken to generate the pdf.
General Comments	The general comment text and create details are printed.
Record Attachments	File attachments to the record are listed alphabetically by file name and include the

Print option	What it prints
	file title, issue date, revision number, and file size. This is not applicable for document type business processes, which list file attachments in the line item section.
Record Attachments option, Comments suboption	Prints comments associated with file attachments to the record. Record Attachments must also be selected to select this option.
Detail Form	Line item data is displayed in order by line item and grouped by tab if the business process has multiple line item tabs. This prints all line item data elements present on the detail form and reflects the layout of the detail form (for example, if the detail form is two-column, the print data is displayed in two columns).
Detail Form option, Attachments suboption	Prints information about attachments to each line item. Detail Form must also be selected to select this option.
Detail Form option, Attachments suboption, Comments suboption	Prints comments associated with file attachments to a line item. Detail Form and Attachments must also be selected to select this option.

Oracle Analytics Server custom print in I Step BP records

In I step BP records, and where the record number does not exist for a record, if you print the BP record using an Oracle Analytics Server custom print template, the print output will be blank.

Note: You cannot print a Portal Enabled BP record in the Creation step.

Custom Format Print Options for BPs

Custom Format Print Window for a non-Workflow BP

The Custom Format Print window, for a *non-Workflow* BP, has two sections:

- Select a custom print template
- Select a template and format to print

Both sections facilitate custom print template and format selections.

Select a custom print template

Lists all the custom print templates existing for the non-workflow BP, including the custom print templates created in the **Custom Templates** functional node and the custom print templates created in the configuration of the non-workflow BP. For example, the list may include Oracle Analytics Server, Word, and PDF custom print templates.

If there are multiple custom print templates for the same non-workflow BP, all the published templates are listed in this section.

The "Select a template and format to print" is populated by the selection made in the "Select a custom print template" section.

Select a template and format to print

- If you select an Oracle Analytics Server custom print, you can select the desired template and format from the drop-down lists.
- Template drop-down displays all the available templates for the selected format.
- Format drop-down displays the available formats for the selected template.
- If the custom print template was created using PDF or Word, the "Select a template and format to print" is disabled.

Default template and format (non-Workflow)

- If an Oracle Analytics Server print template is selected, the default values in the drop-down lists are set based on the default in the custom print template.
- When an Oracle Analytics Server print template is selected in the "Select a custom print template" section, the template and format are populated based on the default value selected at the time of designing the print template.

Custom Format Print Window for a Workflow BP

If there is only one custom print template, and it happens to be an Oracle Analytics Server template, the print template is selected in the “Select a custom print template” section, and the template and format are populated based on the default value selected at the time of designing the print template.

The Custom Format Print window has three sections for a Workflow BP.

- Select a custom print template
- Select a template and format to print
- Select options for Workflow Progress

By default, when the Custom Format Print window is launched, all three sections are enabled and the first template is selected. The options seen in the subsequent sections are based on the selection made in the "Select a custom print template" section.

You can select options for workflow progress in the 'Select options for Workflow Progress" section of the Custom Format Print window for PDF and Word templates, which are created at the time of configuring the non-workflow BP.

If the selected custom print template is of an Oracle Analytics Server type, the “Select options for Workflow Progress” section is disabled. This is because the custom print template designers can always use the system provided Workflow views to include workflow-related information in the template.

Default template and format (Workflow)

- When an Oracle Analytics Server print template is selected in the "Select a custom print template" section, the "Select a template and format to print" section is populated based on the default value selected at the time of designing the print template.
- If there is only one custom print template and it is an Oracle Analytics Server template, the print template is selected in the “Select a custom print template” section, and the template and format are populated based on the default value selected at the time of designing the print template.

> **Note**: If your custom print is a draft business process record, the modified record values will not be displayed in the Output of the Oracle Analytics Server print.

Custom Format Print Window for Shells

In addition to editing shells that you have permissions for, you can view all Custom Print Templates and define them at the shell level. After you navigate to your system logs, you must select a BP. After you choose an item from the list of available items in the BP, click the **Settings** icon and select the **Print - Custom** option.

When you select **Print - Custom**, a new window is displayed where you can choose a Custom Print Template from the list. Upon choosing one of the available Custom Print Templates, select **Print**.

> **Note**: If you copy a shell that has an existing setup and the **BPSetup** module is selected, the Custom Print Templates are also copied.

Print Using a Custom Layout

Custom printing can be used with templates created in Oracle Analytics Server, Microsoft Word, and PDF format. Depending on the template used for custom print, you can print the upper form, the current workflow step, comments, and attachments of the record. The template may also allow printing of specific line items in their tabs. The printed output will list the name of the tab with the line items following on separate lines.

To print a BP form with a custom print layout:

1) Open the business process record that you want to print.
2) From the **Menu Options** (☰), hover over **Print**, and then choose **Custom** to select the Oracle Analytics Server, Microsoft Word, or PDF custom print templates from the same place as the current custom prints (Custom Format Print selection window).

   If you are editing the business process, you are asked to save the changes to the form.

   > **Note:** Even if you have not made any edits, you may be asked to save changes. This can occur if the form includes fields that are auto-populated or automatically updated, as these automatic functions are considered to be changes.

3) Select a template and format.

4) Select Workflow progress options. For details on non-Workflow progress options, see **Printing a Configurable Manager Form** in the *Unifier Managers User Guide*.

   Workflow progress prints a log of the steps in a workflow, showing the:

   Step name

   Assignee: on the step

   Company: the assignee company

   Status: of the step

   Action: on the step

   You have additional print options:

   - All Steps will include all the steps in the workflow, whether or not users visited them. The steps will be listed in order according to the workflow setup. All assignees on each step will be listed in the log, whether or not they acted on the step.
   - Visited Steps will include only those steps that have been visited by users. Only the assignees who acted on the steps will be listed. You can print the selected steps (including the current workflow step) sorted by completion date or step name, in ascending or descending order.

5) Click **Print**. The File Download window opens.
6) Choose to Open or Save the file.
7) Print the file.

Send a PDF Copy of a BP Form via Mailbox

You can create and send a PDF copy of a business process record directly from your mailbox.

To send a PDF copy of a BP form using Mailbox:

1) Open your inbox.
2) Double-click a mail item that is linked to the business process record you want to send.

   If it is linked to a business process record, you will see a caption under the subject line that reads, **This mail and any future replies are linked to business process records.**
3) Click the **business process records** link to open the Linked Business Process Records window.
4) Double-click a record to open it.
5) Click the Menu Options (☰) in the corner, and select Email as Attachment. The message window will open with a PDF file of the business process record attached below the subject line.
6) Complete the message and send.

Auto-Populating BP Data Picker on BP Auto-Creation

When a source business process (BP) record has a BP creator that auto-creates another BP record that has a BP Data Picker referencing the source BP record, the BP Data Picker values will be auto-populated referencing the source BP record, even when the source BP record is in a different shell.

The auto-creation of the destination BP records (from source BP record) can be either of the type:

- Record to Record or
- Line-item to Record

Both types support the BP Data Picker in destination record that will be auto-populated.

> **Note**: The system ignores the queries that have been defined for the BP Data Picker.

The source BP record in a Project/Shell can auto-create another BP record in the same Project/Shell

As a result, when the source BP (BP A) record and the auto-created BP (BP B) record reside in the same Project/Shell, the BP Data Picker in the auto-created BP (BP B) record is auto-populated with reference to the source BP (BP A) record, similar to all BP Pickers.

The source BP record in a Project/Shell can auto-create another BP record in different Projects/Shells

As a result, when the source BP (BP A) record and the auto-created BP (BP B) record reside in different Projects/Shells, the BP Data Picker in the auto-created BP (BP B) record is auto-populated with reference to the source BP (BP A) record.

Auto-Populating BP Line Item Data Picker on BP Auto-Creation

When a record is auto-created from a line item:

- If the created record has a BP Data Picker, it will be populated with a reference to the source record. If the upper form also has the BP Line Item Data Picker, it will be populated with a reference back to the line item on the source record.
- If the created record has a BP Data Picker on the detail form, the line items copied from the source will have the picker populated with a reference to the source record. If the detail line also has BP Line Item Data Picker, it will be updated with a reference to the detail line. You can auto-populate and reverse auto-populate back to the source upper or detail form.
- BP Line Item Data Picker displays the line item based on query conditions that are evaluated similar to Data Picker in the auto-created record.

When a record is auto-created from another record upper form:

- If the created record has a BP Data Picker, it is populated with a reference to the source record and any Line Item Data Picker on record is empty.

- If the created record has a BP Data Picker on the detail form, the Line Items copied from the source will have the picker populated with a reference to the source record. If the detail line also has BP Line Item Data Picker, it will be updated with a reference to the detail line. The design can then auto-populate and reverse auto-populate back to the source upper or detail form.
- BP Line Item Data Picker displays the Line Item based on query conditions that are evaluated similar to Data Picker in the auto-created record.

When a line item is auto-created from source BP line item:

- If the source record has a BP Line Item Data Picker, it is populated with a reference to the auto-created line item, provided BP Data pickers refer to the source record.

Auto-population and Reverse Auto-Population of data elements, based on BP Line Item Data Picker, is supported. A Reverse Auto-Population can be done from both the Upper and Detail forms.

When you select a Line Item Data Picker without selecting a BP Data Picker, the system displays a picker window without line items.

When you change the selection in a BP Data picker, if there is already a line item selected, the system displays the message: You cannot change a BP Data picker that has line item(s) associated with it.

Upon copying a record, the selected values for a BP Line Item Data Picker will be copied from the source record.

Upon auto-creation of the record or line item, the value for the BP Line Item Data Picker (on the destination record or line item) is retained from the source. The value of the BP Data Picker is also retained on the destination from the source.

A data element that is based on a Line Item Data Picker data definition is supported as part of HTML or PDF prints. The Display Element value is printed as part of HTML or PDF prints.

A Line Item Data Picker element is available as part of Custom Print schema so that you can use it on Custom print XML file. At runtime the Display Element value will be printed.

Auto-Populating Record Due Date on BP Workflow Auto-Creation

To ensure auto-created destination BP workflow records display a record due date at run-time, you can define either the **Duration Element** or **Due Date Element** during auto-creation setup. This applies to source business process (BP) workflow records that have a **BP Creator Element** to auto-create another BP record.

Except for S-step, the auto-created destination BP records (from source BP record) can be either:

- Record to Record or
- Line-item to Record

The **Due Date Element** field displays those date picker elements that have been specified in the upper forms or detail forms.

Depending on the entries made in the uDesigner forms, Auto-creation Setup, Unifier Admin, and the source record in User mode, the **Due Date** field in the auto-created destination BP will be populated as described below.

Due Date Behavior in Auto-Creation Settings

uDesigner Auto-Creation Setup (Due Date or Duration Element)	Duration Value in Admin Mode (Auto-Creation Setup)	Due Date Behavior
Neither Due Date nor Duration Element is specified	Not defined	The system assigns a Due Date based on Workflow Settings of the auto-created BP record.
Neither Due Date nor Duration Element is specified	Defined	The Due Date is calculated based on the defined Duration days in Admin mode.
Due Date Element is specified	Defined	If the source record includes a Date Element, the auto-created BP record inherits the source record's Due Date.
Due Date Element is specified	Defined	If the source record does not include a Date Element, the Due Date is calculated based on the Duration value in Admin mode.
Duration Element is specified	Not defined	If the source record does not include a Date Element, the Due Date is calculated based on Workflow Settings of the auto-created BP record.

Updates on Document Attributes for Business Processes

When a document gets published to the Document Manager (DM), the document attributes get updated by matching DEs from the BP record. If the matching DEs on the source record get updated during the life of the record, the corresponding DM attributes can get updated, if it has been configured in uDesigner to do so.

If the **Update attributes for already published documents** option is enabled on a BP Upper Form at a given step, the attributes of all record and line item published attachments will be updated according to the matching DEs between the record and the DM Attribute Form. Also:

If the **Update attributes for already published documents** option is enabled at multiple steps, the DM attributes gets updated at each such step.

For a Workflow type BP:

If the **Update attributes for already published documents** option is enabled on a current step, the DM attributes get updated as the record is routed to next step.

If the user causing the record to move to next step does not have **Modify Properties** permission on a document, the DM attributes get updated, if the **Update attributes for already published documents** option is enabled.

If the end step has an edit form, the DM attributes get updated at each save of the record, if the **Update attributes for already published documents** option is enabled.

For a non-Workflow type BP:

The attributes get updated when the record is **Finish Edited**, if the **Update attributes for already published documents** option is enabled.

If the user who edits the record does not have **Modify Properties** permission on a document, the DM attributes get updated, if the **Update attributes for already published documents** option is enabled.

For both Workflow and non-Workflow type BPs:

If the attribute on DM form is set to **Formula** or **Auto-populate with a Constant Value**, the attributes get updated from the BP if there are matching DEs with the BP form; however, when you manually open the **Properties**, and click **OK**, the **Formula** or **Auto-populate with a Constant Value** on the DE gets recalculated and repopulated.

If a BP record is created by attaching file(s) from the DM directly, and the **Update attributes for already published documents** option is enabled, the files are treated as a published document(s) and their attributes get updated as the record progresses in workflow, or the record is **Finish Edited**.

> **Note**: If the **Update attributes for already published documents** option *is not enabled*, there will be no update of DM attributes as a record progresses in workflow, or the record is **Finish Edited**.

Business Processes with Special Behaviors

Some business processes have special features and behaviors that make them operate differently from most business processes in the system. These business processes and their features are described in this section.

For information about internationalization and CSV files, refer to the *Unifier General Administration Guide*.

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Schedule of Values (SOV) Sheets and Business Processes

This section discusses how to manage BP records, including searching for existing BPs, transferring ownership, viewing BP properties, and viewing Schedule of Values (SOV) or funding information from within a Cost type BP.

> **Note:** If you configure specific Data Elements (DEs) to auto-populate from a Base Commit BP, do not configure the same auto-population using CSV, Microsoft Excel, or REST API in an SOV sheet for General Spends, Payment Applications, or Summary Payment Applications.

View an SOV sheet from the BP form

Commit (contract) or spend (invoice) BPs can be set up to automatically create a Schedule of Values (SOV) sheet. These transactions can be easily accessed directly from the BP form. The BP form remains active.

If the BP has been set up to automatically create an SOV sheet, an SOV button appears at the top of the BP form after the SOV sheet has been created.

For more information about Schedule of Values (SOV) sheets, see **Schedules of Values (SOV)** in the *Unifier Managers User Guide*.

To view the SOV sheet created from the Cost type BP:

1) Wait for the BP to reach terminal status.
2) Open the business process and click the **Menu Options** (☰).
3) Click **SOV** to open the SOV sheet that corresponds to the transaction.
4) Close the SOV sheet to return to the BP form.

Create SOV breakdowns

You can add SOV breakdowns from this view. Breakdowns are only in use in the SOV sheet, not the cost sheet. If another transaction exists for the CBS code, you will not be able to do a breakdown.

To add CBS code breakdowns that can be used to create invoices:

1) Open the business process and click the **Menu Options** (☰).
2) Click **SOV** to open the SOV sheet that corresponds to the transaction.
3) Click a listed CBS code from the sheet. The CBS Detail window opens.
4) Go to the **Breakdown** tab in the right pane.

For more information about adding CBS breakdowns, see **Adding Breakdowns to SOV sheet by Importing** in the *Unifier Managers User Guide*.

View, or edit, fund transaction details from the BP form

Commit (contract) or spend (invoice) BPs can be set up to consume or appropriate funds in the project/shell funding sheet or commitment funding sheet. These transactions can be easily accessed directly from the BP form.

If the BP form has been set up for funding (and is in the appropriate step, and you have funding permissions), a Funding button will appear at the top of the BP form. This lets you perform a fund assignment while routing and approving a BP, such as a payment. Access to this button and fund information is dependent upon your Fund Manager permissions.

For more information, see the **About business processes enabled for commitment funding** and **About business processes enabled for funding** topics in the *Unifier Managers User Guide*.

Composite view of Base Commits and Change Commits

You can view a composite view of both Base Commits and Change commits. The SOV sheet is used as a composite view, and the SOV sheet will be the composite of the PO and all added lines from Change commits.

To support the line-item mode, the SOV sheet has a column called **Ref** that represents line item numbers.

There are other fixed columns, and the columns will be dependent on the mode.

- **Line item mode:**
  - The **Ref** column represents the line item numbers for both Commits and Change Commits.
  - The **Description** column shows the short description of the line item from the Commit.
- **CBS mode:**
  - The **Ref** column does not have any data. The breakdown items do not include a ref number. The column width is four characters.

> **Note**: For Base Commits Business Processes (BPs) with SOV type of "Summary Payment Applications," a special behavior line item has been provided to allow you to add further cost distribution details to the line items. This option is accessible in the Standard detail tab of the properties window and contains two options: Lump Sum and Cost Unit. Click Add and select the appropriate option.

To view funding details from the Cost type BP:

1) Wait for the BP to reach terminal status.
2) Open the business process and click the **Menu Options** (☰).
3) Click **Funding** to open the Funding sheet that corresponds to the transaction.
4) Review the details of the transaction.

> **Note**: This is the same window that you would see if you clicked on the link corresponding to this transaction on the project/shell funding sheet.

To reassign funding, click **Fund Assignment**. For more information, see **About business processes enabled for funding** in the *Unifier Managers User Guide*.

Payment Application Business Processes

A Payment Application BP lets you track the payment information using the standard payment application method, such as tracking retainage, stored materials, past payments, and so on. Each Payment Application BP record references a particular Base Commits record. The line items on the Payment Application BP will reflect the line items on the Base commits as well as any associated Change Commits.

A project/shell can include more than one Base Commit BP with Payment Applications and SOVs. When a shell is created from a shell template that has multiple Base Commit BPs which creates different payment application SOVs, multiple Change Commits that updates different payment application SOVs and multiple payment application BPs, those business processes are automatically included in the created shell with the SOV structures.

When multiple Base Commit BPs are included in a project/shell, you can:

- Create multiple Base Commit records that create different payment application SOVs
- Create multiple Change Commit records that update different payment application SOVs

- Create multiple payment application records that update different payment application SOVs
- Create multiple payment application SOV structures
- View new SOV nodes that display the log of the Base Commit records that creates the Payment Application SOV structure

> **Note:** If the sum of costed lines ranges between a -0.01 to 0.01 difference from the originating line item values, the system does not generate an error or prevent the BP record from moving to the next step.

For more information, watch the following video:

Using Multiple Payments in a Single Shell (***https://players.brightcove.net/2985902027001/default_default/index.html?videoId=6362687200112***)

Payment Application BPs, and associated Base Commits and Change Commits, are designed in uDesigner. For more information, refer to the *Unifier uDesigner User Guide*. Your Company Administrator can include or remove SOV restrictions when setting up a Base Commit BP or a negative Change Commit (negative change order) BP.

Payment Application Tasks and Performing Multiple Actions-Bulk Action

The **Tasks** node of the Payment Application lets you perform bulk action on Payment Application records, when the system detects multiple payments, or negative change orders.

When you select multiple Payment Application BP records (or Summary Payment Application BP records) and perform a workflow action (bulk action), the system (based on the "remove SOV restrictions" selection on the Commit BP) updates all the records that you selected, and:

- If you select the **Action with Preview** option (in the left Navigator, select **Tasks**, and then click **Actions**), the system displays messages related to payment applications and negative change commits, when applicable.
- If you select the **Action without Preview** option (in the left Navigator, select **Tasks**, and then click **Actions**), the system does not display messages related to payment applications and negative change commits, when applicable.

For non-Workflow BP records, when the "Status" is updated through Bulk Edit, the system does not display messages related to payment applications and negative change commits.

When the BP records are progressed from email notifications (when you perform a workflow action through email notifications), the system does not display messages related to payment applications and negative change commits.

Payment Application BP and Multiple Payments

If the **Remove SOV restrictions** option *is selected* in the **Business Process Setup** window (**General** tab), multiple Payment Application type BPs can be configured for a Project/Shell and multiple Payment Application BP records can be routed, at any time, for a commit.

> **Note**: You can go to the Base Commit Setup section for setting information.

Example

First, the user creates the contract record CON-001 and sends the contact to a step that creates Schedule of Values.

Then, the user creates a Payment Application BP record PA-001 and sends the BP record to the next step for approval. At this point the BP record is in progress (in-flight).

Then, the user creates a second Payment Application BP record PA-002 and sends the BP record to the next step for approval.

Then, the user tries to create a second Payment Application BP record for the same Contract CON-001.

An Alerts icon (⚠) is displayed and when the user clicks the icon, information about pending payments and negative change orders is presented.

The system does not block the creation of the second Payment Application BP record PA-002 but informs the user that a Payment Application BP record is pending on the contact.

If the **Remove SOV restrictions** option *is deselected* in the **Business Process Setup** window (**General** tab), only one Payment Application type BP can be configured for a Project/Shell and only one Payment Application BP record can be routed, at any time, for a commit.

After a Payment Application has reached the terminal step, if you open an in progress (in-flight) BP record, the system notifies you that the SOV has been refreshed.

After the system refreshes, the system retrieves the latest information, from the SOV. At run time, whenever you open a draft, or an in-flight, payment record and accept the SOV merge alert the data element (which has the "Do not get latest SOV values when merging" option enabled) will not get refreshed with the latest updated values from SOV.

Before SOV merge, payment grid for data element 'Unit price/gallon' which has 'Do not get latest SOV values when merging' checked.

All the fields populated from the SOV will be updated based on the latest SOV.

All formula fields, in the Payment Application Detail Form, defined using fields from SOV, will be re-evaluated.

Example

There are two Payment Applications P1 and P2. P1 has reached the terminal step. P2 is in progress (in-flight).

User has not yet accepted the task. Upon accepting the task, the system will refresh the SOV and inform user with an alert.

When the user changes to Payment Application BP, an alert icon appears on the window.

Click the Alerts icon (⚠) to see any pending payments, and negative change orders, associated with the selected reference commit. The Alerts icon is available for both Workflow and non-Workflow BPs and might appear after a selection for the contract record is made.

User has accepted the task, and SOV has changed because of another payment. When user open this record, system will perform an SOV merge, and inform user with an alert.

If the user has left P2 open, and P1 has reached terminal status and P1 has impacted the SOV used in P2, when the record P2 is sent to the next step, system will refresh the SOV and throw an alert to the user stating that the SOV has changed.

Payment Application BP and Negative Change Commits

If the **Remove SOV restrictions** option *is selected* in the **Business Process Setup** window of the Base Commit (**General** tab), multiple Payment Application type BPs and Negative Change Commits can be configured for a Project/Shell.

At the time of creating the Payment Application record, upon selecting the reference commit, the system will check for any existing negative change orders for the selected reference commit. The system displays a message if there any negative change orders.

After the record has been created, subsequently, when you open Payment Application record, the system checks to see if there are any pending payments, or negative change orders. If detected, the system displays a message.

Payment Grid which has negative line items

When you open the Payment Application grid, the line items which will be modified because of a pending Negative Change order will have a yellow alert in the Scheduled Value cell. You can click the cell to view the details of the Change Order. The details include the BP name, BP record number, Line Number, and the Amount fields.

Line items from negative Change orders which are in draft status will not be seen in the Payment Application grid, but if a line item has been modified or removed from an existing record which is in draft status, the line item from negative change order can be seen in the Payment Application grid.

In case of Summary Payment Application, the alert will be seen in the Summary line, if the summary line item amount is negative. Similar alert will be seen if the costed line item is negative.

The sort order in the window begins by Business Process, then by Record Number, then by Line Number, and finally by Costed Line Number.

Creating negative change orders when the Payment Application is in progress (in-flight)

Example

First, the user creates the contract record CON-001 and sends the contact to a step that creates Schedule of Values.

Then, the user creates a Payment Application BP record PA-001 and sends the BP record to the next step for approval. At this point the BP record is in progress (in-flight).

Then, the user creates a Change Order (Change Commit) BP record to modify the committed line with a line item with a negative amount (a Negative Change Order CC-001) and sends it to the next step for approval.

The creation is successful.

Creating multiple negative change orders

> **Note**: The following is applicable to Change Orders (Change Commits) that point to the Base Commit that does not have any SOV restrictions.

Example

First, the user creates the contract record CON-001 and sends the contact to a step that creates Schedule of Values.

Then, the user creates a Change Order (Change Commit) BP record to modify the committed line with a line item with negative amount (a Negative Change Order CC-001) and sends it to the next step for approval.

Then, the user creates another Negative Change Order for the same contract record CON-001.

The creation is successful.

Enter Payment Application Line Item Information

Line items on the payment application have special functionality. Payment application line items are created automatically from the line items on the associated base commit and any change commits. The columns that appear on the grid (including formula columns) are part of the business process detail form design. If the **Add All SOV Lines** option is enabled for a Payment Application BP with individual commit line items or group by CBS Codes and the grid contains more than 3000 line items, the grid displays a maximum of 3000 line items by default; however, you can adjust the grid to display between 200 and 10000.

To enter line item information on a payment application:

1) In the **Standard** tab of the payment application business process form, click **Add**. This displays all the SOV lines with the selected Base Commit BP record in the upper form.

Notes:

- In a new payment record, when you navigate to the payment grid and no line items are saved, the system will not calculate the sum of all (SOV) line items for data elements in the upper form.
- If the Payment Applications business process has been configured with **Add All SOV Lines** selected, the **Add** button in the Payment Grid will be hidden.
- If the Summary Payment Application business process has been configured with **Add only edited SOV Line Items**, the **Apply line item value of Percentage Complete to Date to costed lines** option will be hidden.

- Depending upon the design of the BPs, some fields may be auto-populated with data from the base commit and change commit. For a field to auto-populate, the same data element must be used on the base commit, change commit, and payment application. Line items appear from the base commit and any change commits based on the statuses of those business processes, as designed.
- For classic Payment Applications BP, when the upper form has a DE which is configured as “Auto-populate <sum of all lines>,” the system will calculate the sum of all SOV line items. The system will not calculate the sum of all detail line items.

2) Enter details for the line items that must be paid. You can enter values in any editable field on the grid.
3) When you have completed editing the Line Items window, click **Save**.
   - Line items with payments are added to the grid, and the total payment per page is displayed.
   - If the **Add only edited SOV Line Items** option is enabled in uDesigner, only the edited SOV line items will be saved by the Summary Payment Application business process.
   - If a payment must be made in a subsequent step, click **Add** again to re-invoke the SOV lines screen. All lines become visible and any lines that were previously added open in edit mode.

A pen icon appears in the second column to indicate which rows have been modified. When a payment has been added and saved, the pen icon turns green. When the row is still being edited, the pen icon is yellow.

To **Remove** an SOV line that you added to the grid, click the trash-can button on the toolbar.

The columns with decimal values preserve, or maintain, the decimal values specified in the data element of the following business processes and SOV types:

- Schedule of Values (SOV) sheet: Payment Application and Summary Payment Applications
- Payment Application Line Items
- Summary Payment Application Line Items

As a result, the system will not round the decimal value to two decimals, for the preceding DEs.

Errors

The first column of the payment applications grid is marked by an (x) icon and indicates errors within edited line items. An (x) icon appears in this column when rows have errors. To view errors in the log, click **Check Errors** or click the (x) icon.

Payment Status

The second column of the payment applications grid is marked by a pen icon and indicates payment status. A pen icon appears in this column to indicate which rows have been modified. When a payment has been added and saved, the pen icon turns green. When the row is still being edited, the pen icon is yellow.

To undo line item changes without closing the Line Items window:

In the Line Items window, click the **Cancel** button. Any line item information that you have entered or changed will be cleared, and the fields will revert to their original values.

SOV type Payment Application and SOV line items type Individual commit line items

> **Note:** Although uDesigner supports the inclusion of Pull Down DEs (string or integer) on the payment detail form for use with Auto Population from an SOV Sheet, the Pull Down DE column cannot be added to the SOV Sheet from the SOV Structure. Because of this, the Pull Down DE in a line item cannot auto-populate a value from the SOV Sheet when a classic Payment BP record is created. Auto Population is *only* supported for decimal or current amount DEs.

Update Auto-populate on payment application option is enabled for a Change Order BP

If the **Update Auto-populate on payment application** option (located on the **Options** tab in uDesigner) is enabled for a Change Order BP and you create a Payment Application in your project (**Payment Applications** node), in the **Line Items** tab of the **Create New Payment Applications** window, the following information applies:

a) The **Description** column and the **Spend Category** column are set to auto-populate from the Base Commit and receive the latest updated values from the Change Order that references this SOV line items.
b) The Change Order then routes the record to the terminal status.

c) The **Description** column and the **Spend Category** column are set to auto-populate from the Base Commit and receive the latest updated values from the Change Order that references this SOV line items.

When the auto-populated data elements are updated in referenced SOV line items (in the Change Order) and routed to the approved step, new payment record elements that are set to auto-populate from Base Commit will be updated with the latest values from the Change Order. The new payment record elements will always get the values from the latest Change Order whenever these values are updated in the payment record. Upon routing the payment record to terminal status, it will further update the values in SOV line items.

Add All SOV Lines option is enabled for a Payment Application BP

If the **Add All SOV Lines** option (located on the **Options** tab in uDesigner) is enabled for a Payment Application BP with individual commit line items or group by CBS Codes and the grid on the **Line Items** tab contains more than 3000 line items, the following information applies:

- When you need to create a Payment Application BP record with more than 2000 line items or add more than 2000 line items to an SOV, Oracle recommends that you use the Import option to import a CSV or Microsoft Excel file. For more information, see ***Importing, Exporting, and Integration***.
- When you make changes to line items using the grid, the pagination controls are hidden until all the line items are saved. This applies to both creation and in-flight steps.
- Use pagination controls to control the number of lines displayed, which improves system performance.

Pending SOV type Payment Application, or SOV type Summary Payment Application, and SOV line items type Individual commit line items

> **Note:** In the payment record, the values are auto-populated from the Base Commit if the **Update Auto-populate on payment application** option (in **Options** tab) is not enabled for a Change Order BP.

For a pending payment record, in the **Line Items** tab of the **Payment Applications** window:

a) The **Description** column and the **Spend Category** column are set to auto-populate from the Base Commit and receive the latest updated values from the Change Order that references this SOV line items.

b) The Change Order then routes the record to the terminal status.

c) The **Description** column and the **Spend Category** column are set to auto-populate from the Base Commit and receive the latest updated values from the Change Order that references this SOV line items.

When the auto-populated data elements are updated in referenced SOV line items (in the Change Order) and route to approved step, the pending payment (after opening and accepting the task) will receive an SOV alert, if there is an SOV merge. When you click **OK**, the auto-populate data elements (from Base Commit) are updated with the latest Change Order in the grid, along with the latest SOV line items values.

> **Note**: When performing an SOV merge, line-item-level validations will be bypassed. To prevent over-payments, ensure that appropriate rules are configured for the SOV remaining commit balance in the SOV sheet. While the SOV merge keeps data in sync between the SOV and payment lines, the system will not enforce validation rules unless the payment lines are manually edited.

If you open a pending payment that is in an accepted state and navigate to the payment grid, all the existing payment lines will receive the latest values for the auto-populated data elements from the latest Change Order.

Summary Payment Applications behavior for Variable Unit Cost Lines

For the Variable Unit Cost line items, the Quantity this Period column is editable for both the summary and costed lines. You can enter quantity at the summary and push that quantity to the costed lines.

The Requested this Period amount will be calculated based on the Unit Price and Quantity this Period for each costed line. In the summary line item, the Amount this Period is populated with the sum of costed lines - unit price * Quantity this Period, and the request this period will be calculated accordingly.

In the Payment Applications for the Variable Unit Cost line items, the Amount this Period for the summary line will be calculated as sum of each costed line (uuu_unit_price * quantity this period), if "Total the cost breakdown values to line item" is in the design. The Amount this Period will be read-only for both the summary and the costed lines.

Amount this Period (uuu_spa_amt_tp)

This uuu_field DE will be calculated by the system in the summary line if you enter Quantity this Period in the costed lines. The calculation of this field in summary line will be: uuu_spa_amt_tp = sum of each costed line (uuu_unit_price * quantity this period). In the design, the "Total the cost breakdown values to line item" must be selected. For costed lines, the uuu_spa_amt_tp DE value will always zero (0).

The same applies when you import the payment line items for Variable Unit Cost line items, using CSV or Restful services. The Amount this Period in summary line will always be the sum of each costed line (uuu_unit_price * quantity this period). For the costed line items, the uuu_spa_amt_tp DE value will be zero (0).

The Requested this Period will be calculated based on the user-defined formula, for both the summary and the costed line items, and % Complete to Date (for the summary and the costed line items) is calculated based on the existing formula as: % complete to date = (uuu_spa_prev_amt + (uuu_spa_qty_tp * uuu_unit_price) + uuu_spa_amt_tp + uuu_spa_other_tp + uuu_pa_mat_stored) / scheduled_value.

> **Note**: The Percent Complete to Date field is read-only for the summary Variable Unit Cost line item.

Percentage Complete to Date

In the **Create New Payment application with Summary** grid, you can edit the value of the **Percentage Complete to Date** for the variable unit cost line items—when the **Apply line item value of Percentage Complete to Date to costed lines** check box is selected—and can push percentage down to the costed lines).

> **Note**: In the **Create New Payment application with Summary** grid, the value of the **Percentage Complete to Date** for the variable unit cost line items is read-only if the **Apply line item value of Percentage Complete to Date to costed lines** check box is selected.

In the **Create New Payment application with Summary** grid, based on the value of the **Percentage Complete to Date** for the variable unit cost line items, the value of the **Quantity this Period** will get calculated *for costed lines*, and the value of the **Amount this Period** will be calculated *for summary line*.

View Payment Application Line Item History

When payment application records in view mode, a **Line Item History** button becomes available. This provides a snapshot view of the line item grid as of the last entry.

> **Note**: View mode refers to the non-editable version of the form. For example, for workflow BPs, this is before clicking the **Accept Task** button or after the form has gone through all the workflow steps and is complete. For non-workflow BPs, this is after editing has been completed.

To access line item history:

1) Open a payment application record from the log. Be sure the record is in view mode.
2) Open the **Menu Options** (☰) and select **Line Item History**. The Line Items History window opens, displaying the payment application line item grid, as view-only, with data entered to date.

> **Note**: This option is also available in Classic view, labeled **Line Item History Classic**.

By default, the first 100 line items are displayed on the page. If your payment application BP has more than 100 line items, you can scroll through the other pages, or you can choose to display up to 500 line items on the same page. Displaying more than 100 line items on the page may take several seconds to load.

Export Line Item History

You can export the line item history of a payment application record to a CSV or Microsoft Excel file.

To export payment application line item history information:

1) Open a payment application record from the log. Be sure the record is in view mode.
2) Click the **Line Item History** button.
   The Line Item History window opens.

> **Note**: This option is also available in Classic view, labeled **Line Item History Classic**.

3) Click the **Print** button and choose how to export (**Print**, **Export To CSV**, or **Export To Excel)**.
   Depending on your browser, the file may download automatically to your computer or prompt you to choose a location to save the file.

> **Notes:**
>
> - For export to Microsoft Excel, the system currently supports only Euro (EUR) and United States Dollar (USD) currency symbols.
> - If you export data from a business process (BP) record, sheet (such as an Activity Sheet), or log (such as Company Funding Sheet Log) to Excel, be aware that depending on how your negative values are formatted, you might need to configure your columns in Excel to match the correct data type (Number). Otherwise, the columns will not be treated as numeric and will not sum as expected. One supported format includes placing the negative sign between the currency symbol and the amount (for example, $-1,000).

4) Click **Save** and specify the file name and location to which to save a copy of the CSV or Excel file.

Save Payment Application in Draft Mode

You can save a payment application record in draft mode by clicking the **Save** button from the toolbar.

When you open the draft again to send, the system will check to see if there is any modification done by other users. If the system identifies that there is modification to your payment application, you will be asked to accept new changes before proceeding.

Draft Mode and SOV Synchronization

If you create a payment application record and save it in Draft mode, and your SOV changes before you route the draft payment application, an error can result when you attempt to route the record. The error *Line Items must be validated before proceeding* can result if the SOV has changed while your payment application is in Draft mode.

To fix payment application BPs that are affected by changes to the SOV:

1) Open the draft payment application record.
2) Click the **Add** button and click **Detail Line Item** to open the line item entry grid. Line items that are affected by SOV changes are indicated with check marks.
3) Click **OK**. The line items are validated against the SOV.

View the Schedule of Values (SOV) Sheet

The Schedule of Values (SOV) for Payment Application functionality provides a way to assemble information from the Base commits and Change commits (Commit), as well as the payment history, in an SOV sheet. You can open the SOV sheet either from the Schedule of Values (SOV) log, or from within a payment application record (the record must be in an editable mode).

When the base commit record is created and reaches a specified terminal status (for example, Approved), the SOV sheet is automatically created, and line items display as rows. As change commits are created and approved (or other specified status), they are added automatically to the SOV sheet. As payment records are created, these also will affect the SOV.

Data that is displayed on the SOV sheet will depend on the columns that have been added to the SOV structure.

The SOV displays the source information from the base commit and any change commits. The source for each line can be one or more lines from one or more records.

Depending on the design of the associated business processes, the SOV may list each line entry for the base commit and all change commits as separate line items, or it may group entries with the same CBS code and display the total.

When you are working with the SOV sheets, in a Project/Shell, you can enter the item number (**Item #** field) for each of the SOV lines:

- The system stores the SOV sheet based on the **Item #** column.
- When line items roll up to the SOV sheet from the Base Commit and Change Commit BP records, the system generates the values in the Item # field.
- The Item # for each SOV sheet starts with 000010 and this value is incremented by 10. So, if there are 2 lines coming from the Base Commit, the values seen are: 000010 and 000020.
- Although the system generates these numbers, you can edit the numbers, which lets you change the order of the SOV lines. To edit the values, double-click the field. Entries to this field must be Numeric. No alphanumeric fields are allowed. Similarly, no other characters such as punctuation marks, non-ISO characters, negative sign, and so on, are permitted. For the summary lines, you cannot enter the dot (period) "." character. Dots are reserved for costed lines.
- If you edit an existing value, for example 000030, and enter 27, the value seen in the field will be 000027. The leading zeros are added by the system to align and help sort all the values in the column.
- The values entered should be in the range of 000000 to 999999.
- The subsequent lines coming from the Change Commit (CC) records (with reference to the above mentioned Base Commit (BC) record) can be seen in the SOV sheet with increments of 10.

If you make any changes to the Item # field, click Apply to save the values in the column and to change the Sort order of the rows. The new sort order is maintained in the database and next time when you open the SOV sheet, the sort order is displayed in the SOV sheet be based on the last saved view.

For Payment Applications SOV and Summary Payment Applications SOV, the structure is copied from the line item grid structure of the Payment Application BP.

When a Payment Application BP references a Base Commits of the Summary Payment Applications SOV, the line items of the Payment Application BP will reflect the line items of the Base Commits as well as any associated Change Commits.

In a Payment Application BP referring to the commits and the Summary Payment Applications SOV type, depending on the BP setup, you can:

- Include only one Payment Application record, or
- Include multiple Payment Application records

See ***Payment Application Business Processes*** (on page 273) for details.

To open the Line Item window of a Payment Application BP form, click Add. The window displays a list of line items from the Base Commits (and any Chance Commits), and the values are populated if auto-population (from Base Commits and Change Commits) has been defined.

To view the associated SOV sheet from within the payment application BP:

1) In the left Navigator, select **Logs**, and then select **Payment Applications**.
2) Select a Payment Application record and click **Open** (or double-click the record). The Payment Application form opens.
3) Select **SOV** from the Menu Options drop-down menu (hamburger icon). The Schedule of Values window opens.

Note: Ensure that the form is not in a view-only mode.

Importing, Exporting, and Integration

You can use CSV import to create Payment Application Business Processes, or to add SOV line items to an existing Business Process.

You can export payment application CSV templates at the log level (for header and line item templates) and at the record level (for line item templates). You can then modify the templates and import them to create records (at the log level) or to add line items to an existing record (at the record level).

An integration interface must be defined to support CSV import. If you find that you cannot perform the file import, see your Administrator. Also, new records can be created and line items added using integration through Web Services. Integration through Web Services must be coordinated with an Oracle Primavera representative.

The columns with decimal values preserve, or maintain, the decimal values specified in the data element of the following business processes and SOV types:

- Schedule of Values (SOV) sheet: Payment Application and Summary Payment Applications
- Payment Application Line Items
- Summary Payment Application Line Items

As a result, the system will not round the decimal value to two decimals, for the preceding DEs.

Multiple Payment Applications and negative change orders (Change Commits) and CSV import and Web Services

Previously, the system only allowed one Payment Application, or negative Change Commit record, per SOV. You can now create multiple Payment Applications, or negative Change Commit records, against the SOV. You can also create these types of records through CSV import and Web Services.

> **Note**: You can create only one record for each import.

Import New Payment Application Records

You can export a CSV template that includes the upper form and detail form fields as columns. These fields include the header fields from the upper form and the line item SOV fields from the detail form, including the detail line item fields defined in Integration. The Reference Number field is exported as a column for payment application business processes that use individual line items. The Reference number field is not exported as a column for payment application business processes that use Group by CBS.

You can then modify the exported CSV template and import it to create the upper form header and the detail form line items for the new business process.

> **Note:** The system lets you import Payment Application records and line items by way of CSV and REST.

To export a copy of the payment application business process template:

1) Navigate to the payment application business process log.
2) Click the **Actions** menu and select **Export to CSV Template** or **Export to Microsoft Excel Template**.

Depending on your browser, the template will automatically be downloaded to your computer, or you will be prompted to download it manually.

To modify the exported payment application business process template:

1) Open the exported CSV file or Excel file in Microsoft Excel.

2) Enter the business process information into the spreadsheet. Each upper form header record must begin with an "H". Each line item must begin with a "D". For multiple tabs, you must enter appropriate tab name in the Tab Name column.
3) Enter data into the required fields, as well as non-required fields as needed.

Important information:

- Data for formula-based columns is ignored.
- If auto-populated data is provided, the system will import the value, and will not override the imported values except for fields auto-populated by Base Commit, Change Commit, or from SOV.
- When a data element (DE) is set to auto-populate from a Base Commit, Change Commit, or an SOV, the auto-populated values takes precedence when 0 value is sent for those DEs in CSV, Excel, or REST API. Any value specified in the input request is ignored and the auto-populated values from Base Commit, Change Commit, or SOV will be used.
- Any line items with the Amount equal to zero will not be imported.
- SOV locking is enforced.
- Use to add new business process records only; not to modify existing business processes.
- For data to import correctly, you might have to change some of the cells in the CSV file to Text type. For example, if you have a CBS code of 1-1, Microsoft Excel can interpret this entry as a month-day combination and reformat it to Jan-1. In this case, your data import will fail because this data is now an invalid CBS code.
- If the Integration design for the business process includes a Description field for line items, and the associated SOV sheet also contains a Description field, the description from the SOV sheet is imported, and the line item description is not imported.

To import the payment application business process template:

1) Navigate to the payment application business process log.
2) Click the **Actions** menu and hover over **Import**.
3) Select either **Data From CSV File** or **Data From Microsoft Excel File**.
4) Browse to select the file to import, and then click **Next**.
5) Add any attachments to the import.
6) Click **Upload** when finished.

   If there are any import errors, you can open the CSV file to view and correct the error. No records are imported if any rows contain an import error.

Import Payment Application Line Items into a BP

You can export a template that includes the detail form fields as columns for a specific business process. These fields include the SOV data and detail line item fields defined in Integration. The Reference Number field is exported as a column for payment application business processes that use individual line items. The Reference number field is not exported as a column for payment application business processes that use Group by CBS. If multiple tabs are designed for the line items in the business process, the tab columns are included in the export. All the data on the Standard tab is exported; no data on the other tabs is exported.

You can then modify the exported template and import it to create line items for the business process. The exported template contains SOV record information.

Note: The system lets you import Payment Application records and line items by way of CSV and REST.

The Payment Application of Summary Payment Application SOV type supports Record, Line Item, and Cost Allocation creation through CSV integration.

If the payment line items have already been added in the **Standard** tab, importing of the line items through CSV is not permitted.

When importing Summary Payment line items for Payment Applications BPs, the system uses the values that the user provided for the auto-populate data elements, if the fields were editable originally; otherwise, the system uses the values that are from Base Commit line items or Change Commit line items.

To export the payment application line item template:

If multiple tabs are designed for the line items in the business process, only the data in the Standard tab is exported. For the other tabs, the tab name is included in the exported data for reference, but no data in these tabs is exported.

1) Navigate to the payment application business process log.
2) Click **Create** to create a business process.
3) Select a **Reference Base Commit** for the business process. If you do not select a Reference Base Commit, the exported template will not contain data. Data from all columns in the Reference Base Commit is exported.
4) Open the **Menu Options** (☰), hover over **Export Line Item Template**, and then select **CSV** or **Microsoft Excel**.

Depending on your browser, the file will be downloaded automatically, or you will be prompted to download the file manually.

To modify the payment application line item template:

1) Open the exported CSV or Excel file in Microsoft Excel. The SOV line items are listed.
2) Enter the line item information into the spreadsheet. Each line must begin with a "D". For multiple tabs, you must enter appropriate tab name in the Tab Name column.
3) Enter data into the required fields, as well as non-required fields as needed.

Important information:

- Data for formula-based columns is ignored.
- If auto-populated data is provided, the system will import the value and will not override the imported values except for fields auto-populated by Base Commit, Change Commit, or from SOV.
- When a data element (DE) is set to auto-populate from a Base Commit, Change Commit, or an SOV, the auto-populated values takes precedence when 0 value is sent for those DEs in CSV, Excel, or REST API. Any value specified in the input request is ignored and the auto-populated values from Base Commit, Change Commit, or SOV will be used.
- Any line items with the Amount equal to zero will not be imported.
- SOV locking is enforced
- Any line items that you import will replace the existing line items in the business process.

- Use to add new lines only, not to modify existing lines
- For data to import correctly, you might have to change some of the cells in the CSV file to Text type. For example, if you have a CBS code of 1-1, Microsoft Excel can interpret this entry as a month-day combination and reformat it to Jan-1. In this case, your data import will fail because this data is now an invalid CBS code.
- If the Integration design for the business process includes a Description field for line items, and the associated SOV sheet also contains a Description field, the description from the SOV sheet is imported, and the line item description is not imported.

To import the payment application line item template:

> **Note:** The line items that you import will replace any existing line items.

1) Navigate to the Payment Application business process log.
2) Select a business process from the log.
3) Click the **Actions** menu and hover over **Import**.
4) Select either **Data From CSV File** or **Data From Microsoft Excel File**.
5) Browse to select the file to import, and then click **Next**.
6) Add any attachments to the import.
7) Click **Upload** when finished.

   If there are any import errors, you can open the CSV or Excel file to view and correct the error. No records are imported if any rows contain an import error.

You can add line items with 0 (zero) value in the CSV or Excel template. In such scenario, after you import your CSV or Excel template to the BP record, the BP record will have your added line items with 0 (zero) value.

Example

You import a CSV or Excel template that has the following three line items to your BP record:

1-Amount = 1000

2-Amount = 0

3-Amount = 0

After the import is complete, all three line items will be added to your BP record.

Payment Application Grid Column Total

The following information is related to BP run-time only for the *Payment Applications and Summary Payments Applications Business Processes* (Standard tab). For Payment Applications and Summary Payments Applications, based on the options set for the Total property for the Data Elements (DEs) in uDesigner, when you add or modify the grid, the Total row displayed shows the following values:

- Blank

  The system displays the value as empty in the Total Column (that particular DE column).
- Sum of All Rows

  The system displays the value as "Sum of All Rows" in the Total Column.
- Use Formula Definition

The system displays the value as "Formula Defined" in the Total Column. In other words, the system calculates the formula by using the values from the Total row for the respective DEs.

If the formula was reset to Manual, the system resets the Total to "Sum of All Rows."

The system calculated the Total, for DEs with predefined formula, as follows:

- %Complete to Date (uuu_spa_per_comp)
  - Custom formula

    Based on the whether the property is enabled.
  - System-defined formula

    Based on whether the property is enabled.
- Amount This period (uuu_spa_amt_tp)

  Based on whether the property is enabled. (Either Blank or Sum of All Rows)

> **Note:** With version 23 and later, a Total row on a non-standard tab of a line item grid is not displayed. For version 22 and earlier, the Total row displays a 0.

Payment Application BP Record in Terminal Status

The data elements on the Upper Form that are set to receive the values from the **Sum of All Lines** *will not be re-evaluated* if the Payment Application BP record is in **Terminal** status.

Payment Application BP Record in Non-Terminal Status (In-Flight)

An in-flight Payment Application BP record is a Payment application that is in progress. For example, a Payment that has been in review status and now it is moving to the next step in the workflow, which is approval.

> **Note**: A Payment that is in **Draft** status has been created, but it has not been sent to the next step.

When a **Contracts** BP is configured to allow multiple payments (the **Remove SOV Restriction** field check box is selected), the Upper Form data elements that are set to receive the values from the **Sum of All Lines** fields will receive values from the latest SOV, including the existing line item data.

When a **Contracts** BP is configured to not allow multiple payments (the **Remove SOV Restriction** field check box is not selected), the Upper Form data elements that are set to receive the values from the **Sum of All Lines** fields will receive values from the SOV at the time of Payment record creation, including the existing line item data.

General Spends Business Processes

General spends business processes enable you to invoice at the CBS or breakdown level, supporting multiple invoices per SOV. These business processes do not calculate retainage or stored materials. General spends business processes are designed in uDesigner. For more information, refer to the *Unifier uDesigner User Guide* or Unifier Help.

You can use CSV import to create general spends business processes or to add SOV line items to existing business processes. You can export general spends business process templates at the log level (for header and line item templates, with no data exported) and at the record level (for line item templates with SOV line item data exported). You can modify the templates and import them to create records (at the log level) or to add line items to an existing record (at the record level).

An Integration interface must be defined to support CSV import. If you find that you cannot perform the file import, see your Administrator.

Also, new records can be created and line items added using Integration through Web Services. Integration through Web Services must be coordinated with an Oracle Primavera representative.

Import New General Spends Records

You can export a CSV template that includes the upper form and detail form fields as columns. These fields include the header fields from the upper form and the line item SOV fields from the detail form, including the detail line item fields defined in Integration. These fields are always exported in the template as well:

- Reference Number
- Description
- CBS Code
- Breakdown

You can then modify the exported template and import it to create the upper form header information and the detail form line items for the new business process.

To export a copy of the general spends business process template:

1) Navigate to the General Spends business process log.
2) Click the **Actions** menu and select **Export CSV Template** or **Export Microsoft Excel Template**.

   Depending on your browser, the template will automatically be downloaded to your computer, or you will be prompted to download it manually.

To modify the exported general spends business process template:

1) Open the CSV or Excel file in Microsoft Excel.
2) Enter the business process information into the spreadsheet. Each upper form header record must begin with an "H". Each line item must begin with a "D". Add a new "D" line for each line item in the business process. For multiple tabs, you must enter appropriate tab name in the Tab Name column.
3) Ensure that you enter the required values for the Amount, CBS Code, and Short Description columns.

Notes:

- Data for formula-based columns is ignored.
- If auto-populated data is provided, the system will import the value,

and will not override the imported values except for fields auto-populated by Base Commit, Change Commit, or from SOV.

- Any line items with the Amount equal to zero will not be imported.
- Use to add new business process records only, not to modify existing business processes.
- For data to import correctly, you might have to change some of the cells in the CSV file to Text type. For example, if you have a CBS code of 1-1, Microsoft Excel can interpret this entry as a month-day combination and reformat it to Jan-1. In this case, your data import will fail because this data is now an invalid CBS code.
- If the Integration design for the business process includes a Description field for line items, and the associated SOV sheet also contains a Description field, the description from the SOV sheet is imported, and the line item description is not imported.

To import the general spends business process template:

1) Navigate to the General Spends business process log.
2) Click the **Actions** menu and hover over **Import**.
3) Select either **Data From CSV File** or **Data From Microsoft Excel File**.
4) Browse to select the file to import, and then click **Next**.
5) Add any attachments to the import.
6) Click **Upload** when finished.

   If there are any import errors, you can open the CSV file to view and correct the error. No records are imported if any rows contain an import error.

Import General Spends Line Items into a Business Process

You can export a template that includes the detail form fields as columns for a specific business process. These fields include the detail line item columns defined in Integration. These fields are always exported in the template as well:

- Reference Number
- Description
- CBS Code
- Breakdown

You can then modify the amounts on the exported template and import it to create line items for the business process. The exported template contains SOV record information.

To export the general spends line item template:

If multiple tabs are designed for the line items in the business process, only the data in the Standard tab is exported. For the other tabs, the tab name is included in the exported data for reference, but no data in these tabs is exported. Data from all columns in the Reference Base Commit is exported.

1) Navigate to the General Spends business process log.
2) Click **Create** to create a business process.

3) Select a **Reference Base Commit** for the business process. If you do not select a Reference Base Commit, the exported template will not contain data. Data from all columns in the Reference Base Commit is exported.
4) Open the **Menu Options** (☰), hover over **Export Line Item Template**, and then select **CSV** or **Microsoft Excel**.

   Depending on your browser, the file will be downloaded automatically, or you will be prompted to download the file manually.

To modify the general spends line item template:

1) Open the CSV or Excel file in Microsoft Excel. The SOV line item data is shown.
2) Enter the line item information into the spreadsheet. Each line item must begin with a "D". For multiple tabs, you must enter appropriate tab name in the Tab Name column.
3) Enter required values for the Amount, CBS Code, and Short Description columns.

Notes:

- Data for formula-based columns is ignored.
- If auto-populated data is provided, the system will import the value, and will not override the imported values except for fields auto-populated by Base Commit, Change Commit, or from SOV.
- Any line items with the Amount equal to zero will not be imported.
- Use the import to add new line items only, not to modify existing line items.
- Any line items you import will be added after any existing line items.
- For data to import correctly, you might have to change some of the cells in the CSV file to Text type. For example, if you have a CBS code of 1-1, Microsoft Excel can interpret this entry as a month-day combination and reformat it to Jan-1. In this case, your data import will fail because this data is now an invalid CBS code.
- If the Integration design for the business process includes a Description field for line items, and the associated SOV sheet also contains a Description field, the description from the SOV sheet is imported, and the line item description is not imported.

To import the general spends line item template:

1) Navigate to the General Spends business process log.
2) Open a business process from the log.
3) Click the **Actions** menu and hover over **Import**.
4) Select either **Data From CSV File** or **Data From Microsoft Excel File**.
5) Browse to select the file to import, and then click **Next**.
6) Add any attachments to the import.
7) Click **Upload** when finished.

   If there are any import errors, you can open the CSV or Excel file to view and correct the error. No records are imported if any rows contain an import error.

Lump Sum and Unit Cost

The Cost Line Item Type (uuu_cost_li_type) on the detail form is populated with Lump Sum or Unit Cost based on the selection of the option that you have made at the time of adding line items. When you click Add and select either Lump Sum, or Unit Cost, Line Items window opens. The Line Items window has two sections: Upper form (Detail form that follows the uDesigner Detail form design) and lower grid (fixed by system). The following explains all the fields in detail:

Line Item window toolbar

- Save
- Spelling
- Attach
- Upload Images
- Delete
- Line Item
- Close window

Line Item window fields

Click **Add** and then select **Lump Sum** (No added cost) - Upper form (General)

- Short Description
- Cost Line Item Type
- Amount
- Role Effective Date
- Description
- Spend Category
- Work Package
- Item Quantity
- Unit of Measure
- Item Unit Cost
- Costed Amount

Click **Add** and then select **Lump Sum** (Added cost) - Upper form (General)

- Short Description
- Cost Line Item Type
- Amount
- Description
- Costed Quantity
- Not Costed Quantity
- Spend Category
- Work Package
- Item Quantity
- Unit of Measure
- Item Unit Cost

- Costed Amount
- Not Costed Amount

Click **Add** and then select **Unit Cost** (No added cost) - Upper form (General)

- Short Description
- Cost Line Item Type
- Amount
- Role Effective Date
- Description
- Costed Quantity
- Not Costed Quantity
- Spend Category
- Work Package
- Item Quantity
- Unit of Measure
- Item Unit Cost
- Costed Amount
- Not Costed Amount

Click **Add** and then select **Unit Cost** (Added cost) - Upper form (General)

- Short Description
- Cost Line Item Type
- Amount
- Role Effective Date
- Description
- Costed Quantity
- Not Costed Quantity
- Spend Category
- Work Package
- Item Quantity
- Unit of Measure
- Item Unit Cost
- Costed Amount
- Not Costed Amount

Toolbar - Upper form (lower block)

- Add Cost

  This option allows you to add cost distribution lines to the grid, within a line item. You can add more than one cost lines by selecting multiple items from the CBS Picker window (Select CBS Code). Selecting more than one CBS/CBS code results in added lines to the grid and the Cost Code/Code Name fields are populated accordingly. You can edit the CBS/CBS code by double-clicking the cell. The Add Cost option is available when the Allow Cost Breakdown is enabled. Add Cost will be disabled when the record reaches terminal status.
- Remove Cost

This option allows you to remove cost distribution lines from the grid, within a line item. You can select multiple lines and remove them collectively. The Remove Cost option is available when the Allow Cost Breakdown is enabled. Remove Cost will be disabled when the record reaches terminal status.

> **Note:** When you remove a line item from the grid, it will impact the calculations in the General section. If the line item is coming from an SOV sheet, then deletion is not permitted on those lines.

- Copy Cost

  This option allows you to select/copy one costed line item and create a new costed line item using the selected/copied costed line item. You cannot select more than one costed line item for copying. The Copy Cost option is available when the Allow Cost Breakdown is enabled. Copy Cost will be disabled when the record reaches terminal status.
- Add Remaining
  - When you select this option, the CBS Picker window (Select CBS Code) opens and allows you to select multiple codes. You can allocate the remaining cost, or quantity, to multiple codes.
  - If you select Lump Sum as the cost line item type, you can use the Add Remaining option for adding Not Costed Amount line, and the Amount field is auto-populated based on Not Costed Amount. If the Costed Amount (total amount from all costed lines), on the General section, is equal to the Line Item Amount, then the Add Remaining option will be disabled.
  - If you select Unit Cost as the cost line item type, you can use the Add Remaining option for adding Not Costed Quantity line, and the Quantity field is auto-populated based on Not Costed Quantity. If the Costed Quantity (total quantity from all costed lines), on the General section, is equal to the Line Item Quantity, then the Add Remaining option will be disabled.
  - The Add Remaining option is available when the Allow Cost Breakdown is enabled. Add Remaining will be disabled when the record reaches terminal status.

Fields - Upper form (lower block)

You can make change within the editable or required cells of the following columns:

- Cost Code

  You can click the cell and select a Cost Code from a Cost Sheet of the same Shell.
- Code Name

  This is a read-only field. The value is auto-populated by the system according to the Cost Code selection.
- Short Description

  The value is auto-populated from the line item Short Description field. You can modify the default value.

- Quantity

  If the type of the line item is Unit Cost, you can edit the value of this field and enter the costed quantity. If the type of the line item is Lump Sum, this field will not display.
- Unit Cost

  If the type of the line item is Unit Cost, the value of this field is read-only. The value is auto-populated according to the unit price value that you entered in the upper form (General). If no value was entered in the upper form (General), the default value of this field will be zero. If the type of the line item is Lump Sum, this field will not display.
- Amount

  If the type of the line item is Unit Cost, this field is calculated by the system (Quantity * Unit Cost). If the type of the line item is Lump Sum, you can edit the value of this field and enter the costed amount.

Change Commits BP of Summary Payment Applications SOV type

The Change Commits BP of Summary Payment Applications SOV type, similar to the Base Commits, you use Lump Sum and Unit Cost items to add new line items. In addition, you can use the Modify Committed Line Item option (Add) to modify a reference commit line item that exists in the Reference Base Commits record. When you select the Modify Committed Line Item option (Add), the Commit Line Item Picker window opens, and the line items existing in the SOV sheet.

Commit Line Item Picker window

You can select any summary line item from the Commit Line Item picker

The following explains the fields in the Commit Line Item Picker window:

- Ref

  This column contains the reference number of the Change Commits Detail Line Item. The summary row displays the reference number of the Detail Line Item, and the child row displays the reference number of the Cost Distribution Line Item (costed line item) from the parent line. For example, 1.1 is the costed line item for line item 1.
- Cost Code

  This column contains the CBS Code associated with each distribution line. For summary rows (parent), the value for this column is blank.
- Code Name

  This column contains the CBS Code associated with the code. For summary rows, the value for this column is blank.
- Cost Type

  This column contains the Cost Line Item type for the Summary rows. For child rows, the value for this column is blank.
- Description

  This column contains the contents of the Short Description (short_desc) field in the Detail Line item. For summary rows (parent), this column contains the Short Description of the Line Item. For distribution rows, this column shows the Short Description of each costed line item, and based on the user input, the value might, or might not be, the same as the Short Description of the Line Item.

> **Note**: The names of the columns are based on the Summary Payment Applications SOV sheet structure.

Cost Distribution Grid log columns

- Cost Code

  This field is both editable and required. You can click the cell and select a Cost Code from a Cost Sheet of the same Shell. Similar to the Line Items, you can enter a Cost Code and the same Cost Code will be available to select. You cannot change the Cost Code for existing Line Items coming from SOV.
- Code Name

  This field is read-only, and the value is auto-populated by the system according to the Cost Code that you have selected.
- Short Description

  This field is editable, and the default value is auto-populated according to the Short Description (short_desc) field.
- Current Quantity

  This field is read-only and the value is auto-populated by the system if you have selected Modify Reference Commit option, and the Cost Line Item type (uuu_cost_li_type) of the selected Commit Line Item is Unit Cost.

  > **Note**: If the conditions are not met, the system auto-populates the value as "Quantity," from the source commit distribution line item.
- Current Scheduled Value

  This field is read-only, and the value is auto-populated by the system (regardless of the Cost Line Item type (uuu_cost_li_type). The value of this field can be updated when modifying an existing line is from an SOV sheet.
- Change Quantity

  This field is read-only if the Cost Line Item type (uuu_cost_li_type) of the selected Commit Line Item is Lump Sum. If the Cost Line Item type (uuu_cost_li_type) of the selected Commit Line Item is Unit Cost, you can edit this field and enter the costed quantity.
- Change Amount

  If the Cost Line Item type (uuu_cost_li_type) of the selected Commit Line Item is Lump Sum, you can edit this field and enter the costed amount. If the Cost Line Item type (uuu_cost_li_type) of the selected Commit Line Item is Unit Cost, the value of this field is calculated by the system as: Change Quantity * Unit Cost.
- New Schedule Value

  This field is read-only, and the value is auto-populated by the system when modifying an existing line is from an SOV sheet. The value of this field is calculated by the system as: Current Scheduled Value + Change Amount.

CSV Integration

You can use a Comma Separated Values (CSV) file to save Cost Allocation data for Base Commit and Change Commit of Summary Payment Application SOV type.

The Payment Application of Summary Payment Application SOV type supports Record, Line Item, and Cost Allocation creation through CSV integration.

If the payment line items have already been added in the **Standard** tab, importing of the line items through CSV is not permitted.

The "CA" (Cost Allocation) row, in the CSV file, includes the following information about Cost Allocation.

- Cost Code
- Short Description
- Quantity
- Amount

> **Note**: Ensure that all Costed Line Item details are entered in the "CA" row.

Multiple Cost Allocation Line Items can be added to the CSV file by way of multiple CA rows.

If your CSV template contains Cost Allocation details, but the design does not permit entering the Cost breakdown information (that is, the option of Allow Cost Breakdown is unchecked), importing the CSV file will fail and you will receive an error message.

Creating Lump Sum and entering Unit Cost details

The "D" row, in the CSV file, includes the information about Summary Line Item. If the Cost Line Item type is Unit Cost type, you must enter the Unit Cost in the D row.

Based on the Cost Line Item type specified in the "D" row, the system will check for the presence of required fields for the specified Cost Line Item type.

Change Commit: Adding Line Items to modify committed lines

The CSV template contains a "Reference" field that you can use for adding lines that have already been committed from a reference commit. The system uses the value in the "Reference" field to select a specific row in the committed lines (SOV).

> **Note**: The availability of the "Reference" field depends on the design set in uDesigner. If this field is not present in the Detail Form integration interface, modification of committed lines cannot take place.

The Costed Line Item of the Summary Line Item that needs to be updated will be identified by the value in the "Reference" field and the Cost Code. The "Reference" column label is the label set for "sovlinum" and will appear after the CA column.

After the record creation, all the Costed Line Items belonging to the selected Line Item (Summary Line Item and child Line Item) will be added to the record.

Payment Application

For Payment Application of Summary Payment Application (SPA) SOV type, the "CA" row will have the columns similar to the details row.

Unit Cost

The following additional informational texts are displayed in the exported CSV template:

- Cost Code
- Short Description
- Quantity
- Unit Cost
- Amount

Enter the unit cost value either at "D" or "CA" row but not in both rows. Variable

You can enter the unit cost value either in the "D" row or in the "CA" row but not both. You can create the variable unit cost lines by entering the unit cost in the "CA" row.

Importing the Lump Sum or Unit Cost line items remains as is. The Unit Cost, in the "CA" row is ignored even if the Unit Cost column is seen in the "CA" row, and the cost line item type selected is Lump Sum or Unit Cost.

When importing the line items for Lump Sum and Fixed Unit Cost line items, if the "CA" row has values (based on the cost line item type mentioned in "D" row) the system will check the presence of the required fields.

You can create both the Base Commit and the Change Commit records with the variable unit cost line items. The "CA" row is populated with the variable rates for the Unit Cost column.

In the "D" row (Summary), if the uuu_li_cost_type value is entered as "Variable Unit Cost," and you enter the unit cost for the "CA" rows, the variable unit cost line items will be created with uuu_li_cost_type, as the "Unit Cost."

If you enter the unit cost value and select cost line item type as "Variable Unit Cost" at summary row "D," you will see the message: Unit Cost is not allowed on summary line for variable unit cost lines.

If the design does not permit cost breakdown (Allow Cost Breakdown is unchecked), and if the CSV Template has cost allocation details, you will see the message: Business Process design does not allow cost allocation.

Change Commit Business Processes

Change commit business processes enable you to change the value of a base commit and to also update the SOV created by the contract. This business process is also known as a change order. Change commit business processes are designed in uDesigner. For more information, refer to the *Unifier uDesigner User Guide*.

When multiple Base Commit BPs with Payment Applications and corresponding SOVs are included in a project/shell, you can create multiple Change Commit records that update corresponding payment application SOVs.

You can use CSV import to create change commit business processes or to add SOV line items for an existing business process. You can export change commit business process templates at the log level (for header and line item templates with no data exported) and at the record level (for line item templates with SOV data exported). You can then modify the templates and import them to create records (at the log level) or to add line items to an existing record (at the record level).

An **Integration** interface must be defined to support CSV import. If you cannot import the file, contact your Administrator.

Also, new records can be created and line items added using Integration through Web Services. Integration through Web Services must be coordinated with Oracle Primavera Unifier Consulting Services.

Import New Change Commit Records

You can export a CSV template that includes the upper form and detail form fields as columns. These fields include the header fields from the upper form and the line item SOV fields from the detail form, including the detail line item fields defined in Integration.

You can modify the exported CSV template and import it to create the upper form header information and the detail line items for the new business process.

To export a copy of the change commit business process template:

1) Navigate to the change commit business process log.
2) Click the **Actions** menu and select **Export CSV Template** or **Export Microsoft Excel Template**.

   Depending on your browser, the template will automatically be downloaded to your computer, or you will be prompted to download it manually.

To modify the exported change commit business process template:

1) Open the exported CSV or Excel file in Microsoft Excel.
2) Enter the business process information into the spreadsheet. Each upper form header record must begin with an "H". Each line item must begin with a "D". For multiple tabs, you must enter appropriate tab name in the Tab Name column.
3) Enter data into the required fields, as well as non-required fields as needed.

Notes:

- Data for formula-based columns is ignored.
- If auto-populated data is provided, the system will import the value, and will not override the imported values except for fields auto-populated by Base Commit, Change Commit, or from SOV.
- Any line items with the Amount equal to zero will not be imported.
- Use to add new business process records only; not to modify existing business processes.
- All data created through the CSV import is rolled up to the cost sheet
- For data to import correctly, you might have to change some of the

cells in the CSV file to Text type. For example, if you have a CBS code of 1-1, Microsoft Excel can interpret this entry as a month-day combination and reformat it to Jan-1. In this case, your data import will fail because this data is now an invalid CBS code.

To import the change commit business process template:

1) Navigate to the change commit business process log.
2) Click the **Actions** menu and hover over **Import**.
3) Select either **Data From CSV File** or **Data From Microsoft Excel File**.
4) Browse to select the file to import, and then click **Next**.
5) Add any attachments to the import.
6) Click **Upload** when finished.

   If there are any import errors, you can open the CSV file to view and correct the error. No records are imported if any rows contain an import error.

Import Change Commit Line Items Into a BP

You can export a template that includes the detail form fields as columns for a specific business process. These fields include the detail form line item fields defined in Integration.

You can then modify the exported template and import it to create line items for the business process. The exported template contains SOV record information.

To export the change commit line item template:

If multiple tabs are designed for the line items in the business process, only the data in the Standard tab is exported. For the other tabs, the tab name is included in the exported data for reference, but no data in these tabs is exported. Data from all columns in the Reference Base Commit is exported.

1) Navigate to the change commit business process log.
2) Click **Create** to create a business process.
3) Select a **Reference Base Commit** for the business process. If you do not select a Reference Base Commit, the exported template will not contain data. Data from all columns in the Reference Base Commit is exported.
4) Open the **Menu Options** (☰), hover over **Export Line Item Template**, and then select **CSV** or **Microsoft Excel**.

   Depending on your browser, the file will be downloaded automatically, or you will be prompted to download the file manually.

To modify the change commit line item template:

1) Open the exported CSV or Excel file in Microsoft Excel. The SOV line items are listed.
2) Enter the line item information into the spreadsheet. Each line must begin with a "D". For multiple tabs, you must enter appropriate tab name in the Tab Name column.
3) Enter data into the required fields, as well as non-required fields as needed.

Notes:

- Data for formula-based columns is ignored.
- If auto-populated data is provided, the system will import the value, and will not override the imported values except for fields auto-populated by Base Commit, Change Commit, or from SOV.
- Any line items with the Amount equal to zero will not be imported.
- Ensure that you are importing the records you want to import. Any line items that you import will be added after any existing line items.
- Use to add new lines only, not to modify existing lines
- All data created through the CSV import is rolled up to the cost sheet
- For data to import correctly, you might have to change some of the cells in the CSV file to Text type. For example, if you have a CBS code of 1-1, Microsoft Excel can interpret this entry as a month-day combination and reformat it to Jan-1. In this case, your data import will fail because this data is now an invalid CBS code.

To import the change commit line item template:

1) Navigate to the change commit business process log.
2) Open a business process from the log.
3) Click the **Actions** menu and hover over **Import**.
4) Select either **Data From CSV File** or **Data From Microsoft Excel File**.
5) Browse to select the file to import, and then click **Next**.
6) Add any attachments to the import.
7) Click **Upload** when finished.

   If there are any import errors, you can open the CSV or Excel file to view and correct the error. No records are imported if any rows contain an import error.

Linked Elements for Changed Commit and General Spends SOV Types

The following data elements can be added as linked elements in Change Commit BPs and General Spends BP of SOV Types:

- **uuu_scheduled_value**

  Displays the original scheduled value of a Base Commit BP or General Spends BP of SOV type.
- **uuu_commit_remaining_balance**

  Displays the remaining balance of a Base Commit BP or a General Spends BP of SOV type

Note: The above data elements can be added to published BP designs also.

For more details regarding each element, refer to the *Unifier Data Reference Guide*.

SOV Summary Payment Applications Sheets and Business Processes

The Summary Payment Applications Schedule of Values (Summary Payment Applications SOV) allows users to allocate cost to line items based on the line item type (Lump Sum or Unit Cost). Use the Summary Payment Applications SOV type in association with *Commit* and *Spends* Business Processes (BPs) that are designed for Summary Payment Applications SOV (SPA SOV) type.

For a given Project/Shell, there can be multiple Payment Application Business Processes of Summary Payment Applications SOV Type.

For *Base Commits* Business Processes (BPs) with SOV type of "Summary Payment Applications," a special behavior line item has been provided to allow you to add further cost distribution details to the line items.

Notes:

- Cost allocation/distribution can be done only for line items that are in the Standard tab of the *Base Commits* and *Change Commits* BPs of SPA SOV type.
- Although uDesigner supports the inclusion of Pull Down DEs (string or integer) on the payment detail form for use with Auto Population from an SOV Sheet, the Pull Down DE column cannot be added to the SOV Sheet from the SOV Structure. Because of this, the Pull Down DE in a line item cannot auto-populate a value from the SOV Sheet when a classic Payment BP record is created. Auto Population is *only* supported for decimal or current amount DEs.
- If the sum of costed lines ranges between a -0.01 to 0.01 difference from the originating line item values, the system does not generate an error or prevent the BP record from moving to the next step.

The Standard detail tab of the properties window contains two options:

- Lump Sum
- Cost Unit

Click **Add** and select the appropriate option. For more information, see the **Cost Distribution Grid log columns** section in ***Lump Sum and Unit Cost***.

The **Summary Payment Applications** sub-node will be available under the **Schedule of Values** node only if a *Base Commits* or *Change Commits* of SOV type Summary Payment Applications is deployed in uDesigner.

The Grid functionality is *not supported* for the *Base Commits* BP with SOV type of "Summary Payment Applications."

When a *Base Commits* BP with SOV type of "Summary Payment Applications" is configured to auto-populate Data Elements on a Payment Application with values from the *Base Commits*, the runtime auto-populate occurs for the:

- Summary lines
- Costed lines

The Audit log, at the record level, captures the Line Item as well as the Costed Line Item changes (taking place through Web Services) for both *Base Commits* and *Change Commits* BPs with SOV type of "Summary Payment Applications." In this case the Event field of the Audit Log for the BP displays "Line Items: Costed Line Item." In other words, any updates that are made to the Costed Line Items, through Update calls, will have the Event as “Costed Line Item” for Costed Line Item changes.

Grid functionality is not supported for *Change Commits* BPs with SOV type of "Summary Payment Applications."

Summary Payment Applications SOV sheet is created when the *Base Commits* BP reaches the terminal step as set in uDesigner.

> **Note:** If a BP has been set up in uDesigner to automatically create a Summary Payment Applications SOV sheet upon the end step, the following procedures are not applicable.

Adding Values to a Summary Payment Applications SOV Sheet

To create a Summary Payment Applications SOV sheet, manually, begin by allocating cost to line items based on the line item type (Lump Sum or Unit Cost).

To allocate cost to line items based on the line item type (Lump Sum or Unit Cost), follow these steps.

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Cost Manager**, select **Schedule of Values**, and then select **Summary Payment Applications**.
3) Select a Base Commit BP (SOV Base Record) that you want to allocate cost to.
4) In the left Navigator, expand the **Logs** grouping node.
5) Select the Base Commit BP that you want to allocate and click to open the log.
6) Select a record and from the toolbar click **Open** to open the Base Commit BP form. The Base Commit BP must be Approved before you can allocate.
7) Click Edit from the toolbar and change the Status to **Approved**.
8) Add cost by clicking the Add button, located at the lower-left corner of the window, and selecting your cost option (**Lump Sum** or **Unit Cost**).
9) Ensure that the Line Item fields have correct values (Add Cost, Remove Cost, and so on) and when finished click **Close Window**.
10) Click **Finish Editing** from the toolbar and wait for the process to complete.
11) Go to the Base Commit BP under the Summary Payment Applications grouping node.
12) Find the SOV Base Record that you have added, select the record, and click **Open**.
13) Inspect the fields to ensure that the record has been added.

> **Note**: Some of the column headings are links. If you click these types of column headings, you can view more details about the column.

14) When finished, click **Close Window**.

Summary Payment Applications SOV Sheet window

Use the toolbar to expand, collapse, find, split the screen, and export records.

> **Note**: You can use the menu bar options as an alternative and perform the same operations.

Expand

Allows you to view the Summary and the associated child rows.

Collapse

Allows you to view only the Summary rows. This will be the default view.

Find

Allows you to search the Summary Payment Applications SOV sheet for specific line items. Find will be based on the columns and will have fields of Column, Value, and Search.

Split

Allows you to split the sheet into two sections.

Export

Allows you to export the entire summary sheet along with the costed lines (the line item summary and the associated costed line items). The generated CSV is for information purposes only.

Summary Payment Applications SOV sheet structure (columns)

The columns in the Summary Payment Applications SOV sheet window are based on the SOV structure. The following is a list of the default columns:

- Ref.
- Cost Code
- Code Name
- Cost Line Item Type
- Description

To modify the columns, click **File**, select **Properties** to open the Properties window, and then click the **Options** tab.

> **Note**: The CBS Code and CBS Item fields are read-only and the values are based on the Cost Sheet.

The rows display the summary lines and the associated child rows, within the summary lines.

The grid displays the summary rows (Detail line item) with cost distributed rows, and the child cost rows within a Detail line item appears under the row and indented. All the fields are read-only and the currency is displayed on the right upper-corner of the grid.

The grid also has a Total field, which appears at the bottom of the sheet, that displays the sum of all the lines.

Grid Support in Base Commit and Change Commit

You can enter line items using either a line-item entry form, or the Grid feature. For the Base Commit and Change Commit, you can use the Grid feature to enter line items directly into the item logs.

> **Note**: The Grid feature is best used for short line items.

Grid Support for Base Commit

The toolbar for the Base Commit and Change Commit item logs has the following options:

- Save
- Attach
- Linked Records
- Expand
- CollapseSplit
- Find
- Close Window

Other Grid functionalities

In the Grid, you can:

- Reverse auto-population
- Auto-population of other fields in the Grid based on the selection of certain fields
- Printing of Line Items (Line Items and Costed Line Items created through the Grid)
- Audit log

Additional Grid Toolbar Options

Upon selecting the Line Items tab of a Business Process record, the Form View is displayed by default. In Form View, the view options are displayed in the toolbar alongside options like Refresh, Print, Search, and Find on Page.

The Line Item list, along with line item Details, Attachments, and Linked Records, is displayed in the right pane.

You can switch to Grid View by selecting the Grid View option in the toolbar. In Grid view, the view options are displayed in the toolbar alongside Refresh, Print, Find on Page, and Expand/Collapse. When a row or cell in the grid is edited, additional toolbar options are available, including: Add, Cancel, Error Check, Save, Print, and Find on Page.

> **Note**: In the Grid view of Line Item tabs, the additional options are applicable to Pending records. Only the Refresh, Print, Find on Page, and Expand/Collapse options are applicable to Approved records and Terminated records.

Other Elements of Line Items and the Grid

The options of Attach and Linked Records are only available for Line Items. If you attempt to add attachments or linked records to a Costed line, an error message is displayed. If a Costed Line Item (Cost allocated Line Item which belongs to a Summary Line Item) is selected, these options are not available.

Before adding attachments or linked records to a line item, you must save the line item.

If a Costed Line Item and a Summary Line Item are selected, you can upload the attachments, or link records, to the Summary Line Item.

If multiple Summary Line Items are selected, and you click Attach, or Linked Records, the system notifies you then an alert will be seen informing user that only one record needs to be selected (this is existing elsewhere in the grid).

The search parameters, in the Find option, are based on the design of the Line Item list, prepared in uDesigner.

> **Note**: The search parameters are not for the Costed Line Items.

Any time you run a search, the Line Item that matches the search parameter is found. In addition to the parent Line Item, the Costed Line Items belonging to that Line Item will be found.

The Grid rows can be expanded.

The Grid columns contain the Cost Allocation columns, and the fields designed in the Detail Form, in uDesigner.

The sorting order is based on the order set in uDesigner. Line items are sorted first, followed by Costed lines.

You can use the Split option to split the view into 2 sections.

By default, the order of the following columns will be fixed:

- Row
- Line No.
- Attachment
- Linked Record
- Cost Line Item Type
- Cost Code
- Cost Name
- Short description
- Item Quantity
- Item Unit Cost
- Amount

Subsequent columns appear in the order that was set in the Detail Form, during the design.

> **Note**: The system uses the Row number to display an error messages.

The column names are based on the Data Element (DE) labels specified in the Data Structure setup. Cost Code and Cost Name columns have fixed labels and cannot be changed.

The first column (*gear menu* [⚙]) provides the following options:

- Insert Line Item
- Insert Multiple Line Items
- Insert Costed Line Items
- Add Remaining
- Copy
- Paste
- Remove
    - In the Remove *gear menu*, the following message is displayed when the action is triggered: “Are you sure you want to remove the selected Line Items and all the associated Costed Line Items?

Effect of uDesigner on Gear Menus

The options on the corresponding uDesigner Upper form affect the toolbar and *gear menus* (⚙) when a line item and a Costed line are selected in the Grid view. The table below indicates the effects of the uDesigner options.

uDesigner Upper form options	Toolbar and Gear menus seen at runtime when a line item is selected	Gear menus seen at runtime when a Costed line is selected
Allow Add/Remove/Copy line items option checked Allow Cost Breakdown unchecked	**Toolbar** Add option is seen **Gear menus** Insert Line Item with submenu options of Lump Sum and Unit Cost Insert Multiple Line Items with submenu options of Lump Sum and Unit cost Copy-To make an exact copy of the line item Remove-To remove a line item	**Gear menus** No actions in the *gear menu*
Allow Add/Remove/Copy line items option unchecked Allow Cost Breakdown unchecked	**Toolbar** Add option is not seen **Gear menus** No actions in the *gear menu*	**Gear menus** No actions in the *gear menu*
Allow Add/Remove/Copy line items option checked Allow Modification of Line Item checked with Allow Cost Breakdown unchecked	**Toolbar** Add option is seen **Gear menus** Insert Line Item with submenu options of Lump	**Gear menus** No actions in the *gear menu*

uDesigner Upper form options	Toolbar and Gear menus seen at runtime when a line item is selected	Gear menus seen at runtime when a Costed line is selected
	Sum and Unit Cost Insert Multiple Line Items with submenu options of Lump Sum and Unit cost Copy-To make an exact copy of the line item Remove-To remove a line item	
Allow Add/Remove/Copy line items option unchecked Allow Modification of Line Item checked with Allow Cost Breakdown unchecked	**Toolbar** Add option is not seen **Gear menus** No actions in the *gear menu*	**Gear menus** No actions in the *gear menu*
Allow Add/Remove/Copy line items option unchecked Allow Cost Breakdown checked	**Toolbar** Add option is not seen **Gear menus** Insert Costed Line Items-To add cost break down to a line item Add Remaining-To add a costed line which will have the Amount field=Non-Costed Amount - Costed Amount. This option will not be seen when the Costed Amount=Amount in the Costed lines Copy-To make an exact copy of the line item Remove-To remove a line item and its costed lines	**Gear menus** Insert Costed Line Items-To add cost break down to a line item Copy-To make an exact copy of the line item Remove-To remove line items
Allow Add/Remove/Copy line items option checked Allow Cost Breakdown checked	**Toolbar** Add option is seen **Gear menus** Insert Line Item with submenu options of Lump Sum and Unit Cost Insert Multiple Line Items with submenu options of Lump Sum and Unit cost	**Gear menus** Insert Costed Line Items-To add cost break down to a line item Copy-To make an exact copy of the line item Remove-To remove line items

uDesigner Upper form options	Toolbar and Gear menus seen at runtime when a line item is selected	Gear menus seen at runtime when a Costed line is selected
	Insert Costed Line Items-To add cost break down to a line item Add Remaining-To add a costed line which will have the Amount field=Non-Costed Amount - Costed Amount. This option will not be seen when the Costed Amount=Amount in the Costed lines Copy-To make an exact copy of the line item Remove-To remove a line item and its costed lines	

Line Items in the Grid

When the Grid is launched for the very first time and no Line Items exist for the BP record:

A blank line (first line) is displayed in the Grid, by default, and the blank line is treated as a Summary Line Item. The uuu_cost_li_type field will be set as “Lump Sum” for the Summary Line Items.

> **Note**: The uuu_cost_li_type field cannot be blank. It can either be set as "Lump Sum" or "Unit Cost."

If you click the *gear menu* (⚙) in the first column of the first line, only these options will be available:

- Insert Line Item
- Insert Multiple Line Items

All other options are disabled.

You can change the default value set in the uuu_cost_li_type field to "Unit Cost." The value specified in this field governs whether the other fields can be edited.

When a new Line Item is inserted, the new Line Item will be a Summary Line Item.

You can also add the Summary Line Item by selecting the “Insert Line Item” option from the *gear menu*. The “Insert Line Item” option only lets you add one Line Item.

You can add multiple Summary Line Items by selecting the “Insert Multiple Line Items” option.

If you insert a new row, based on key actions (tab, enter), the inserted new row type will be the same as the previous row.

The line number (1, 2, 3, 4, and so forth) are generated after you click Save.

The "Add Remaining" option is enabled for all Summary Line Items if the:

- "Total Amount" from the Costed Line Items is not = Line Item Amount, in case of Lump Sum
- "Quantity" from the Costed Line Items is not = Line Item Quantity, in case of Unit Cost

When you select the “Insert Multiple Line Items…” option, the Insert Multiple Line Items window appears which allows you to determine the number of Line Items that you want to add.

The total amount row (at the bottom of the Grid) displays the Total Line Item Amount of all the Summary Line Item rows.

> **Note**: The added Line Items are all Summary Line Items and will be populated with Lump Sum as the Cost Line Item Type.

Gear Menus for Summary Line Item

The following explains the functions of the *gear menus* (⚙) when you select the Summary Line Item and click the *gear menu* (in the first column).

Option	Enabled/ Disabled	Description
Insert Line Item	Enabled	If you highlight a Summary Line Item and click this option, the system inserts another Summary Line Item row above the highlighted row.
Insert Multiple Line Items	Enabled	If you highlight a Summary Line Item and click this option, the system inserts multiple Summary Line Items.
Insert Costed Line Items	Enabled	If you highlight a Summary Line Item and click this option, you can add Costed Line Items below the highlighted row.

Option	Enabled/ Disabled	Description
Add Remaining	Enabled	If you highlight a Summary Line Item and click this option, the system launches the CBS Picker window. When you select the CBS code, the system adds a Costed Line Item, with the Short Description field auto-populated from the Short Description of the Summary Line Item, and the system calculates the value in the Amount field as Non Costed Amount - Costed Amount. The system inserts these Line Items at the end of the Costed Line Item for that parent/Summary Line Item. This option is disabled when the Costed Amount = Amount in the Costed lines.

Option	Enabled/ Disabled	Description
Paste	Disabled (until you perform a Copy)	If you highlight a blank row and perform a Paste action, the system inserts the Summary Line Item and the Costed Line Item above the highlighted Line Item. You can also insert the Summary Line Item and the Costed Line Item between Summary Line Item. If you select a Summary Line Item, the system inserts the Summary Line Item above the highlighted row. You cannot perform a Paste action for more than one Costed Line Item. When you perform a Paste action, the system updates the number of each Line Item, after you click Save. When you click Save, the newly pasted Summary Line Items appear at the end of the Line Item list.

Option	Enabled/ Disabled	Description
Copy	Enabled	If you highlight a Summary Line Item and click this option, you copy the Summary Line Item and the associated Costed Line Items. If you highlight a Summary Line Item and a Costed Line Item, from a set of Costed Line Items, click the *gear menu*, and select Copy, the Summary Line Item and all the associated Costed Line Items are copied. Example Line 1 has 1.1, 1.2, and 1.3. You select Line 1 and click copy. When you paste, the system inserts Line 1 along with 1.1, 1.2, and 1.3 in the Grid.
Remove	Enabled	If you highlight a Summary Line Item and click this option, the Summary Line Item and all the associated Costed Line Items are removed.

Adding and Managing Line Items in Grid View

Adding Line Items in Grid View

Upon selecting the Line Items tab of the record, you can add a Lump Sum item or a Unit Cost item using the Add list.

Fields seen in the grid are based on the detail form design. The editable field cells are bolded while the read-only field cells are italicized. Row numbers for the line items are generated upon saving the grid.

Adding Multiple Line Items in the Grid

After selecting to add multiple line items, a dialog box is displayed where you can specify the number of added line items. When adding these line items, the total number of rows displayed depends on the number indicated in the dialog box.

The Cost Line Item Type for each line item is populated based on the selected submenu option.

Modifying Cost Line Item Types

When an alert window is displayed regarding a change of value for uuu_cost_li_type, the rules are applied as listed below:

- If the line item has not been saved and the line item remains in entry mode, no error message is displayed.
- If the summary line item has been saved, a confirmation message is displayed.
    - This indicates that the field values for the Cost Line Item Type are reset.
- If the summary line item has Costed lines, a confirmation message is displayed.
    - This indicates that the field values for both the line item and Costed line are reset.
- If you select, “Yes” in the alert window, system fields dependent on uuu_cost_li_type are reset for both the line item and Costed line.

> **Note**: If “Allow Cost Breakdown” is unchecked in uDesigner and Costed lines exist as part of a previous step, changing uuu_cost_li_type modifies the Costed lines. This is applicable for Workflow Business Processes.

Handling Errors in the Grid

The handling of errors in this updated grid is similar to other grids. All required field validation errors are displayed with a red circle in their respective fields.

When you select Save or Error Check, form and system-level validations are performed. If any rows on the grid contain errors, the Error Indicator column displays an error.

System-defined Fields for the Summary Line Item

The following explains the function of the system-defined fields in the *Summary Line Item*.

Columns

- The first 10 columns will be fixed as Line No., attachment, link records, uuu_cost_li_type field, Cost Code, Cost Name, Short Description, Item Quantity, Item Unit Cost, and Amount.
- Remaining columns will be as per the detail form design in uDesigner.

uuu_cost_li_type

The uuu_cost_li_type will be a drop down and will have the values of Lump Sum and Unit Cost.

This field is a required field and should be marked with an asterisk. This field cannot be blank and by default will be set as Lump Sum.

The drop-down will have the values of Lump Sum and Unit Cost.

The editing of remaining fields in the grid will be dynamic in nature.

Meaning the uuu_cost_li_type will drive the editable and non-editable fields in the grid.

> **Note**: After the selection has been made, this value should be grayed out post shift of focus. This will be important since this field drives the

behavior of other fields.

If the option selected is Lump Sum then:

- uuu_quantity: Disabled (Any auto population and formula definition on this field will not be retained when the LI type is lump sum.)
- uuu_unit_price: Disabled (Any auto population and formula definition on this field will not be retained when the LI type is lump sum.)
- amount: Required.
- Manual or Formula destination. User must type in the amount value. This DE could also be set as formula in uDesigner. Runtime should retain the formula calculation.

If the option selected is Unit Cost then:

- uuu_quantity: Required.
- Manual or Formula destination. User must type in the Quantity value. This DE could also be set as formula in uDesigner. Runtime should retain the formula calculation.
- uuu_unit_price: Required
- Manual or Formula destination. User must type in the unit cost value. This DE could also be set as formula in uDesigner. Runtime should retain the formula calculation.
- amount: Read-only, populated by formula as configured by user in uDesigner. At runtime this field should always be calculated as uuu_quantity*uuu_unit_price

If the detail form design does not have the uuu_quantity and uuu_unit_price fields but user selects the Unit Cost option for uuu_cost_li_type then upon shift of focus, an error should be thrown alerting the user that the fields are missing. (Use existing alert currently being thrown when user clicks unit cost option in the classic line item Unit Cost option).

Other System Elements in the Grid

uuu_costed_amt

Always read-only. This DE should show value as sum of ‘Amount' from all costed lines.

(Note that when uuu_cost_li_type = Lump Sum, amount will be entered by user in the cost allocation window. When uuu_cost_li_type = Unit Cost, amount will be calculated in the grid by system as Unit Cost*Quantity. Either case, uuu_costed_amt in the summary line item will be calculated as sum of ‘amount' from all costed lines.)

This field will be displayed only at the summary line item level in the grid.

uuu_not_costed_amt

Always read-only, this DE should show value = (amount - uuu_costed_amount)

This field will be displayed only at the summary line item level in the grid.

uuu_costed_qty

Always read-only. This DE should show value as sum of ‘Quantity' from all distributed cost child lines.

(Note that when uuu_costed_li_type = Lump Sum, this will be zero. When uuu_cost_li_type = Unit Cost, Quantity will be entered by user in the Cost Allocation window. Either case, uuu_costed_qty in the summary line item should calculate as sum of 'Quantity' from all costed lines.)

This field will be displayed only at the summary line item level in the grid.

uuu_not_costed_qty

Always read-only, this DE should show value = (uuu_quantity - uuu_costed_quantity). Note that when uuu_cost_li_type = Lump Sum, this will calculate as zero.

This field will be displayed only at the summary line item level in the grid.

All other fields designed in the Detail form

User defined fields will be editable in the summary line item and not in the costed lines.

Costed Line Items in the Grid

The option of "Insert Costed Line Items…" allows you to add Costed Line Items for a Line Item. Clicking this option will launch the CBS Picker window. Multiple CBS Codes can be selected.

The number of Costed Line Item inserted depends on the number of codes selected in the CBS Picker window. After you insert the Costed Line Items, along with the CBS codes, you can edit the rest of fields according to the Cost Line Item Type that these Costed Line Items belong to.

Line Numbers for the Costed Line Items follow the parent number (+ 1,2,3,4, and so on).

For example, if the parent line item has a Line No. of 1, the subsequent Costed Line Items have the numbers of 1.1, 1.2, 1.3 and so forth.

Notes:

- The Summary level cost codes cannot be selected for line items in Cost Business Process records, as this may result in data inaccuracies. Additionally, ensure that summary level cost codes are not associated with cost allocation lines when creating or updating commits of Summary Payment Application records via any method, including UI, REST API, or auto-creation.
- The Line Item numbers are generated after you click Save.

Both the Summary Line Item and the Costed Line Item are indented on the page. The Summary Line Item has the option of Expand and Collapse.

The **Short Description** field is auto-populated from the Short Description field in the parent Line Item.

If you insert a blank Line Item through a key action, and there are no rows after the inserted row in the Grid, the inserted row will be a Costed Line Item. If you want to change the next Line Item to a Summary Line Item, you must insert the Line item by clicking the *gear menu* (⚙) and selecting **Insert Line Items**. The **Add Remaining** option is disabled for the Costed Line Item.

Gear Menus for Costed Line Item

The following explains the functions of the *gear menus* when you select the Costed Line Item and click the *gear menu* (in the first column).

Option	Enabled/ Disabled	Description
Insert Line Item	Disabled	You cannot add a Summary Line Item when a hierarchical relationship exists between the Costed Line Item and a Summary Line Item.
Insert Multiple Line Items	Disabled	You cannot add a Summary Line Item when a hierarchical relationship exists between the Costed Line Item and a Summary Line Item.
Insert Costed Line Items	Enabled	If you highlight a Costed Line item and click this option, you can add additional Costed Line Items below the highlighted row.
Add Remaining	Disabled	You can only perform this action for Summary Line Items.
Paste	Disabled (until you perform a Copy)	You can only paste a copied Summary Line Item. If you copy a Costed Line Item, for example 1.1, from the parent line, for example Line 1, you can paste the copied Costed Line Item under the parent line. After you paste, the new Costed Line Item is inserted below the selected Line Item and renumbering of the Costed Line Items takes place automatically. You can paste Costed Line Items that have the same source and destination.

Option	Enabled/ Disabled	Description
Copy	Enabled	If you highlight a Costed Line Item and click this option, the highlighted Costed Line Item is copied. You can copy multiple Costed Line Items and insert them below the highlighted/selected Costed Line Item. The Costed Line Items copied must belong to the same Summary Line Item. You cannot copy Costed Line Items that belong to different Summary Line Items.
Remove	Enabled	If you highlight a Costed Line Item and click this option, the Costed Line Item will be removed.

System-defined Fields for the Costed Line Item

The following explains the function of the system-defined fields in the *Costed Line Item*.

Option	Enabled/ Disabled	Description
Cost Code	Always Enabled regardless of the uuu_cost_li_type value	The initial value that is populated in this field is based on the selection that you had made when you clicked the **Insert Costed Line Items** option. You can modify the value later.
Cost Name	Disabled	The value in this field depends on the CBS Code that you had selected.

Option	Enabled/ Disabled	Description
Short Description	Always enabled regardless of the uuu_cost_li_type value	The initial value that is populated in this field is based on value of the Short Description field of the Summary Line Item. You can modify the value later.
Item Quantity	Enabled only when uuu_cost_li_type = Unit Price	User will be allowed to enter the quantity.
Item Unit Price	Disabled	This field will get populated based on the Item Unit Price value in the Line Item.
Amount	Enabled when: uuu_cost_li_type = Lump Sum Disabled when: uuu_cost_li_type = Unit Cost	Amount will be editable when uuu_cost_li_type = Lump Sum. Amount will be derived as Item Quantity* Item Unit Price when uuu_cost_li_type = Unit Cost

Grid Support for Change Commit

> **Note:** Except when noted, other functions of the Change Commit Grid are similar to those for the Base Commit Grid.

The Grid for the Change Commit Business Processes of Summary Payment Application (SPA) SOV type enables you to add:

- Lump Sum
- Unit Cost
- Modify Committed Lines

The first column (*gear menu* [⚙]) provides the following options:

- Insert Line Item
- Insert Multiple Line Items
- Insert Costed Line Items
- Modify Committed Line Item
- Add Remaining
- Copy
- Paste
- Remove

- For the Remove option, the following message is displayed when the action is triggered: “Are you sure you want to remove the selected Line Items and all the associated Costed Line Items?"

Note: The **Modify Committed Line Item** option will be disabled when you select a Costed Line Item.

When you click the **Modify Committed Line Item** option, the Commit Line Picker window opens. Follow the prompts to select a Commit Line Item from SOV to insert in the Grid.

The columns in the Change Commit grid are similar to the Base Commit grid. Alongside Item Quantity, Item Unit Cost, and Amount are the following new columns:

- Error Indicator
- Attachment
- Linked Record
- Cost Line Item Type
- Cost Name
- Short Description
- Current Quantity
- Current Scheduled Value
- New Scheduled Value

The remainder of the columns display based on the form design established in uDesigner.

Total Amount Row

Similar to a Base Commit grid, a total amount row (at the bottom of the Grid) displays the Total Line Item Amount of all the Summary Line Item rows.

Form Validations

All form level validations at the system and user-defined levels are done after the Save option is selected from the toolbar.

For Lump Sum validations, the Costed Amount must be the same as the Line Item Amount for the Cost Line Item Type.

For Unit Cost validations, the Costed Quantity must be the same as the Line Item Quantity for the Cost Line Item Type.

Selecting and Modifying Line Items

You can use the "Item Quantity" and "Amount" to enter "Change Quantity" and "Change Amount" when modifying the Committed Line Items.

When you select the **Modify Committed Line Item** option, the Committed Line Item Picker window opens to allow you to select the Line Item that you want to modify. The behavior of a line item selection is similar to the one seen when line items are added through selecting the Modify Committed Line option in Form View. You can select any Summary Line Item, from this window. After you select the Line Item, the following occurs:

- The uuu_cost_li_type and uuu_unit_price fields, when Cost LI type = Unit Cost, are copied from the reference Commit Line Item and transferred into the Change Commit Line Item as read-only fields.
- The uuu_cost_li_type and uuu_unit_price fields are read-only and cannot be modified because the fields are from the SOV sheet.
- The short_desc field is also copied from the reference Commit Line Item and transferred into the Change Commit Line Item.

The following Costed Line Items, below the Commit Line Item, are copied into the Change Commit Line Item:

- The currency field Scheduled Value
- The bi_item, bitemid, and short_desc fields

> **Note:** The fields mentioned above are copied from the source distribution row and transferred into the destination distribution row.

If you select a Costed Line Item instead of a Summary Line Item, and you select Costed Line Item from the Commit Line Item Picker window, you will add the parent Line Item, along with all the child distribution Line Items, into the Change Commit Line Item.

The short description field of the Change Commit Line Item updates the SOV sheet.

Gear Menus for Summary Line Item of Modify Committed Line Item

The following explains the functions of the *gear menus* (⚙) when you select **Modify Committed Line Item**, select **Summary Line Item**, and click the *gear menu* (in the first column).

Option	Enabled/ Disabled	Description
Insert Line Item	Enabled	If you highlight a Committed Summary Line Item and click this option, the system inserts another Committed Summary Line Item row above the highlighted row.
Insert Multiple Line Items	Enabled	If you highlight a Committed Summary Line Item and click this option, the system inserts multiple Committed Summary Line Items.
Modify Committed Line Item	Enabled	If you highlight a Committed Summary Line Item and click this option, you will launch the Commit Line Item picker, and you can select the Summary Line Item for insertion.

Option	Enabled/ Disabled	Description
Insert Costed Line Items	Enabled	If you highlight a Committed Summary Line Item and click this option, you can add Costed Line Items below the highlighted row.
Add Remaining	Enabled	If you highlight a Committed Summary Line Item and click this option, the system launches the CBS Picker window. When you select the CBS code, the system adds a Costed Line Item, with the Short Description field auto-populated from the Short Description of the Summary Line Item, and the system calculates the value in the Amount field as Non Costed Amount - Costed Amount. This option is disabled when the Costed Amount = Amount in the Costed lines.
Paste	Disabled (until you perform a Copy)	If you highlight a blank row and perform a Paste action, the system inserts the Committed Summary Line Item and the Costed Line Item above the highlighted Line Item.
Copy	Enabled	If you highlight a Committed Summary Line Item and click this option, you copy the Committed Summary Line Item and the associated Costed Line Items.

Option	Enabled/ Disabled	Description
Remove	Enabled	If you highlight a Committed Summary Line Item and click this option, the Committed Summary Line Item and all the associated Costed Line Items are removed.

Gear Menus for Costed Line item of Modify Committed Line Item

The following explains the functions of the *gear menus* (⚙) when you select **Modify Committed Line Item**, select **Costed Line Item**, and click the *gear menu* (in the first column).

Option	Enabled/ Disabled	Description
Insert Line Item	Disabled	You cannot add a Summary Line Item when a hierarchical relationship exists between the Costed Line Item and a Committed Summary Line Item.
Insert Multiple Line Items	Disabled	You cannot add a Summary Line Item when a hierarchical relationship exists between the Costed Line Item and a Committed Summary Line Item.
Modify Committed Line Item	Disabled	You cannot add a Committed Summary Line Item from an SOV sheet when a Costed Line Item is highlighted.
Insert Costed Line Items	Enabled	If you highlight a Costed Line item and click this option, you can add additional Costed Line Items below the highlighted row.
Add Remaining	Disabled	You can only perform this action for Committed Summary Line Items.

Option	Enabled/ Disabled	Description
Paste	Disabled (until you perform a Copy)	You can paste a Costed Line Item within the Summary Line Item. For example, if you copy the Costed Line Item 1.1 from the parent Line 1, the copied Costed Line Item can only be pasted under Line 1. Renumbering of the Costed Line Items occurs automatically. You can paste Costed Line Items that have the same source and destination.
Copy	Enabled	If you highlight a Costed Line Item and click this option, the highlighted Costed Line Item is copied. You can copy multiple Costed Line Items and insert them below the highlighted/selected Costed Line Item. The copied Costed Line Items must belong to the same Summary Line Item. You cannot copy Costed Line Items that belong to different Summary Line Items.

Option	Enabled/ Disabled	Description
Remove	Enabled or Disabled depending on the case	Case 1: A new Costed Line Item that does not exist in the SOV sheet: If you highlight the Costed Line Item and click this option, the Costed Line Item will be removed. Case 2: The Costed Line Item exists in the SOV sheet: This option is disabled if you select a Committed Costed Line Item (the Costed Line Item exists in the SOV sheet).

Column Details Specific to Cost Allocation

The following provides the details specific to the Cost Allocation.

Log Column	Description
Cost Code	Required and editable within the Grid. You can select a Cost Code from the Cost Code Sheet, within the same Shell, by clicking inside the cell. Similar to the Line Items, you can enter a Cost Code in the cell and the system provides the matching Cost Codes for you to choose from. You cannot change the Cost Code of an existing Line Item that originates from an SOV sheet.
Code Name	Read-only. The value in this field is auto-populated by the system according to the Cost Code that you have selected.
Short Description	Editable. The default value in this field is auto-populated by the system according to the Line Item "short_desc" field. You can update/modify the default value.

Log Column	Description
Current Quantity	Read-only. You can see the column and the values if 1) You select the Modify Reference Commit option and 2) The Commit Line Item = Unit Cost in the Cost Line Item type: uuu_cost_li_type. If the two conditions are satisfied, the system auto-populates the value in this column as "Quantity" (from the source Commit distribution line).
Current Scheduled Value	Read-only. The system displays this column and populates the value (regardless of the uuu_cost_li_type). The value in this column is only populated when you modify an existing Line Item from the SOV sheet.
Item Quantity (Change Quantity)	Read-only if uuu_Cost_li_type = Lump Sum. Editable if uuu_cost_li_type = Unit Cost. You can enter the Costed Quantity.
Amount (Change Amount)	Editable if uuu_cost_li_type = Lump Sum. You can enter the Costed Amount. The system calculates the value as "Change Quantity * Unit Cost" if uuu_cost_li_type = Unit Cost. The value of the Unit Cost must be according to the Detail Form (uuu_unit_price). If DE is missing, the value will be zero.
New Schedule Value	Read-only. This column is only populated when you modify an existing Line Item from the SOV sheet. The value is calculated by the system as "Current Schedule Value + Change Amount".

Summary Payment Application Grid Column Total

- Blank
  Unifier displays the value as empty in the Total Column (that particular DE column).
- Sum of All Rows
  Unifier displays the value as "Sum of All Rows" in the Total Column.
- Use Formula Definition

- Unifier displays the value as "Formula Defined" in the Total Column. In other words, Unifier calculates the formula by using the values from the Total row for the respective DEs.

If the formula was reset to Manual, Unifier resets the Total to "Sum of All Rows."

Unifier calculated the Total, for DEs with predefined formula, as follows:

- %Complete to Date (uuu_spa_per_comp)
  - Custom formula

    Based on the property selected in uDesigner.
  - System-defined formula

    Based on the property selected in uDesigner.
- Amount This period (uuu_spa_amt_tp)

  Based on the property selected in uDesigner. (Either Blank or Sum of All Rows)

> **Note:** With version 23 and later, a Total row on a non-standard tab of a line item grid is not displayed. For version 22 and earlier, the Total row displays a 0.

SOV Summary Payment Application Business Process

In a new payment record, when you navigate to the payment grid and no line items are saved, the system will not calculate the sum of all (SOV) line items for data elements in the upper form.

View Mode

In View Mode, you can use the toolbar to **Reload**, **Print**, **Find**, **Collapse**, and **Expand**.

Field	Description
Add	Lets you add lines. When you click **Add**, a confirmation dialog will be displayed. After lines have been added, the **Add** button will be hidden. **Note**: After lines have been added manually, the payment lines cannot be added through CSV import.
Import	Lets you import lines. After lines have been added, the Import button will be hidden.
Reload	Lets you reload line items.

Field	Description
Print	Lets you print or export the entire summary sheet along with the costed lines (the line item summary and the associated costed line items). The sheet can be exported to CSV or Excel. The generated CSV or Excel sheet is for information purpose only.
Find on Page	Lets you find items on the displayed page. When you click this option, the system inserts a row that lets you enter filter parameters.
Collapse	Lets you view only the Summary rows.
Expand	Lets you view the Summary and the associated child rows. This will be the default view.
Summary Payment Applications SOV structure (columns)	The grid columns seen in the classic payment application will be as per the detail form design specified in uDesigner. The grid also has a Total field at the bottom of the sheet that displays the sum of all the lines. **Note:** Although uDesigner supports the inclusion of Pull Down DEs (string or integer) on the payment detail form for use with Auto Population from an SOV Sheet, the Pull Down DE column cannot be added to the SOV Sheet from the SOV Structure. Because of this, the Pull Down DE in a line item cannot auto-populate a value from the SOV Sheet when a classic Payment BP record is created. Auto Population is *only* supported for decimal or current amount DEs.

Edit Mode

In Edit Mode, you can use the toolbar to **Cancel**, **Error Check**, **Save**, **Find**, **Collapse**, and **Expand**. Additionally, a check box option of **Apply line item value of Percentage Complete to Date to Costed Lines** will be visible on the right.

Field	Description
Cancel	Allows you to exit **Edit Mode**.
Error Check	Allows you to check the sheet for errors.

Field	Description
Save	Allows you to save any changes made to the sheet in **Edit Mode**.
Collapse	Allows you to view only the Summary rows.
Expand	Allows you to view the Summary and the associated child rows. This will be the default view.

Locking of the Grid

In View and Edit mode, the system will automatically lock the grid after the first 5 columns. To lock another column while viewing or editing data, you can drag the column from the unlocked part of the sheet into the locked part of the sheet. This layout will not be saved into the database.

Total Mismatch Indicator

When the line item field value does not match the sum of costed line values, the line item cell displays a small red triangle to indicate that the totals do not match. When you click the small triangle, the system displays an information text and informs you of the differences. This is applicable only for the line item.

> **Note:** If the sum of costed lines ranges between a -0.01 to 0.01 difference from the originating line item values, the system does not generate an error or prevent the BP record from moving to the next step.

Multiple Payment Applications

If SOV restrictions are removed and multiple Payment Applications are detected, an Alerts icon will be displayed in the upper right corner of the window. When you hover over the icon, information about pending payments is presented.

Negative Change Orders

When the Payment Application grid is opened, the line items that will be modified because of a pending Negative Change order will have an Alerts icon in the Scheduled Value cell. You can click the cell to view the details of the Change order. The Pending Change Orders with negative amounts screen will be displayed. The screen will include columns for the Business Process name, Record Number, Line Number, and Amount.

Updating Change Orders

When a change order that refers to the line item from SOV contains data about the change quantity (uuu_quantity) is created, and the quantity gets updated in the SOV sheet, the system will update the quantity changed (uuu_quantity) to the inflight payment record after SOV merge.

Import New Summary Payment Application Records

You can export a CSV or Excel template that includes the upper form and detail form fields as columns. These fields include the header fields from the upper form and the line item SOV fields from the detail form, including the detail line item fields defined in Integration.

You can modify the exported CSV or Excel template and import it to create the upper form header information and the detail line items for the new business process.

To export a copy of the summary payment application business process template:

1) Navigate to the summary payment application business process log.
2) Click the **Actions** menu and select **Export CSV Template** or **Export Microsoft Excel Template**.

Depending on your browser, the template will automatically be downloaded to your computer, or you will be prompted to download it manually.

To modify the exported summary payment application business process template:

1) Open the exported CSV or Excel file in Microsoft Excel.
2) Enter the business process information into the spreadsheet. Each upper form header record must begin with an "H". Each line item must begin with a "D". For multiple tabs, you must enter appropriate tab name in the Tab Name column.
3) Enter data into the required fields, as well as non-required fields as needed.

Notes:

- Data for formula-based columns is ignored.
- If auto-populated data is provided, the system will import the value, and will not override the imported values except for fields auto-populated by Base Commit, Change Commit, or from SOV.
- When a data element (DE) is set to auto-populate from a Base Commit, Change Commit, or an SOV, the auto-populated values takes precedence when 0 value is sent for those DEs in CSV, Excel, or REST API. Any value specified in the input request is ignored and the auto-populated values from Base Commit, Change Commit, or SOV will be used.
- Any line items with the Amount equal to zero will not be imported.
- Use to add new business process records only; not to modify existing business processes.
- For data to import correctly, you might have to change some of the cells in the CSV file to Text type. For example, if you have a CBS code of 1-1, Microsoft Excel can interpret this entry as a month-day combination and reformat it to Jan-1. In this case, your data import will fail because this data is now an invalid CBS code.

To import the summary payment application business process template:

1) Navigate to the summary payment application business process log.
2) Click the **Actions** menu and hover over **Import**.

3) Select either **Data From CSV File** or **Data From Microsoft Excel File**.
4) Browse to select the file to import, and then click **Next**.
5) Add any attachments to the import.
6) Click **Upload** when finished.

If there are any import errors, you can open the CSV file to view and correct the error. No records are imported if any rows contain an import error.

> **Note:** If the **Add Only SOV edited line items** option is selected in uDesigner, only the edited line items will be saved when the summary payment application template is imported through CSV, Excel, or RESTful services.

Adding Partial Line Items by way of CSV or Excel import or RESTful web services

When you add partial line items by way of CSV-Excel import or RESTful web services to the Summary Payment Applications BP, the system will add all the other existing SOV lines, along with the line items provided in the CSV-Excel template or RESTful web services input request.

When you are scheduling payments by creating the payment line items by way of CSV or Excel import or RESTful web services, you can add all the payment line items to the grid to prevent data discrepancy in the Schedule of Value (SOV). To be able to prevent data discrepancy in the SOV when the payment record is approved, you can view all the SOV line items that have been added to the payment grid (**Standard** tab):

- When partial line items have been included in the CSV or Excel import or RESTful web services request.
- When the record is created by way of CSV or Excel import or RESTful web services request.
- When the record is created by way of RESTful web services request (**CreateBPRecord**) and partial line items that have been included in the input request.
- When the record is updated by way of RESTful web services request (**UpdateBPRecord**) and partial line items that have been included in the input request, provided that there were no other line items added to the payment grid.

When you create payment applications in the **Payment Items** tab, and you are exporting the record CSV or Excel template (or line item CSV or Excel template):

- If the payment record is created by way of line items or partial line items (using input from the CSV or Excel template), all the existing SOV lines will be added to the payment grid along with imported line items if importing is successful.
- If the payment record is created without line items or partial line items (not using input from the CSV or Excel template), the system will not add any line items or partial line items to the payment grid.
- If the payment record is created by way of adding all the payment line items (using input from the CSV or Excel template), all the line items will be added to payment grid, when the import is successful.

Oracle recommends that you should set the DD value as default, or define the auto-population, when the payment detail form has "required" string DEs, such as a short description. If the required" string DE does not include any value, the CSV or Excel import or RESTful web services request will fail because the system will add all the existing line items from SOV into the payment grid. In this scenario, the system will generate an error email for record creation, or the system will generate an error message, in the imported CSV template, for line item creation.

The system will validate when you add payment line items (by way of CSV or Excel import or RESTful web services request) to the SOV line items even if partial line items have been added, previously.

> **Note:** The existing process will remain as is for CSV or Excel import or RESTful web services request of line items in non-standard tabs, within the Summary Payment Applications SOV BPs.

When you export the record, or line item, CSV or Excel template, the template will display the following information: "`The system will add existing SOV lines into the payment grid when importing partial line items.`"

Import Summary Payment Application Line Items Into a BP

You can export a template that includes the detail form fields as columns for a specific business process. These fields include the detail form line item fields defined in Integration.

You can then modify the exported template and import it to create new line items for the business process. The exported template contains SOV record information.

When importing Summary Payment line items for Payment Applications BPs, the system uses the values that the user provided for the auto-populate data elements, if the fields were editable originally; otherwise, the system uses the values that are from Base Commit line items or Change Commit line items.

To export the summary payment application line item template:

If multiple tabs are designed for the line items in the business process, only the data in the Standard tab is exported. For the other tabs, the tab name is included in the exported data for reference, but no data in these tabs is exported. Data from all columns in the Reference Base Commit is exported.

1) Navigate to the summary payment application business process log.
2) Click **Create** to create a new business process.
3) Select a **Reference Base Commit** for the business process. If you do not select a Reference Base Commit, the exported template will not contain data. Data from all columns in the Reference Base Commit is exported.
4) Open the **Menu Options** (☰), hover over **Export Line Item Template**, and then select **CSV** or **Microsoft Excel**.

Depending on your browser, the file will be downloaded automatically, or you will be prompted to download the file manually.

To modify the summary payment application line item template:

1) Open the exported CSV or Excel file in Microsoft Excel. The SOV line items are listed.
2) Enter the line item information into the spreadsheet. Each line must begin with a "D". For multiple tabs, you must enter appropriate tab name in the Tab Name column.
3) Enter data into the required fields, as well as non-required fields as needed.

Notes:

- Data for formula-based columns is ignored.
- If auto-populated data is provided, the system will import the value, and will not override the imported values except for fields auto-populated by Base Commit, Change Commit, or from SOV.
- When a data element (DE) is set to auto-populate from a Base Commit, Change Commit, or an SOV, the auto-populated values takes precedence when 0 value is sent for those DEs in CSV, Excel, or REST API. Any value specified in the input request is ignored and the auto-populated values from Base Commit, Change Commit, or SOV will be used.
- Any line items with the Amount equal to zero will not be imported.
- Ensure that you are importing the records you want to import. Any line items that you import will be added after any existing line items.
- Use to add new lines only, not to modify existing lines
- All data created through the CSV import is rolled up to the cost sheet
- For data to import correctly, you might have to change some of the cells in the CSV file to Text type. For example, if you have a CBS code of 1-1, Microsoft Excel can interpret this entry as a month-day combination and reformat it to Jan-1. In this case, your data import will fail because this data is now an invalid CBS code.

To import the summary payment application line item template:

1) Navigate to the summary payment application business process log.
2) Open a business process from the log.
3) Click the **Actions** menu and hover over **Import**.
4) Select either **Data From CSV File** or **Data From Microsoft Excel File**.
5) Browse to select the file to import, and then click **Next**.
6) Add any attachments to the import.
7) Click **Upload** when finished.

   If there are any import errors, you can open the CSV or Excel file to view and correct the error. No records are imported if any rows contain an import error.

Adding Partial Line Items by way of CSV or Excel import or RESTful web services

When you add partial line items by way of CSV-Excel import or RESTful web services to the Summary Payment Applications BP, the system will add all the other existing SOV lines, along with the line items provided in the CSV-Excel template or RESTful web services input request.

When you are scheduling payments by creating the payment line items by way of CSV or Excel import or RESTful web services, you can add all the payment line items to the grid to prevent data discrepancy in the Schedule of Value (SOV). To be able to prevent data discrepancy in the SOV when the payment record is approved, you can view all the SOV line items that have been added to the payment grid (**Standard** tab):

- When partial line items have been included in the CSV or Excel import or RESTful web services request.
- When the record is created by way of CSV or Excel import or RESTful web services request.
- When the record is created by way of RESTful web services request (**CreateBPRecord**) and partial line items that have been included in the input request.
- When the record is updated by way of RESTful web services request (**UpdateBPRecord**) and partial line items that have been included in the input request, provided that there were no other line items added to the payment grid.

When you create payment applications in the **Payment Items** tab, and you are exporting the record CSV or Excel template (or line item CSV or Excel template):

- If the payment record is created by way of line items or partial line items (using input from the CSV or Excel template), all the existing SOV lines will be added to the payment grid along with imported line items if importing is successful.
- If the payment record is created without line items or partial line items (not using input from the CSV or Excel template), the system will not add any line items or partial line items to the payment grid.
- If the payment record is created by way of adding all the payment line items (using input from the CSV or Excel template), all the line items will be added to payment grid, when the import is successful.

Oracle recommends that you should set the DD value as default, or define the auto-population, when the payment detail form has "required" string DEs, such as a short description. If the required" string DE does not include any value, the CSV or Excel import or RESTful web services request will fail because the system will add all the existing line items from SOV into the payment grid. In this scenario, the system will generate an error email for record creation, or the system will generate an error message, in the imported CSV template, for line item creation.

The system will validate when you add payment line items (by way of CSV or Excel import or RESTful web services request) to the SOV line items even if partial line items have been added, previously.

> **Note:** The existing process will remain as is for CSV or Excel import or RESTful web services request of line items in non-standard tabs, within the Summary Payment Applications SOV BPs.

When you export the record, or line item, CSV or Excel template, the template will display the following information: "`The system will add existing SOV lines into the payment grid when importing partial line items.`"

Overpayment in Summary Payment Applications SOV

The Data Element (DE) uuu_spa_per_comp (Percentage Complete to Date) is required on the detail form of a Summary Payment Applications type Payment Application business process.

You can enter values in the detail form (grid) (for uuu_spa_per_comp (Percentage Complete to Date)) that is above 100 percent.

In the Summary Payment Application SOV structure, you can add a column with Datasource = **Commits Remaining Balance**.

If the **Commits Remaining Balance** column has not been added to the SOV structure, you will have the ability to overpay (assign a payment amount that exceeds the remaining balance and the uuu_spa_per_comp value exceeds 100%).

If the **Commits Remaining Balance** column has been added to the SOV structure, you will not have the ability to overpay (you will not be allowed to assign a payment amount that exceeds the remaining balance or to make the uuu_spa_per_comp greater than 100), and the system displays a detailed message notifying you that the payment amount exceeds the remaining reference commit balance.

Base Commit SOV Type

Create New Base Contract Summary Payment Application

Based on the upper form properties, designed in uDesigner, if the add, copy, and remove lineitems options are checked, you can select **Add** and create a line item from the **Standard** tab, in the **Create New Base Contract Summary Pay App** window. The following options will be made available when you click **Add**:

- **Lump Sum**

  Enables you to create line items with lump sum amount defined at the summary line item and at the cost breakdown level.

  When you select **Lump Sum**, the summary line item and cost breakdown creation are set. The amount data element in the summary line item will be editable and any formulas defined on the amount data element will be retained. The uuu_quantity and uuu_unit_price will be disabled. The cost line item type for this type of line item will be lump sum. For the lump sum cost breakdowns, the uuu_amount data element will be editable. You can add the cost breakdowns with the amounts when the "allow cost breakdown" is configured, in uDesigner.

- **Unit Cost**

  Enables you to create line items with fixed unit rate defined at summary line item and cost breakdowns that were added. The system will use the same unit rate to calculate the line item amount.

  When you select **Unit Cost**, the summary line item will have uuu_quantity and uuu_unit_price data elements as editable fields. The summary line item can be set as formula, in uDesigner. The Amount field will be read-only and always calculated based on the formula configured in uDesigner.

When adding cost break downs, you can enter the CBS Code, a short description, and the uuu_quantity data element. The uuu_unit_price, for each break own line, will be read-only and is populated with the value from summary line. The Amount field, for each cost breakdown, will be calculated based on the formula: quantity * unit price. The Cost Line Item Type will be displayed as **Unit Cost** in the line item.

- **Variable Unit Cost**

  Enables you to define a variable unit rate at cost breakdowns. The line item amount is calculated based on the variable unit rate.

  When you select Variable Unit Cost, the summary line item will have the uuu_quantity and amount data elements editable, but the uuu_unit_price data element will be disabled and read-only. The Cost Line Item Type will be displayed as Variable Unit Cost in the line item. The following describes the data elements on the summary line item when the **Variable Unit Cost** is selected:

  uuu_quantity

  The uuu_quantity is an editable and required field. It can be set for either a manual or formula destination. The uuu_quantity DE can be set as formula, or it can be set as auto-populate, in uDesigner. The auto-population or formula will work in user mode (at runtime).

  uuu_unit_price

  The uuu_unit_price is a disabled field. The formula or auto-populate design does not work for the Variable Unit Cost line item.

  amount

  The amount is an editable and required field. It can be set for either a manual or formula destination. The amount DE can be set as auto-populate, in uDesigner. The auto-population or formula will work in user mode (at runtime).

  In the Variable Unit Cost, the data element uuu_costed_amount (in the upper section of the line item) will be calculated as sum of the amount (from all cost breakdowns). The uuu_non_costed amount will be calculated as (amount - uuu_costed_amount). The amount, in this case, is the line item amount. Similarly, the data element uuu_costed_quantity (in the line item) will be calculated as sum of quantity entered in all cost breakdown. In the uuu_non_costed_quantity DE, the data element uuu_costed_quantity, will be calculated as: uuu_quantity - uuu_costed_quantity.

Regardless of the Line Item type, the right pane displays the Line Item and Cost Breakdown options.

> **Note:** The availability of the Cost Breakdown options of Add Cost and Add Remaining is per uDesigner design. If the Business Process form does not permit cost breakdown, these options will not be available.

- **Cancel**
- **Save**
- **Save & Add New**

When you click the **Save & Add New** option, the Line Item type displayed will be based on the last cost line item type selected. As a result, if you click Add, select Lump Sum, and then save the Line Item and continue to click **Save & Add New**, the new Line Item will be of Lump Sum type.

On the right pane:

The Line Item option contains fields that have been designed in uDesigner, and the fields are similar to those in other Business Processes with the Standard user interface.

The Cost Breakdown option enables you to open a grid that contains fields related to the Cost Line Item type such as the number, cost code, and so on.

Use the Add Cost and Add Remaining toolbar options to add your cost or the remainder of the cost.

The "Not Costed Amount" (for Lump Sum) and "Not Costed Quantity" (for Unit Cost) options are also available.

Cost Breakdown option (Adding costed lines)

When you click the plus (+) icon, the system launches the CBS picker, and you can select one or more codes and add the codes to the grid.

> **Note:** The Summary level cost codes cannot be selected for line items in Cost Business Process records, as this may result in data inaccuracies. Additionally, ensure that summary level cost codes are not associated with cost allocation lines when creating or updating commits of Summary Payment Application records via any method, including UI, REST API, or auto-creation.

The *gear menu* ( ) is available when you select a single line item or multiple line items, and it allows you to copy or remove an item.

> **Note:** You can copy multiple costed lines by selecting multiple line items, click the *gear menu*, and click Copy.

Errors

In case of errors in Line Items, the system displays a detailed report inline (Error Location and Description). The system displays all form level validation errors and required field errors at the record level error location.

In case of errors in Cost Breakdown, the system populates an error column that contains the error indication followed by a message.

Add Cost

In the Line Item Details tab, the Cost BreakDown tab, the add cost(+) option will be enabled if in the upper form properties the Allow Cost Breakdown option is selected in uDesigner.

When you select the add cost option, in the Cost BreakDown tab, the CBS picker will be shown so you can select a single or multiple CBS codes to add their breakdowns. In the cost breakdown line:

Cost Code and Code Name

The Cost Code is editable and the default value will be populated from selected code in the CBS picker. You can double-click and modify the cost code. The Code Name is read-only and populated by cost code selection.

Short Description

The Short Description is editable. By default, the Short Description data element is populated from the value of the summary line item short_desc field. You can edit and modify the field.

uuu_unit_price and uuu_quantity

The uuu_unit_price and uuu_quantity DEs are editable and available for you to enter the values.

uuu_amount

The uuu_amount, in cost breakdown, will be calculated as uuu_unit_price * uuu_quantity.

Not Costed Quantity and Non Costed Amount

The Not Costed Quantity and Non Costed Amount will be calculated and displayed on the top of the costed lines.

Total Amount

The Total Amount for all costed lines is displayed.

uuu_costed_amount and uuu_costed_quantity

The uuu_costed_amount and uuu_costed_quantity, in the summary line item, will be calculated as the sum of amount and quantity from the costed lines.

Remove Cost

You can remove one or more cost breakdowns by using the Remove option (*gear menu*). When the selected cost breakdowns are removed, the total amount of the costed lines will be updated. The uuu_non_costed_amount and uuu_non_costed_quantity will be recalculated accordingly.

Copy Cost

You can copy one or more cost breakdowns by using the Copy option (*gear menu*). For copied costed lines, besides the CBS code, the quantity unit cost and the amount will be copied.

Adding Variable Unit Cost lines by using the grid

You can add Variable Unit Cost line items in the grid view. Click Insert Line Item and select the Variable Unit Cost option (similar to the form view). When you click the Insert Line Item, the following options will be available, based on the form properties

- **Lump Sum**
- **Unit Cost**
- **Variable Unit Cost**

The Cost Line Item Type is set as "Variable Unit Cost" in the line item, when the Variable Unit Cost option is selected.

The behavior of data elements uuu_quantity, uuu_unit_price and amount in the Variable Unit Cost lines will be similar to the cost lines created from the form view. The uuu_unit_price DE, in the cost breakdowns, will be editable, and you can specify the variable rates for each costed line. The amount for each cost breakdown will be calculated based on the unit rate specified. Accordingly, both the uuu_costed_amount DE and uuu_noncosted_amount DE will be calculated.

In unit cost lines, the uuu_unit_price DE will be editable only on the summary line and read-only in cost breakdowns.

After the base contract record, which has the line items of both fixed and variable unit cost, reaches the terminal step, the SOV will be created. The variable unit rates provided in the cost breakdowns will be rolled up to SOV along with quantity and amount.

The following table explains how the line item consolidation of the **Variable Unit Cost** lines takes place:

Source Business Process	Destination Business Process	Expected Results	What If Scenarios

Source Business Process	Destination Business Process	Expected Results	What If Scenarios
Generic Cost BP of CBS type and Non-SPA BP with the line items having cost (Non-SPA) selected as variable unit cost type.	Change Commit BP Summary Payment Applications SOV BP (SPA commits)	Copy the line item from the source. In the destination record, the summary line item will be created and cost line item type is populated as variable unit cost type. Cost breakdown will be created if the source line item has CBS Code defined. If the source BP is a CBS cost type, and the line items are consolidated from the standard source, both the summary and the costed line items will be created and data will be populated as follows: ▸ The summary line item will have both the `uuu_quantity` and the amount populated. In this case, the `uuu_unit_price` will be disabled and no value should be populated from the source. ▸ The cost breakdown will have the CBS Code, description, `uuu_quantity`, `uuu_unit_price`, and the amount populated.	If the line items are consolidated from the non-standard tab and CBS Code is not part of the source line item, only the summary line item will be created with `uuu_quantity` and the amount populated. If the source BP is a line item type, only the summary line item will be copied into the destination. The summary line item will have both the `uuu_quantity` and the amount populated. In this case, the `uuu_unit_price` will be disabled and no value should be populated from the source.

Source Business Process	Destination Business Process	Expected Results	What If Scenarios
SPA commits and change commits type BPs with variable unit cost line items.	Generic Cost BP of CBS type and Line item type BP with the line items having cost line item type selected as variable unit cost type.	Only the summary line item will be copied.	If the destination BP is a CBS cost type, the consolidation will fail because the summary line item will not have CBS codes. If the destination BP is a line item type, using the line item consolidation line items will be copied if all the required fields have values defined. In this case, the short description and the amount are copied in to the destination line item, if it exists.
SPA commits and change commits type BPs with variable unit cost line items.	SPA commits and change commits type BPs with variable unit cost line items.	Both the summary line item and the cost breakdowns will be copied in to the destination.	New summary line items will be created (with all their cost break downs) in the destination record.

Linked Elements for All SOV Types Except Summary Payment SOV Type

If you set up Base Commit BPs with the following options:

- Select **Sub-Type** as *Line Items with CBS Code*
- Enable **Create SOV**
- Select any **SOV Type** except Summary payment SOV type

the following data elements can be added as linked elements:

- **uuu_scheduled_value**

  Displays the original scheduled value of a Base Commit BP or General Spends BP of SOV type.
- **uuu_commit_remaining_balance**

  Displays the remaining balance of a Base Commit BP or a General Spends BP of SOV type

Note: The above data elements can be added to published BP designs

also.

For more details regarding each element, refer to the *Unifier Data Reference Guide*.

Change Commit Summary Payment Application SOV Type

Create New Change Order with Summary Payment Application

Based on the upper form properties, designed in uDesigner, if the add, copy, and remove line items options are checked, you can select **Add** and create a line item from the **Standard** tab, in the **Create New Change Order with Summary Pay App** business process window. The following options will be made available when you click **Add** and when a referenced Base Commit has "**Allow Variable Unit Cost in Cost Breakdown**" is selected in uDesigner:

- **Lump Sum**
- **Unit Cost**
- **Variable Unit Cost**
- **Modify Committed Line Item**

For Summary Payment Application SOV type business processes, the Amount field can be either editable or read-only based on the following conditions:

- If you add a Lump Sum type line item to a BP, the system will ignore the existing formula of the Amount field.
- If you add a Unit Cost type line item to a BP, the system will retain the existing formula of the Amount field.

The cost breakdown of Lump Sum and Unit Cost is similar to the Base Commit Summary Payment Application SOV type BP (cost), explained in the previous section.

The summary and costed line item behavior for the first three options selected will be similar to Base Commit Summary Payment Application SOV type Business Process records with check box selected in uDesigner.

For the **Variable Unit Cost** line items, you are allowed to enter the uuu_unit_price for each cost breakdown. The amount will be calculated based on the unit rate and the quantity entered. The summary line item will have the uuu_unit_price disabled.

When you select the **Modify Committed Line Item** option, the **Commit Line Item Picker** window will be displayed. This window enables you to select and modify any line item from the picker. The cost line item type for the unit cost lines will be the **Unit Cost**; whereas, for the variable unit cost lines, the cost line item type will be the **Variable Unit Cost**.

When you click **Save & Add New** option, the system displays the Line Item type based on the last cost line item type that was selected. As a result, if you click Add, select Lump Sum, and then save the Line Item and continue to click Save & Add new, the new Line Item will be of Lump Sum type.

When you click **Modify Committed Line Item** option, and then click **Save & Add new**, the system launches the SOV picker.

Commit Line Item Picker

> **Note**: The fields displayed vary based on the line item selected from the Commit Line Item Picker

The Cost Break down field, when you select a committed line:

- Committed line = Lump Sum, the field seen will be "Not Costed Amount."
- Committed line = Unit Cost, the field seen will be "Not Costed Quantity."

The grid columns are always dependent on line item creation.

> **Note**: Grouping of line items through CSV is not supported for SPA BPs.

When you select the line item of type "Variable Unit Cost," the data element uuu_cost_li_type is copied over from the reference commit line item into the Change Commit line item and will be set as read-only.

The uuu_quantity and amount data elements, in the summary line item are editable. The uuu_unit price DE will be disabled for the summary line item.

If the selected line item has variable unit rates at costed lines, an additional column (uuu_unit_price) will be seen in cost breakdowns that is copied over from the SOV.

The following columns will be in cost breakdowns in the Commit Line Item Picker, for the costed lines that are copied from SOV:

Cost Code

The Cost Code is a read-only field, and the value gets populated from the Commit Line Item Picker (for the SOV referenced lines). For the new costed lines, the Cost Code field can be edited, and it can pick from the CBS picker.

Code Name

The Code Name is a read-only field, and the value gets populated from the Cost Code selection.

Short Description

The Short Description is an editable field. By default, the value for this data element gets populated from the summary line item short_desc field.

Current Quantity

The Current Quantity column is read-only, and the value for the existing lines will be copied from the selected commit record. For the new costed lines that are added, this column will be empty and read-only.

Unit Cost

The Unit Cost column is read-only, and it displays the uuu_unit_price value that is coming from the selected commit record. For new costed lines added, this column will be empty and editable.

Current Scheduled Value

The Current Scheduled Value column is read-only, and it gets populated with the scheduled value from the SOV for the existing costed lines. For the new costed lines, this column will be 0 and will be read-only.

Change Quantity

The Change Quantity column is editable and you can enter the values for existing and new costed lines.

Change Amount

The Change Amount column is read-only, and the value is populated based on the calculation: Change Quantity * Current Unit Cost.

New Scheduled Value

The New Scheduled Value column is read-only, and the value gets calculated as: Current Scheduled Value + Change Amount.

In the Commit Line Item Picker, you can:

- Add new costed lines
- Copy existing costed lines
- Remove newly added costed lines

The In the Commit Line Item Picker toolbar options that are available in the Cost Breakdown tab (for the Commit Line Item) are:

Add Cost

When you select this option, the CBS picker is displayed so you can select single or multiple CBS codes to add the breakdowns. In the cost breakdown line, the following columns are displayed:

Cost Code

Editable field with value populated from the selected code, in the CBS picker. You can double-click the field and modify the value.

> **Note**: The Summary level cost codes cannot be selected for line items in Cost Business Process records, as this may result in data inaccuracies. Additionally, ensure that summary level cost codes are not associated with cost allocation lines when creating or updating commits of Summary Payment Application records via any method, including UI, REST API, or auto-creation.

Code Name

Read-only field with value populated from the selected cost code.

Short Description

Editable field with value populated from the summary line item short_desc field.

Current Quantity

For the new costed lines added, the Current Quantity column value will be empty and read-only.

Unit Cost

For the new costed lines added, the Unit Cost column value will be empty and read-only.

Current Scheduled Value

For the new costed lines added, the Unit Cost column value will be 0 and cannot be edited.

Change Quantity

This column is editable and you can enter the values for new costed lines.

Change Amount

This column is read-only and the value is populated based on calculation: Change Quantity * Current Unit Cost.

New Scheduled Value

This column is read-only and is calculated as: Current Scheduled Value + Change Amount.

The *gear menu* (⚙) options available for the costed lines are as follows:

> **Note:** You cannot remove the existing line items that are coming from the SOV.

Copy

If you select an existing line item and click Copy, you will copy the costed line item. The current scheduled value will not be copied. Only the unit cost and change quantity columns are editable. The new scheduled value will be calculated based on the: change amount + current scheduled value.

You can copy multiple costed line items at the same time. All these line items must belong to the same summary line item.

You cannot pick costed lines from different summary line items.

Remove

If you select a new costed line item, by clicking this option you will remove the costed line item.

For the committed costed line item (line items coming from the SOV), the Remove option is not available.

After the Change Commit record is routed to the terminal step, the SOV will be updated with both the modified quantity and the new scheduled value, for costed lines that exist in the SOV .

The variable unit rates that are provided in the cost breakdowns will be rolled up to the SOV, along with the quantity and amount for new lines.

Totaling Cost Breakdown Values

This section explains the following topics:

Note: The following applies when the **Total the Cost Breakdown values to the line item** option is checked in the form. To access this option, go to the Company Workspace tab and switch to Admin mode; in the left Navigator, select **uDesigner**, and then select **Business Processes**; open **Payment Applications**; in the left Navigator, select **Upper Forms**; select the applicable Form; from the toolbar, click **Properties**, select the **Options** tab, and check the option in the **Line Items** block.

- Totaling Cost Breakdown to the Line Item

  Totaling cost breakdown values to the line item
- Totaling Line Item in Payment Application

  Totaling the line in the Payment grid of Payment Application
- Totaling Line Item in Summary Payment Application

  Totaling the line in the Payment grid of the Summary Payment Application
- Line Item and Sum of Costed Line

  When the line item field value does not match the sum of costed line values
- Summary Line item
- Summary Row Totals
  - Summary total
  - Line item total

Note: If the sum of costed lines ranges between a -0.01 to 0.01 difference from the originating line item values, the system does not generate an error or prevent the BP record from moving to the next step.

Totaling Cost Breakdown to the Line Item

The totaling cost breakdown to the line item can be done for:

- Line items with editable numeric data element columns (line item and costed lines)
- Line items with editable numeric data element columns (line item and costed lines)
- Line items with cells that are based on formula
- Line items with cells that are percentages

The following explains each option.

Line items with editable numeric data element columns (line item and costed lines)

You can see the sum of all the costed line item values after entering the pertinent values in the editable fields (line item and costed lines). That is, when you enter values in the costed line items, the system sums up those values and displays the resulting value in the corresponding cell of the line item.

Example

Contracts with Cost Break down

Enter the costed line item information in the “Other Amount this Period” field. After you click elsewhere, the system displays the sum total of the costed line item values in the "Other Amount this Period" field of the line item.

Line items with editable numeric data element columns (line item and costed lines)

If the fields are read-only, there are not summations.

Line items with cells that are based on formula

When the line item cell has a formula definition, the sum (roll up) for the cell in the line item is not generated from the costed line items. The calculation for this cell is based on the line item values.

Example

"Completed and Stored to Date" is a formula field = Total Previous Payments <uuu_spa_prev_amt> + Requested this Period <spz_total_tp> + Stored Materials Amount <uuu_spa_mat_stored>. As a result, the cell value for "Completed and Stored to Date" in the line item = Total Previous Payments <uuu_spa_prev_amt> + Requested this Period <spz_total_tp> + Stored Materials Amount <uuu_spa_mat_stored>.

During runtime, the system Data Element (DE) uuu_spa_prev_amt, on a Summary Payment Applications detail form, is calculated by the system as the sum of following (from SOV):

- The uuu_spa_prev_amt, and
- The data element selected in uDesigner option "Total Previous Payments = Total Previous Payments + ..."

By default, uDesigner selects the "Amount" field from the system detail form in this option and the formula for uuu_spa_prev_amt equals the sum of:

- The uuu_spa_prev_amt from SOV, and
- The amount from the SOV.

If the user selects some other option in uDesigner, for example, the data element "Amount Requested this Period," then the formula for this field would become:

- The uuu_spa_prev_amt from SOV, and
- The amount Requested This Period from SOV

Line items with cells that are percentages

System-defined uuu fields and user-defined custom formula fields, which are treated as percentages field and set as formulas, do not sum up the values from the costed lines to the line item.

Totaling Line Item in Payment Application

The Total row, at the bottom of grid, displays the total for payment lines (costed line items) when the values are:

- Manually entered
- Formula based
- Percentages

In the total Row, all the numeric columns display the total of the Summary Line items.

> **Note:** With version 23 and later, a Total row on a non-standard tab of a line item grid is not displayed. For version 22 and earlier, the Total row displays a 0.

Totaling Line Item in Summary Payment Application

In the Total Row, the manual data element columns display the total of the Summary line item values.

The calculation in the Total Row is applicable for both Payment Application and Summary Payment Application.

> **Note:** With version 23 and later, a Total row on a non-standard tab of a line item grid is not displayed. For version 22 and earlier, the Total row displays a 0.

Line Item and Sum of Costed Line

When the line item field value does not match the sum of costed line values:

For fields that are editable, the line item cell displays a small triangle to indicate that the totals do not match.

> **Note:** The small triangle is displayed based on the selection that has been made in the Upper Form option "Costed line item total must be equal to the line item total". If the check box for **Costed line item total must be equal to the line item total** is *unchecked*, the red triangle does not display. If the check box for **Costed line item total must be equal to the line item total** is *checked*, the Data Element is configured to show the **Summary Total** as **Sum of All Rows** (there is a total mismatch), and the red triangle is displayed.

When the user clicks the small triangle, the system displays an information text and informs the user about the differences. This is applicable only for the line item.

> **Note:** The alert is not displayed for `uuu_spa_per_comp` field because

the field values of costed lines and summary lines will always have a discrepancy.

Summary Line Item

The (Summary) Line item row is gray when the line is not editable.

The (Summary) Line item row is editable if the row is displayed:

- In bold font.
- With thick borders.

To be able to modify Line Items, you must select the "**Allow Modification of Line Items** option in the **Creation** step.

You can define whether or not you want the value of the Data Element (DE) `uuu_spa_per_comp` (from summary row) to apply to all costed lines (in a summary Payment Application grid) automatically. This enables you to avoid filling each costed line value manually and have a better user experience.

If the **Allow viewing of Costed line items** and **Allow Modification of line item** options are selected (checked) in the Upper Form of a Payment Application type BP (which references a Base Commit of SOV Type = Summary Payment Applications) in uDesigner, the runtime SPA grid provides a check box option labeled **Apply line item value of <label of DE uuu_spa_per_comp> to costed lines** (in the upper-right corner of the grid) to enable you to apply the line item value to costed lines.

When you select the check box option labeled **Apply line item value of <label of DE uuu_spa_per_comp> to costed lines**, the system copies the value of the data element uuu_spa_per_comp (from the summary lines) into the corresponding costed lines. The subsequent impact on fields uuu_spa_amt_tp / uuu_spa_qty_tp in the costed lines is similar to just as if you made a manual edit of uuu_spa_per_comp in the costed lines to trigger the update of these fields.

To proceed, select the **Apply line item value of <label of DE uuu_spa_per_comp> to costed lines** option (at the upper-right corner of the detail form). This selection impacts only those lines that are edited after checking the box, and the existing, or edited, lines will remain as they were.

If the **Apply line item value of Percentage Complete to Date to costed Lines** option is selected (checked), the system performs all the form-level validations, for the Costed line items, after saving the line items (clicking **Save**).

The following scenarios explain the behavior, when you edit a line item, or costed rows, after checking the box.

Scenario 1

Scenario	Description
Scenario 1-a	The uuu_spa_per_comp is editable and the **Apply line item value of 'Percentage Complete to Date' to costed lines** options is selected (checked) when the user enters a value for field uuu_spa_per_com in the summary row: a) The corresponding uuu_spa_amt_tp or uuu_spa_qty_tp (depending on whether it is a *Lump sum* or *Unit Cost* type line item) in the summary row should get back-calculated as per the new value of uuu_spa_per_com. b) All child costed lines should get auto-populated with the same value as the summary cell for uuu_spa_per_com. c) The fields uuu_spa_amt_tp or uuu_spa_qty_tp for all costed lines get back-calculated according to the newly populated value of uuu_spa_per_com. In this case, the system stops at back-calculating the costed row values for uuu_spa_amt_tp or uuu_spa_qty_tp and does not roll the values into the line item value again (even if the option **Total the Cost Breakdown values to the line item** is checked). Here, if the back-calculated values of uuu_spa_amt_tp or uuu_spa_qty_tp total to a penny off from the line item cell value, the system adjusts that penny in the last costed line.

Scenario	Description
Scenario 1-b	The uuu_spa_per_comp is editable and the **Apply line item value of 'Percentage Complete to Date' to costed lines** options is selected (checked) when the user enters a value in the summary cell for fields uuu_spa_amt_tp or uuu_spa_qty_tp, depending on whether it is a *Lump sum* or *Unit Cost* type line item: a) The summary row field uuu_spa_per_com is calculated by the system. b) At the same time, all child costed lines get auto-populated with the same value as the summary cell for uuu_spa_per_com. c) The fields uuu_spa_amt_tp or uuu_spa_qty_tp (depending on whether it is a *Lump sum* or *Unit Cost* type line item) for all costed lines get back-calculated according to the newly populated value of uuu_spa_per_com. In this case, the system stops at back-calculating the costed row values for uuu_spa_amt_tp or uuu_spa_qty_tp and does not roll the values into the line item value again (even if the option **Total the Cost Breakdown values to the line item** is checked). Here, if the back-calculated values of uuu_spa_amt_tp or uuu_spa_qty_tp total to a penny off from the line item cell value, the system adjusts that penny in the last costed line.

Scenario	Description
Scenario 1-c	The uuu_spa_per_comp is editable and the **Apply line item value of 'Percentage Complete to Date' to costed lines** options is selected (checked) when the user enters a value in the summary cell for a field that impacts calculation of uuu_spa_per_comp (such as uuu_spa_mat_stored or uuu_spa_other_tp): a) The summary row field uuu_spa_per_com get calculated by the system. b) At the same time, all child costed lines get auto-populated with the same value as the summary cell for uuu_spa_per_com. c) The fields uuu_spa_amt_tp or uuu_spa_qty_tp (depending on whether it is a *Lump sum* or *Unit Cost* type line item) for all costed lines get back-calculated according to the newly populated value of uuu_spa_per_com. In this case, the system stops at back-calculating the costed row values for uuu_spa_amt_tp or uuu_spa_qty_tp and does not roll the values into the line item value again (even if the option **Total the Cost Breakdown values to the line item** is checked). Here, if the back-calculated values of uuu_spa_amt_tp or uuu_spa_qty_tp total to a penny off from the line item cell value, the system adjusts that penny in the last costed line.

Scenario 2

In this scenario, the uuu_spa_per_comp field is read-only, but any of the other fields that impact its calculation (uuu_spa_amt_tp, uuu_spa_qty_tp, uuu_spa_mat_stored, or uuu_spa_other_tp) are editable, and the option **Apply line item value of <label of DE uuu_spa_per_com> to costed lines** is checked. In such scenario:

Scenario	Description
Scenario 2-a	If the user modifies the summary cell value for any of the editable fields, the behavior will be similar to Scenario 1-b and Scenario 1-c, above.

Scenario	Description
Scenario 2-b	If the user modifies the costed row value for any of the editable fields (existing functionality), the corresponding costed row value of `uuu_spa_per_com` gets calculated by system. This does not result in roll up, or impact, the summary cell value of `uuu_spa_per_com`, even if the option **Total the Cost Breakdown values to the line item** is checked. You can select (check) the **Apply line item value of <label of DE uuu_spa_per_com> to costed lines** option and the proceed to deselect (uncheck) it. Deselecting the option does not revert any of the changes that you had made when the option was selected, but it impacts the future operation and the subsequent summary value changes for uuu_spa_per_com will not automatically copy into the costed lines. If you make manual changes (after deselecting the option), select the option again: ▸ The manual changes that you had made remain as they were. ▸ The roll-down behavior from summary to costed rows occurs for all the subsequent summary row changes. If you select (check) the **Apply line item value of <label of DE uuu_spa_per_com> to costed lines** option, the system lets you only push the values down from the line items to the costed row (`for uuu_spa_per_com`). Even if the option **Total the Cost Breakdown values to the line item** is enabled, the system does not allow roll-up from the costed rows to line item for the following Data Elements: ▸ `uuu_spa_per_com` ▸ `uuu_spa_amt_tp` ▸ `uuu_spa_qty_tp`

Summary Row Totals

The costed lines can be defined to roll up to their summary line items as "Sum of all rows" by using the form option "Total the Cost Breakdown values to the line item" in uDesigner (for a Payment Application BP which has reference to a Contract type BP of SOV Type: "Summary Payment Applications").

Similar to the "Totals: for fields on a Summary Payment Application detail form, you can define:

- The fields from costed lines sum up to the summary line item.
- The fields from costed lines do no sum up to the summary line item.

The values in summary line item fields populate as defined in uDesigner (Manual, Formula, or Auto-populate).

The following subsections provide details about when the option **Total the Cost Breakdown values to the line item** *is checked* (Summary Row Totals), or *is not checked* (Line Item Total), in uDesigner.

Summary Total

During runtime, if the uDesigner upper form option "Total the Cost Breakdown values to the line item" *is checked*, then the Summary row values in Payment Applications grid displays per "Summary Total' option, selected by the user in detail form. The following table "Summary Total" provides details:

Costed Row Data Element Settings in uDesigner Data Entry / Access	Costed Row Data Element Settings in uDesigner Summary Total	Summary Row Value
Manual / Editable/Editable Required	As Defined	Editable. The value shows as 0 or $0.00, per Data Element (DE) Data Definition (DD). The user can double-click into the cell and enter any value as per the DE Data Definition**. If the user deletes the value in the cell, it reverts to 0 (zero) or $0.00, whichever applicable.
Manual / Editable/Editable Required	Sum of All Rows	Editable. The value shows sum of all costed lines. The user can double-click into the cell and enter any other value, per the DE Data Definition**. If the user

Costed Row Data Element Settings in uDesigner Data Entry / Access	Costed Row Data Element Settings in uDesigner Summary Total	Summary Row Value
		deletes the value in the cell, it reverts to 0 (zero) or $0.00, whichever applicable.
Manual / Read-Only	As Defined	Read-Only. Value: 0 (zero) or $0.00
Manual / Read-Only	Sum of All Rows	Read-Only. Value: Sum of all costed lines
Formula (Always Read-Only)	As Defined	Read-Only. Value: Calculated according to the formula defined for the DE. **Note**: If the DE is set as Formula, the option **As Defined** is selected for the **Summary Total**.
Formula (Always Read-Only)	Sum of All Rows	Read-Only. Value: Sum of all costed lines
Auto-populate / Editable/Editable Required	As Defined	Editable. The value shows the auto-populated value, per definition. The user can double-click into the cell and enter any value as per the DE Data Definition**. If the user deletes the value in the cell, it reverts to 0 (zero) or $0.00, whichever applicable.
Auto-populate / Editable/Editable Required	Sum of All Rows	Editable. The value shows sum of all costed lines. The user can double-click into the cell and enter any value as per the DE Data Definition**. If the user deletes the value in the cell, it reverts to 0 (zero) or $0.00, whichever applicable.
Auto-populate / Read-Only	As Defined	Read-Only. Value: The auto-populated value, per

Costed Row Data Element Settings in uDesigner Data Entry / Access	Costed Row Data Element Settings in uDesigner Summary Total	Summary Row Value
		definition
Auto-populate / Read-Only	Sum of All Rows	Read-Only. Value: Sum of all costed lines

** *If there is a total mismatch, a red triangle symbol appears in the cell and when you click the red triangle symbol the cell displays the difference.*

During runtime, the following DEs (summary row total value fields) are exception to the above settings:

- `scheduled_value`
- `uuu_spa_prev_amt`
- `uuu_spa_per_comp`

The uDesigner properties for the fields above are set as "Manual," but the system calculates the value of these fields as a system-calculated hard-coded formula.

- The summary cells for these three fields are calculated per system-defined hard-coded formula for each line.
- The fields are Read-Only, Editable, or Required per uDesigner setting.
  - If Editable, or Required, then you can double-click into the cell and enter any other value, per the DE Data Definition.
  - If there is a total mismatch, then a red triangle symbol appears in the cell and when you click the red triangle symbol the cell displays the difference.

Line Item Total

If the uDesigner option "Total the Cost Breakdown values to the line item" is unchecked, even if the "Summary Total" option has been defined in detail form, the costed lines do not roll up to the summary rows in any of the forms. The following table lists additional scenarios:

Item	Check box "Total the Cost Breakdown values in the line item" in the BP upper form	Check box "Costed Amount must be equal to the line item total" in the BP upper form	Summary Total definition for a numeric Data Element on the BP detail form	Expected behavior of corresponding summary cell during runtime
1	Unchecked	Unchecked	As Defined	Blank,

Item	Check box "Total the Cost Breakdown values in the line item" in the BP upper form	Check box "Costed Amount must be equal to the line item total" in the BP upper form	Summary Total definition for a numeric Data Element on the BP detail form	Expected behavior of corresponding summary cell during runtime
				editable/required/read-only, per definition.
2	Unchecked	Unchecked	Sum of All Rows	Blank, editable/required/read-only, per definition.
3	Unchecked	Checked	As Defined	Blank, editable/required/read-only, per definition.
4	Unchecked	Checked	Sum of All Rows	Blank, editable/required/read-only, per definition.
5	Checked	Unchecked	As Defined	If the DE is set to "Manual," the summary cell is 0 (zero). The field is editable/required/read-only, per definition. If the field is editable/required, you can change the value.
5	Checked	Unchecked	As Defined	If the DE is set to "Formula," the summary cell is calculated per formula. The field is read-only.

Item	Check box "Total the Cost Breakdown values in the line item" in the BP upper form	Check box "Costed Amount must be equal to the line item total" in the BP upper form	Summary Total definition for a numeric Data Element on the BP detail form	Expected behavior of corresponding summary cell during runtime
5	Checked	Unchecked	As Defined	If the DE is set to "Auto-populate," the summary cell shows the auto-populated value. The field is editable/required/read-only, per definition. If the field is editable/required, you can change the value.
6	Checked	Unchecked	Sum of All Rows	The summary cell is populated by the system as sum of all rows. This field is editable/required/read-only, per definition.
7	Checked	Checked	As Defined	If the DE is set to "Manual," the summary cell is 0 (zero). The field is editable/required/read-only, per definition. If the field is editable/required, you can change the value. **Note:** This behavior overrides the

Item	Check box "Total the Cost Breakdown values in the line item" in the BP upper form	Check box "Costed Amount must be equal to the line item total" in the BP upper form	Summary Total definition for a numeric Data Element on the BP detail form	Expected behavior of corresponding summary cell during runtime
				check box "Costed Amount must be equal to the line item total" and must be allowed.
7	Checked	Checked	As Defined	If the DE is set to "Formula," the summary cell is calculated per formula. The field is read-only. **Note:** This behavior overrides the check box "Costed Amount must be equal to the line item total" and must be allowed.
7	Checked	Checked	As Defined	If the DE is set to "Auto-populate," the summary cell shows the auto-populated value. The field is editable/required/read-only, per definition. If the field is editable/required, you can change the value. **Note:** This behavior overrides the

Item	Check box "Total the Cost Breakdown values in the line item" in the BP upper form	Check box "Costed Amount must be equal to the line item total" in the BP upper form	Summary Total definition for a numeric Data Element on the BP detail form	Expected behavior of corresponding summary cell during runtime
				check box "Costed Amount must be equal to the line item total" and must be allowed.
8	Checked	Checked	Sum of All Rows	The summary cell is populated by the system as sum of all rows. The field is editable/required/read-only, per definition. The system applies the check box "Costed Amount must be equal to the line item total" and prevents if you manually change the value to something other than sum of all rows.

Request for Bid (RFB) Business Processes

The Request for Bid (RFB) feature allows companies to invite bids from vendors and suppliers.

> **Note:** The system lets your company designate only one **Vendors** business process as the RFB master vendor list (master vendor BP/vendor master BP).

The bid invitation can be addressed to a specific set of vendors or can be opened to the public. The bidders are provided with a simple Unifier interface that does not require special training to use. Bidders receive email notifying them that they have received a bid invitation so they can log on to the system and submit their bids.

In addition to receiving emails for Personal Tasks, CC'd Tasks, Overdue Personal Tasks, Record Workflow Complete, and Decline Tasks, RFB also includes email subjects for Login Information, Bid Invitation, and Due Date Change.

The bidder portal enables the bidder to use the Announcement icon ( ) to view announcements by the owner company. The Bidder Business Process log (Bidder BP log) enables the bidder to view all requests, their titles, due date, and status.

The Bidder BP log has the following options:

- **View:**
  - Active
  - All
- **Refresh:** To refresh the log items.
- **Print:** To print the log contents.
- **Search:**
  - Status with values of All, Open and Closed
  - Search parameters based on Bidder log setting
- **Find on Page:** To find content on the visible page.
- **Help:** To view help options.

The *gear menu* ( ), in front of each record, is context sensitive and provides the following conditions and corresponding options:

Condition	Options
Bid has been received and no submissions have been made	Open - Opens the requestor's form Create - Will open the bid form
Bid has been submitted	Open - Opens the requestor's form View Submission Withdraw Submission - Confirmation asking user to confirm action. After a successful withdrawal, an alert will be seen **Note:** After a bid has been withdrawn, options seen will be: Open

Condition	Options
Bid has been closed	View Submission - This will open the submitted bid Double-clicking the record will open the submitted bid form.

The preview pane, on the right side, contains:

- The form content, based on the current state of the record.
  - If the bid is active (just received a RFB or submitted a bid), the requestor form is displayed.
  - If the bid is closed, the content of the submitted bid is displayed.
- The Attachments tab is displayed.

The Mailbox provides a preview of a selected email, in the right pane. The Mailbox has an Inbox and a Sent Items section. The Inbox lets bidders view all the mails received from Unifier.

When you send an email to a bidder, the system includes information in the subject line that helps the recipient identify that the message is for an RFB and it lists the RFB Record Number. The body of the message includes additional information, such as the Record Number and Title, and indicates the type of change made to the RFB.

When you receive an email from a bidder, the system includes information in the subject line that helps you identify that the message is for an RFB, it lists the RFB Record Number, and it indicates that the recipient received the original RFB request. The body of the message includes additional information, such as the Project Name and Project Number, critical bidder information such as the name of the company, first and last name of the contact, and the contact's email address, and a text field in which the bidder has entered additional information.

The RFB type BP supports the **Grid** feature when the RFB design includes the subtype: **Line Item with CBS Code**. The **Grid** feature is available both in the Requestor and Bidder sides, within the Line Item tab.

Request for Bid (RFB) Type Business Process Form (Private)

If you have been invited for a private bid, you receive an RFB business process form that is not configured for public bidding. In such case, the upper form and detail form contain the following elements:

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Logs** and open an RFB BP.
3) Open a record.

The record details screen opens with the following elements:

- **Send**
- **Save**
- **Menu Options**
- **Tabs**
  - **General**

- **Line Item**
- **Winning Contract**
- **Proposal Management**

The Menu Options enables you to perform the following actions:

- **Print**
  To print the form (HTML, PDF, Custom)
- **Reload**
  To reload the information presented.
- **Review**
  To preview an attachment.
- **Terminate Record**
- **Transfer Ownership**
- **Undo Accept Task**
- **Help**
  To access the BP help and User Productivity Kit
- **Close**

Tabs (**RFB Creation Form**)

On the left pane, the **RFB Creation Form** tab contains the following field blocks:

- **General**
- **Details**
- **Calculation**

On the right pane, the **RFB Creation Form** tab contains the following tabs:

- **Attachments**
- **Comments**
- **Linked Records**
- **Linked Mail**
- **Workflow Progress**
- **Audit Log**
- **Reference Records**

Tabs (RFB Line Item List)

On the left pane, the RFB Line Item List tab contains the following toolbar options:

- **Form View**
- **Grid View**
- **Add**
- **Actions**
- **Refresh**

- **Print**
- **Search**
- **Find on Page**

On the left pane, the RFB Line Item List tab contains the following columns:

- **No.**
- **Attachments**
- **Linked Records**
- **WBS Code**
- **Short Description**
- **Line Item Last Update Date**
- **Item Quantity**
- **Item Unit Cost**
- **Unit of Measure**
- **Amount**

The **Total Amount** is displayed at the bottom of the left pane.

On the right pane, the RFB Line Item List tab contains the following tabs:

- **Line Item Details**
- **Attachments**
- **Linked Records**

When the RFB record is first completed, the **Winning Contract** tab will be visible.

On the left pane, the **Winning Contract** tab contains the following toolbar options:

- **Form View**
- **Grid View**
- **Refresh**
- **Print**
- **Search**
- **Find on Page**

On the left pane, the **Winning Contract** tab contains the following columns:

- **No.**
- **Attachments**
- **Linked Records**
- **Short Description**

When the bid is initiated, the **Proposal Management** tab will be visible.

On the left pane, the **Proposal Management** tab contains the following toolbar options:

- **Add**
- **Send Invitation**
- **Actions**
- **Refresh**
- **Find on Page**

On the left pane, the **Proposal Management** tab contains the following columns:

- **Attachments**
- **Mail**

Inviting to RFB

For public bidding, invitations are sent to the Vendors that you have selected from the Vendors business process (a company-level BP). The Vendors BPs can be found using the following steps:

1) Go to the **Company Workspace** tab and switch to **User** mode.
2) In the left Navigator, select **Company Logs**, and then select **Vendor**.

To start the bidding process:

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Logs**, and the select **Request for Bid**.
3) Open the bid that you want to send.
4) Go to the **Proposal Management** tab.

   If this is the first time you are sending an invitation, click **Add** to open the **Add Vendors** window, select the applicable Vendors BPs, and move them from the **Available** block to the **Selected** block. When all the applicable vendors have been selected, click **Add**. See ***Public Bidding*** (on page 374) and ***Private or Non-Public Bidding*** (on page 376) for more details about the options in the **Proposal Management** tab.
5) Select a vendor from the log.

   If you are sending an invitation for the first time, click **Send Invitation**. *Unifier* sends two emails:

   I. An invitation email, which contains the Unifier Login URL.
   2. A credential email, which contains the user name and password.

   If a vendor who has received an invitation loses their password, the vendor can change their password with the **Forgot Password** link on the Sign In page. For best results, bidders should change the password at the first log in, and then sign in using the newly set password.

The left section includes the general information about the requestor and the bid.

To modify the date, click the date icon, modify the date, and click **Done**.

The right panel includes the list of invitees to whom the invitations have been either sent out or will be sent in future.

When you click **Add**, a new full-screen window overlay appears (similar to BP Picker) that lets you select the list of vendors (from the Master Vendor List BP) that you want to add to the invitees list.

Add vendors by selecting items from the **Available** list and moving them to the **Selected** list, using the arrow buttons in the middle. Click **Add** when finished.

The *gear menu* (⚙) options in the left tab are:

- **Open Vendor Details**
- **Remove**

- **Send Mail**

Be aware that these options change depending on the Status of each invitation. For example, Send Mail is not available for vendors whose Status is Not Invited and Remove is visible but only functional for vendors whose Status is Not Invited.

The right pane displays the following tabs:

- **Attachments**
- **Mail**

  For correspondence with internal team members. Unopened emails are displayed in boldface type to indicate that they have not been viewed.

For an RFB BP that is enabled for public bidding, if you click **Send Invitation** after the BP is opened for public bidding, the system displays an overlay screen that lets you modify the due date. Modifying the due date in public bidding is similar to the same feature in private bidding.

To view a list of emails sent:

1) Click the **Mail** tab in the right pane.
2) Use the column headings to sort the list by **From**, **To**, **Bidder Company**, **Subject**, or **Date**, or use **Find on Page** □_ **Find on Page** to specify search criteria.

Audit Log in Requestor BP (Private Bid and Public Bid)

The system audits all emails sent to the bidder (initial invitation, revised attachments, and so on) and makes the information available in the **Audit Log** tab of the Requestor BP record. The **Audit Log** captures the following events when an email is sent to a bidder:

- Adding new addendums
- Revising Addendums
- Removing Addendums or original attachments

In all the preceding cases, the event name will be Bidding. Furthermore:

- For adding addendums, the Action name will be "Send Addendum <Attachment name>."
- For Revising addendums, the Action name will be "Send Revised Addendum <Attachment name>."
- When addendums or original attachments are removed, the Action name will be "Removed Addendum <Attachment name>" or "Removed Original Attachment <Attachment name>."
- Also, the attachment name is displayed in the **Audit Log** entry.

Language, Time Zone, and Date Format for Vendors BP

While creating a Vendors BP, you have an option to set the language, date format, and time zone specific to your bidders:

> **Note**: The languages listed are the active languages selected by the administrator in the **Configuration - Internationalization** log.

- Contact Language:
- Date Format:
- Time Zone:

> **Note**: The DEs mentioned above must be included in the RFB master vendor list BP (master vendor BP/vendor master BP) in uDesigner to be selected by the user in runtime.

The notifications follow the preferences of the user who has been specified in Bid Management Account field who is designated as the manager for all bidders or the company bid contact. This information can be found using the following steps:

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) In the left Navigator, select **Company Workspace**, select **Open**, and then select **Bid Management Account**.

Selecting the above options enables the bidder to receive email notifications (also Unifier Bidder Portal web page content and Bidder forms) in the bidder's language, date format, and time zone.

If the above options are not available, or not selected, the bidder receives email notifications (also Unifier Bidder Portal web page content and Bidder forms) following the user preferences whose name is indicated in the **Bid Management Account** field.

> **Note**: If the RFB master vendor list BP (master vendor BP/vendor master BP) includes Date Format data element but no value is selected, the system displays a default date format (for example, MM/DD/YYYY HH:mm AM). The uppercase MM in the date format denotes month and lowercase mm denotes minutes. The Company Administrator must set the respective bidder's date format in the RFB master vendor list BP.

Unlike a standard user, a bidder user cannot change the preferences in the bidder portal. When this option is clicked, the **Preferences** set forth in Vendor information record (for the vendor) will be seen in view only mode.

Working with RFBs

The RFB business process has a reference process to a vendor list business process, which contains the pool of vendors to whom the RFB will be sent. This vendor reference process will populate the upper fields of the RFB at runtime. The system automatically launches this reference process, when the RFB is activated.

After the RFB Business Process is active in the system, the bid procedure runs as follows:

You (the person who starts the bidding process and sends the invite):

1) Start the bid procedure by opening the RFB, filling in the form, and sending it for internal review (if necessary).
2) When the internal review is complete, you:
   a. Assemble the bid package and prepare the bid invitation for distribution.
   b. Send out the bid invitations, along with a user name and password, so that the vendors can log on to Unifier and submit their bids.

After the bid invitations have been sent, you must wait for the bid due date to pass.

The vendors:

1) When the vendors receive the bid invitation, they log on to Unifier and open the bid request.
2) (Optional) The vendors can request clarification of any questions or issues before submitting the bid. (The vendors can use the Mailbox link on the bid request for this purpose.)
3) The vendors then submit their bids.

You (the person who started the bidding process and sent the invite):

1) When the due date for all bids is reached, you tabulate the bids for comparison.
2) Open discussions about the bids, if necessary.
3) Award the bid to a vendor and automatically generate a contract copying relevant details from bid record into the contract.
4) Select a winning bid, after discussions with the members of your team.

In Unifier, you can create a contract from the winning bid (the bid that was selected from multiple bids) automatically, and the contract that is generated automatically will have a copy of the data from the winning bid (terms and negotiating amounts), if any. For more information, see ***Select Winning Bid*** and ***Auto-create Contract***.

Active bids in Bidder log

When you open the **Attachments** tab, the following blocks and sub-blocks will be present, depending on the bid status:

- Unpublished Attachments
  - Addendums
- Published Attachments
  - Original Attachments

All active bids can receive additional attachments, from the requestor. When the bidder opens or views the bidding in the log, the new or additional attachments will be shown under the **Addendums** block.

When a bid receives a new attachment, as addendums, the system sends a new email to all bidders. The system sends a similar email when an existing bid attachment is removed.

Sending the Bid Request for Internal Review and Approval

For most companies, an internal review is necessary for the purpose of verifying the scope of the project as well as other issues such as terms and conditions, architectural drawings, and structural materials.

To send the Bid Request for internal review and approval:

1) Navigate to the RFB log, and click **Create**. The RFB BP form opens.
2) Complete the form.
3) After you submit the form for review, use the **Workflow Actions** list to send the RFB into the workflow.

After the approval request reaches the middle of the workflow, you receive the completed BP as a task in your **Tasks** log. When you open the form this time, you should see a **Send Invitation** button on the toolbar of the **Proposal Management** tab, with which you can start the bidding process.

After the bid request is approved, you can start the bidding process.

Starting the Bidding Process

After the RFB has completed the internal review and approval, you can start the bidding process.

To start the bidding process:

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Logs**, and then select **Request for Bid**.
3) Open the bid that you want to send.
4) Go to the **Proposal Management** tab.

   If this is the first time you are sending an invitation, click **Add** to open the **Add Vendors** window, select the desired Vendors BPs, and move them from the **Available block** to the **Selected** block. When all the desired vendors have been selected, click **Add**.
5) Select a vendor from the log.

   If you are sending an invitation for the first time, click **Send Invitation**. The system sends two emails:

   I. An invitation email (contains the Unifier Login URL).
   2. A credential email (contains the username and password).

   If a vendor who has already received an invitation loses their password, the vendor can change their password with the **Forgot Password** link in the Sign In page. For best results, bidders should change the password at the first log in, and then sign in to Unifier using the newly set password.

The following provides additional information regarding the bidding process:

- If you need, you can modify the bidding due date in the upper portion of the **Proposal Management** tab.
- The list of vendors you use to distribute the bid invitations can include your company's entire list of vendors or a list of "approved vendors" specific for the project you are working on.
- Your administrator can design a business process that filters the master list of vendors into a subset of this list for your project. If such a subset of the vendor list has been created for your project, this is the list of vendors you will see in the Bidders window, unless this is a public bid. For public bids, the filtered vendor list will be ignored.
- To see the approved list of vendors with more information, go to your project **Logs** grouping node in the Navigator and click the business process that created the vendor list for your project. The system will display the list of records in that business process. To see the approved list, click **View filtered Records** on the toolbar.

> **Note**: After you have sent out all the bid invitations, the system freezes the RFB until the bid due date passes. After the due date passes, you

can compare the bids.

Filtering Bidders

During the BP run-time, the list of available bidders depends on the options set in uDesigner.

- When you do not select set additional filter for a bidder in the RFB BP, and you are in a Shell, then:

  If a Line Item type BP of sub-type, "Line item to filter Company BP record" exists and the option of, "Use Master Vendor list filtered at Project level" is checked, the list of vendors will be filtered based on this existing functionality.
- When you select set additional filter for bidder in the RFB BP and you are in a Shell, then:

  A filtered list of potential bidders is listed which includes all those bidders referenced by the BP Data Picker and the system ignores the Line Item type BP of sub-type, "Line item to filter Company BP record." To see the approved list of vendors with more information, go to your project **Logs** grouping node in the left Navigator, and click the business process that created the vendor list for your project, and from the toolbar, click **View filtered records**.

The BP Data Picker:

- Does not need to be populated in the RFB form.
- Value will always be ignored, and the system uses the query conditions on the Data Picker to filter the list of vendors.

If no query conditions are defined for the BP Data Picker, you will see the list of all vendors.

In uDesigner, you can place the BP Data Picker, in the RFB BP, in a hidden block. If the BP Data Picker is placed in the hidden block, you can filter the list of vendors through the defined query conditions.

Public Bidding

For public bidding, invitations are sent to the Vendors that you have selected from the Vendors business process (a company-level BP). The Vendors BPs can be found using the following steps:

1) Go to the **Company Workspace** tab and switch to **User** mode.
2) In the left Navigator, select **Company Logs**, and then select **Vendor**.

The option for public bidding is set in uDesigner. To access the setting:

1) Go to the **Company Workspace** tab and switch to **Admin** mode.
2) In the left Navigator, select **uDesigner**, and then select **Business Processes**.
3) Open the applicable RFB Business Process.
4) From the toolbar, click **Open**, and then select **General**.
5) On the Options tab, select **Allow public bidding (no pre-defined bidders)**, and click **OK.**

Public Bids: Requestor BP - Invite form

When you select the **Invite** option (from the menu icon), after the BP has been opened for public bidding, the **Invite** overlay page opens. The following blocks are displayed on the **Invite** overlay page:

- **General**

  This block has the following fields:

  - **Title**
  - **Requester Name**
  - **Phone**
  - **Due Date**
  - **Email**

- **Invitation**

  This block has the following toolbar options:

  - **Add**

    To add invitee.

  - **Send**

    To send password.

  This block has the following columns:

  - **First Name**
  - **Last Name**
  - **Company**
  - **User Id**
  - **Sent Date**

The **Invite** overlay page has the following tabs (right pane):

- **Attachments**

  Go to this tab to add additional attachments through using the **Browse** or **Document Manager** options, similar to the ***Private or Non-Public Bidding*** (on page 376).

  All the attachments that have been added, from this form, are shown in the Addendums as well as the Attachments tab of the Requestor form (Request for Bid), similar to the ***Private or Non-Public Bidding*** (on page 376).

  In the Requestor form (Request for Bid), **Attachments** tab, you can see the attachments that have been added from the **Proposal Management** tab. After uploading a file to the **Attachments** tab, the bidder is allowed to rename the file to ensure that meaningful names are used within the proposal.

  The new column, Addendums, can be seen under the Attachments tab in the BP log of the RFB records. The additional attachments, added from the **Invite** form and sent to bidders, are also shown under the Attachments tab in the BP log, but they will be listed as Addendums.

The requestor can make changes to the attachments. Changes made to the **Attachments** tab, before an invitation is sent out to the invitees, will be audited and displayed on the **Audit Log** tab of the **Request for Bid** tab.

- **Mail**

  Go to this tab to send email to the vendors, when the bidding is open (select **Send** and then select **Mail**).

The emails that have been sent to the bidders are shown in the **Mail** tab, similar to the ***Private or Non-Public Bidding*** (on page 376). The **Mail** tab includes headings such as From, To, Bidder Company, Subject, and Date. Unopened emails are displayed in boldface type to indicate that they have not been viewed.

Private or Non-Public Bidding

For private non-public bidding, where you want to select who is invited to bid, the **Allow public bidding (no pre-defined bidders)** option is *deselected* in uDesigner.

In the **Proposal Management** tab, click **Add**, select vendors, and click **Add** to send the invitation to the Vendors.

Private Bids: Requestor BP

In an RFB, the Requestor can send an email to the bid-invitees from the Linked Mail tab. The Requestor is also able to send emails from the **Proposal Management** tab. You can add attachments in the **Attachments** tab, within the Proposal Management tab, while the bid is open.

> **Note:** On the Attachments tab, the attachments must be identified as being added as addenda. This ensures that when the Bidder opens the bid (or views the bid) from the log, the newly added attachments are shown as addendums for the open bids.

The following explains each tab in detail.

Tab	Description
The **Attachments** tab has two sections:	**Unpublished Attachments:** The attachments added from the **Browse** option are displayed under **Unpublished Attachments**. The **Unpublished Attachments** has two sections: ▸ **Addendums:** When the bid is still open, it lists all the additional attachments that have been added, using the **Browse** option (the paper-clip icon) in the invite form. ▸ **Original Attachments:** Lists attachments that have already been sent as part of the bid invitation (and are originally attached to the Requestor form (Request for Bid) through the **Browse** option) but have not been published yet. **Published Attachments:** The attachments added from the **Document Manager** option are displayed under **Published Attachments**. The **Published Attachments** has two sections: ▸ **Addendums:** When the bid is still open, it lists all the additional attachments that have been added, using the **Document Manager** option (the paper-clip icon) in the invite form. ▸ **Original Attachments:** Lists attachments that have already been sent as part of the bid invitation (and are originally attached to the Requestor form through the **Document Manager** option) but have been published.

Tab	Description
	There are two ways to add attachments (click the paper-clip icon): ▸ **Browse** ▸ **Document Manager** When you click to add an attachment, the system displays the message: `All the invitees will receive the addendums. Do you want to continue?` ▸ If you select **Yes**, you can add the attachment. ▸ If you select **No**, the Upload File window does not open. Any attachment that gets added under the Attachments tab will be shown in the Requestor form (**Attachments** tab), as **Addendums**. You must send emails to all invitees regarding any added, removed, or updated attachments to the bids. The *gear menu (* ⚙), for the items within the **Attachments** tab, let you conduct the following functions on each item: ▸ **Revise**: To revise the document contents. ▸ **Review**: To review the document contents. ▸ **Download**: To download the document. ▸ **Remove**: To remove the document. ▸ **Rename:** To change the name of the document. When you select any of the *gear menu* options, the system displays the message: `All the invitees will receive the addendums. Do you want to continue?` The **Attachments** tab log (grid) columns in the Invite form and the Requestor form are similar to any other BP form. The **Upload Date** column (under the toolbar section and to the right) lists the dates that each attachment was uploaded. Any Attachments that are added from the Invite form as addendums are shown in the Attachments tab of the Requestor form (as addendums) after the form becomes editable. The attachments that were added as addendums can be identified under the

Tab	Description
The **Mail** tab:	The **Mail** tab lists all emails sent to bid invitees. When you select **Send** and then select **Mail** from the Invite form, a new email window will display which contains the following columns, similar to the **Linked Mail** tab: ▸ Flag: Flagged mails can be identified by using this column. ▸ Attachments: When attachments are added to an email, the **Attachment** icon is seen. ▸ From: Shows the requestor name (logged in username). ▸ To: Shows the selected bid invitees. You can select one or more invitees, and you can send emails while the bid is open. ▸ Subject: Shows the subject of the email that is sent. ▸ Date: Shows the date the email is sent. The system adds the sent emails (from the Invite form) to the Mail tab in the Invite form, and the Linked Mail tab in the Requestor form. The sent bid-invitations are displayed in the Mail tab of the Invite form. The Mail tab includes headings such as From, To, Bidder Company, Subject, and Date. Unopened emails are displayed in boldface type to indicate that they have not been viewed. **Note**: Emails must be sent only through the Invite form. The Linked Mail tab does not let you send emails to the bid-invitees. The emails sent to the bid-invitees from the **Invite** form are also shown in the **Linked Mail** tab. All the mails sent to bid invitees from the **Invite** form should also be shown in **Linked Mail** tab.

Bidders and Passwords

The bidders *who have used* the system before:

- Will not receive a new password when they create/submit a new bid.
- Are expected to use the password they had used from the previous bid to log in to Unifier.
- Can change their password. For more information, see **Change Password** in the *Unifier General User Guide*.

> **Note:** When you change your password, you will be logged out automatically. Log in again with your new password.

- Can use the "Forgot Password" process, if they have forgotten their password.
- Receive an email from Unifier containing the new bid and the URL that they can use.

The new bidders *who have not used* the system before, receive an email from the system inviting them to the bid followed by a second email that contains a user name and system-generated password.

Comparing the Bids (Classic View)

After the bidding process ends (after the bid due date has passed), you can open a bid tabulation to compare the bids you received. A default bid tabulation sheet is available in the system, or your company may have a custom-designed bid tabulation sheet.

To compare bids:

1) Open the Request for Bid (RFB) record.
2) Go to the **Proposal Management** tab.

   After the bid is closed, upon selecting the bid, you can only view the information of the invitation that was sent, along with the bids that have been received. The information within the Invitation tab is read-only, and you (requestor) can only view the information about the bid-invitees, the addendums sent, and the emails sent to the invitees.
3) From the list, select the vendors you want to compare and click **Compare Classic**.

   The system tabulates the bids from the vendors you selected and displays a **Compare** sheet. This sheet will look different, depending on whether you are using the default comparison sheet supplied by the system, or a custom-designed comparison sheet created by your company.

   The default bid comparison sheet shows the bid amounts for each line item for which the vendor submitted a bid.

   The custom-designed bid comparison sheet shows the following:

   - General bid information from each vendor who submitted a bid.
   - Each line item from the RFB that the vendor has bid on. If the vendor adds line items of their own to the bid, these line items will appear on the sheet as well.

Comparing the Bids (Standard View)

After the bidding process ends (after the bid due date has passed), you can open a bid tabulation to compare the bids you received. A default bid tabulation sheet is available in the system, or your company may have a custom-designed bid tabulation sheet.

To compare bids:

1) Open the Request for Bid (RFB) record.
2) Click the **Proposal Management** tab to view the bids you received. After the bid is closed, upon selecting the bid, you can only view the information of the invitation that was sent, along with the bids that have been received.
3) From the list, select the vendors you want to compare and click **Compare**. The Bids Comparison window opens, showing the bids you selected. From the toolbar, check **Star Vendors Only** to view the data of only shortlisted vendors. To compare the line item total with reference to the selected proposal, select a proposal from the **Compare with** list. The list includes all proposals selected for comparison.
4) Click **Save** or **Cancel** after making any edits.

Record Details tab

By default, the Bids Comparison sheet opens in the **Record Details** tab where you can view requestor estimates and proposals in a multiform view.

Reorder bids by hovering the top of the bids and dragging them to the desired position.

Use the **Bidder Qualification** list to designate each bid as Qualified, Not Responsive - Disqualified, or Not Responsible - Disqualified.

Hover the top of a bid to view a menu in which you can:

- **Send Email**
- **Open Vendor Details**
- **Open Proposal**

Line Items tab

To view the bid comparison in a grouped grid view, navigate to the **Line Items** tab.

The grid contains a **Short Description** column, a **Requestor Estimates Column**, and **Vendor Column Groups**.

The **Short Description** column lists all lines entered by the requestor and additional lines entered by each vendor. Additional lines display 0.00 for vendors who have not quoted.

The **Requestor Estimates Column** contains data elements selected for comparison for the detail form. This column is fixed and cannot be sorted.

Each **Vendor Column Group** contains all data elements that have been included for comparison from the detail form. The lowest amount per line item among all visible vendors in the grid displays in green. The highest amount per line item among all visible vendors in the grid displays in red.

Select Winning Bid

To select the winning bid:

1) Open the RFB record.
2) Go to the **Proposal Management** tab.
3) Select the bid to accept.
4) Click **Award**.

> **Note:** If you click **Yes** to proceed, awarding the winning contract removes all existing line items from the **Winning Contract** tab and replaces them with the line items per the selected winning contract.

Requestor Upper Forms

The Bid Picker (Winning Bid) is available on any Requestor Upper Forms of an RFB type Business Process as a second Detail tab (Winning Bid). The "Select Winning Bid" properties window lets you select a bid, clear bid selections, and find bids.

- You cannot select a winning bid unless the bidding process has been completed.
- After the bidding process has been completed, you can select a bid and click Select. When you select a bid as the winner, then:
- The winning bid picker displays the name of the company that has been selected (Company Name).

If the Requestor form has the second Detail tab (Winning Bid), all the lines of the winning bid form will be copied into the second Detail tab (Winning Bid). Lines are copied according to the matching DEs from the Bidder Detail form and the Bid Comparison Sheet. If additional DEs have been included in the Bid Comparison Sheet, the additional DEs will be copied into the second Detail tab (Winning Bid) if the second Detail tab (Winning Bid) contains the matching DEs. The DEs in the Bidder Detail form and the DEs in the Bid Comparison must match so you can copy data.

For each copied line item, the value of the CBS Code (`bitemID`), or a CBS Name (`bi_item`) must be mapped from the corresponding line item in the standard tab Detail line item.

Example

Assume a standard tab that has 3 line items and each line item is associated with a CBS Code. When bids are requested, these 3 line items will be copied into the Bidder Detail tab so that the Bidder can bid on those 3 line items. The Bidder form (Bidder Detail tab) does not allow placing `bitemID`, `bi_item` DEs. As a result, the Bidder form line items will not display the CBS Code, or the CBS Name.

When Bidder A adds 2 more line items to the Bidder form before submitting the bid. After all bids have been submitted, the Bid Comparison Sheet column for Bidder A shows 5 line items (3 line items from the Requestor standard tab, and the 2 line items that have been added by Bidder A, manually).

If Bidder A is selected as winner, and the requestor adds more line items such as the negotiated amount, price, quantity, and so forth, the Bid Comparison Sheet, for the winner (Bidder A) will have more information than originally included by Bidder A, when Bidder A submitted the bid.

> **Note**: The additional line items that the requestor has added must be captured in the "Bid Comparison Sheet" by the requestor by way of adding corresponding DEs in uDesigner (for more information, go to the Company Workspace tab and switch to Admin mode; in the left Navigator, select uDesigner, and then select Business Processes; open the RFB Business Process; in the left Navigator, select Bid Comparison Sheet, and then select Detail).

All line items, within the second Detail tab (Winning Bid) must be valid before an RFB record can be successfully routed to next step. If you change the value of a "Winning Bid" picker on the Requestor Upper form, the existing line items in the tab (<winning bid tab name>) will be removed and the system sends a confirmation request. If you confirm the change, the Winning Bid selector displays the new value and all the line items from the second Detail tab (Winning Bid) will be deleted.

If you use the Clear option in the winning bid selector window, the existing line items in the tab (<winning bid tab name>) will be removed and the system sends a confirmation request. If you confirm the change, the confirmation window and the winning bid selector window will close, the winning bid selector value will be cleared, and all line items from second Detail tab (Winning Bid) will be deleted, including line items add manually.

The system saves the following information to the database, each time you make a winning bid selection:

- Winning Bid picker value
- Winning Bid Detail tab line items
- Any DEs on Requestor Upper form which are set to auto-populate from winning bid picker

As a result, if you select a winning bid and perform an Undo Accept Task, then:

- Winning bid will stay as selected
- Winning bid tab Detail line items will persist and not revert
- Fields that receive AP from winning bid will be persisted and will not revert
- Other DEs will be reverted back as per existing functionality

> **Note**: If the winning bid picker is blank, but the Winning Bid Detail tab has line items that have been manually added, the manually added line item will be removed when you perform an Undo Accept Task.

If you close a form window without saving the form:

- Winning bid Picker, auto-populated fields, and the winning bid Detail tab line items will still be saved as records
- Other fields will not be saved (as per existing functionality)

To clear the winning bid related information, you can do one of the following:

- Clear, or reselect, the winning bid Detail tab to its previous value before performing Undo Accept Task.

- If you performed Undo Accept Task, click Accept Task, and reselect, or deselect the winning bid picker.

If there is more than one assignee on a step:

- When user 2 tries to select the winning bid, if user 1 has already done a selection, user 2 will receive an alert notifying user 2 that some of the line items have already been saved to the winning bid tab (<winning bid tab name>) and the action taken by user 2 will remove all those lines and recreate lines as per new information in the DE (<label of DE `uuu_rfb_winning_bid`>) selection.
- New line items will be created in the winning bid Detail tab as per user 2's response.

The special runtime behavior of the winning bid Detail tab is connected to the winning bid selector DE (`uuu_rfb_winning_bid`). You can select not to place the winning bid selector DE (`uuu_rfb_winning_bid`) on the form and still use the winning bid Detail tab by naming it something else. The winning bid Detail tab will behave like any other non-standard detail tab in such a scenario.

Also, similar to other Detail tabs in Business Processes, you can delete line items from the winning bid Detail tab if it is configured as such.

Additional information about selecting winning bid

To keep winning bid details hidden from the bidder, if a user signs in as a "Bidder," the requestor Winning Bid Detail tab will remain hidden.

If you select a bid using the winning bid selector on RFB Upper form, the winning bid will be highlighted in the following window:

- Select Winning Bid: By way of displaying the selected bid in bold typeface.
- Show: By way of displaying the "Winning Bid" column.
- Compare: By way of displaying the selected bid in bold typeface.

> **Note**: The DE of DD = Bid Picker will not be available for bulk editing or bulk action.

When you copy an RFB record to create an RFB record, note that:

- Not all the line items in the winning bid Detail tab are going to be copied.
- The picker "Winner Bid" will not be copied.
- DEs will be copied, similar to the standard copy behavior for records in the system.

Auto-create Contract

When an additional Detail tab (for the Requestor section of all RFB type Business Process forms) is available, you can use the second **Detail** tab (non-standard tab) to record the lines of the winning bid, as the user copies the data from the **Bid Comparison Sheet**.

In general, the **Bid Comparison Sheet**, for a preferred bidder, contains more information than the information submitted by the bidder.

The second **Detail** tab is similar to that of any other non-standard **Detail** tab on any other Cost-type BP which allows multiple tabs.

To be able to use this feature, the following conditions must exist:

- The "`uuu_rfb_winning_bid`" data element must be included in the RFB requestor form.
- At least one bidding process must be completed.

After these conditions are met, you can select the winning bid.

The **Result** window displays all the completed bids. You can select one bid as the winning bid and after selecting that bid the system copies all the lines of the winning bid onto the **Winning Bid** tab.

The system copies the lines base on the matching data elements available on the:

- **Bidder** detail form
- **Bid Comparison Sheet**

The destination record is created by auto-creation and selecting a Winning Bid is not required for successful auto-creation.

The BP Creator is available after all the mapping to the second Detail tab (Winning Bid) is complete. If the BP Creator is configured to auto-create a CBS Cost type Business Process, but the source Bidder Detail form did not contain a CBS picker (`bitemid`), the auto-creation will fail. To correct this error, you must correct the data (for example, selecting the CBS code before routing it to the next step), manually.

> **Note**: The value of *bitemid* cannot be copied over when a record is auto-created from a Summary Base Commit to a non-Summary Base Commit.

What the Vendor Does

Use the instructions in this section to familiarize vendors with the Unifier interface so they can submit bids.

When a bidder is invited to bid for the first time, the system sends two emails simultaneously:

- Invitation email, which contains the URL to log on to Unifier.
- Credential email, which contains the username and system-generated password.

> **Note:** For best results, a bidder should change their password at the first log in, and then sign in using the newly set password.

About the Bid Due Date Time

Be aware that the due date and time for the bid reflect the time of the server on which Unifier is running. (Unifier servers operate on Pacific Standard Time.)

To sign in:

If you received a bid invitation, you should also have received an email containing a link to Unifier, a user name, and a password.

1) Open the bid invitation, and click the link provided.
2) At the login screen, enter the user name and password provided in the email.

   The Unifier home screen opens.

To submit a bid:

1) In the left Navigator, select **Request for Bid/Bids** (or **Request for Bid Private/Bids** if you have been invited for a private bid). A bid log appears on the right pane showing a list of open bids you have been invited to submit.

   By default, the system displays only open bids. If you want to see all the bids you have been invited to submit, use the View menu. Click the arrow and choose All from the list. The system will display all your bids, past and present.
2) In the Request for Bid log, double-click the name of the RFB you have received. The **Request for Bid** form opens.

   Before you submit the bid, you can communicate with the requestor about any questions or issues that need clarification. The Request for Bid form provides a link to a Unifier Mailbox feature. To send a communication:
   a. Click the **Linked Mail** tab at the top of the window. The Linked Mail tab shows a chronological list of any existing communications.
   b. Click **Add** and then select **New Mail**. An email-type form opens, where you can send a communication to the requestor.
3) To participate in the bid, you must accept the request for bid using the **Accept** button in the upper-right corner.
4) Fill in the upper-form fields that are required.
5) Go to the **Line Item List** tab and add line items to the form through one of the following methods:
   a. Click the **Add** button. Then, in the right pane, fill in the fields on the Line Item Details tab and click **Save** or **Save & Add New**. The line item detail you entered appears in the log on the left pane.
   b. Use the **Export** button to export a CSV or Excel template of the line item form to be opened in a separate application that reads CSV or Excel files. After the correct information has been added to the CSV or Excel file, use the **Import** button to create line items based on the data in the CSV or Excel file. For more information about this process, see ***Importing Line Items to a Request for Bid***.
6) (Optional) To add an attachment to the bid, open the Attachments tab in the right pane and click **Attach Files** and then select **Browse**. A file upload window opens.
   a. Within this window, click **Browse** to search your system for files to attach. Alternatively, you can drag and drop files into the window.
   b. Navigate to the file you want to attach and select it. Then click **Open**. The file name appears in the list
   c. Click the **Upload** button. After the file has been uploaded, the window will close automatically.

On the Request for Bid form, Unifier indicates the attachment in the lower-left corner of the window. You can click **Attachments** to verify that the attachment is correct, or rename or remove an attachment.

7) Click **Submit Proposal** to finalize the bid, or **Save** to save changes to the bid.

The following rules apply when a bidder accesses new forms:

- If the Requestor has created the bid request in Classic view, the bidder will be able to perform all subsequent actions (such as View the request/Create Bids in Classic view).
- If the Requestor has created the bid request in Standard view, the bidder will be able to perform all subsequent actions (such as View the request/Create Bids in Standard view).
- After the bid is submitted and the due date is passed, Unifier opens the RFB form in Standard view.

To withdraw a bid:

1) Sign in to Unifier.
2) In the left Navigator, select **Request for Bid/Bids** (or **Request for Bid Private/Bids**, if you were invited for a private bid). A bid log appears on the right pane.
3) In the log, double-click the name of the RFB you received. The Request for Bid form opens.
4) Click the **Withdraw** button in the upper-right corner of the window.

To view or print the bid after submitting it:

1) Sign in to Unifier.
2) In the left Navigator, select **Request for Bid/Bids** (or **Request for Bid Private/Bids**, if you were invited for a private bid). A bid log appears on the right pane.
3) In the log, select the bid record that you want to view or print.
4) Click the Print button and select one of the following:
   - **Print**
   - **Export To CSV**
   - **Export To Excel**

Importing Line Items to a Request for Bid

You can export a template for CSV or Excel that includes the line item detail form fields as columns for the Request for Bid business process. These fields include the detail form line item fields defined in Integration.

You can then modify the exported template and import it to create line items for the RFB.

> **Note:** To import or export line item templates, you must first accept the bid.

To export the request for bid line item template:

1) Navigate to the Request for Bid business process log.
2) Open a bid from the log.
3) Go to the **Line Item List** tab.
4) Click Export and select one of the following options:

- **Export Line Item Template in CSV**
- **Export All Line Items in CSV**
- **Export Line Item Template in Microsoft Excel**
- **Export All Line Items in Microsoft Excel**

Depending on your browser, the file will be downloaded automatically, or you will be prompted to download the file manually.

To modify the request for bid line item template:

1) Open the exported CSV or Excel file in Microsoft Excel. The line item columns are listed.
2) Enter the line item information into the spreadsheet. Each line must begin with a "D". For multiple tabs, you must enter appropriate tab name in the Tab Name column.
3) Enter data into the required fields, as well as non-required fields as needed.

Notes:

- Data for formula-based columns is ignored.
- Any line items with the Amount equal to zero will not be imported.
- Ensure that you are importing the records you want to import. Any line items that you import will be added after any existing line items.
- Use to add new lines only, not to modify existing lines
- All data created through the CSV or Excel import is rolled up to the cost sheet
- For data to import correctly, you might have to change some of the cells in the CSV or Excel file to Text type. For example, if you have a CBS code of 1-1, Microsoft Excel can interpret this entry as a month-day combination and reformat it to Jan-1. In this case, your data import will fail because this data is now an invalid CBS code.
- Image picker data elements will not be shown in the CSV or Excel template.

To import the request for bid line item template:

1) Navigate to the Request for Bid business process log.
2) Open a bid from the log.
3) Go to the **Line Item List** tab.
4) Click Export and select one of the following options:
   - **Data From CSV File**
   - **Data From Excel File**
5) Browse to select the file to import, and then click **Next**.
6) Add any attachments to the import.
7) Click **Upload** when finished.

   If there are any import errors, you can open the CSV or Excel file to view and correct the error. No records are imported if any rows contain an import error.

Changing Vendor Email Address

You can change the bidder email in the **RFB Vendors BP** by selecting **Line Item Type Vendor** and then selecting **Bidder Email**.

If you accept the change (click **Finish Editing** or **Save** and then click **Yes**), the system updates the vendor record, with the new email address.

- If there are active bids for the vendor, the system sends an email to the vendor with their username and password.
- If there are no active bids, the system changes the email address, but the system does not send an email to the vendor.

  Unifier deactivates the old email address.

  If you change the vendor's email to an email that exists in the system, the following message will be displayed: Existing email or username cannot be used.

If you do not accept the change (click **Finish** and then click **No**), the system reverts to the original email address.

To change the vendor email address through integration, Reverse Auto-population (RAP), or Bulk Edit:

If you update the vendor's email address on the vendor record by way of integration, Reverse Auto-population (RAP), or Bulk Edit, the system updates the record with the new email address and sends an email to the vendor, if the bids are active.

> **Note**: The system does not send an email to the vendor if the bids are inactive.

Exporting Record Details and Line Items from Bid Comparison Sheet

A project manager can share information about bids that have been submitted by multiple vendors with the rest of the project team members by way of the Bid Comparison module and through exporting the Bid Comparison sheet data (record details and line items details) based on certain parameters.

The following explains the process of exporting the Bid Comparison sheet data based on certain parameters:

1) Go to the shell tab and switch to **User** mode.
2) In the left Navigator, select **Logs** and open a RFB BP.
3) In the **Requests for Bid** log, select and open a record.
4) In the record window, go to the **Proposal Management** tab.
5) From the left pane, select the records you want to compare and click **Compare,** opening the **Compare** window. By default, the **Record Details** tab is active which shows the details of the bid comparison. The other tab on the **Compare** window is the **Line Items** tab.
6) In the **Record Details** tab, click the **Export** icon to enable Unifier to generate the export file (The Excel file "**Compare_Export - ....xlsx**" shown in your browser's download log).

7) After the Excel file is generated, open the file, or the exported comparison sheet file. Notice that the file hast to worksheets: **Record Details** and **Line Items**. These two worksheets correspond to the **Record Details** tab and the **Line Items** tab, on the **Compare** window, respectively. The coloring scheme used within the columns of each tab is also maintained in the columns of the corresponding worksheets of the export sheet.

The **Records Details** worksheet contains the following informational text:

```
This file contains the proposals received for - <Record No>: <Record Title>
The content of this file is for information purpose only and cannot be used to import data into the system.
The upper form data has been exported into the Record Details worksheet. The line item data has been exported into the Line Items worksheet.
Proposals for the following Vendors have been exported along with the Requestor Estimates.
<Vendor 1, Vendor 2...>
```

The record details are displayed in columns. The **Requestor Estimates** column is locked, by default. The color format, as mentioned, is according to the color format of the sheet. The text in each cell is wrapped and can be displayed in multiple lines when the size exceeds the column width. The rest of the columns show the vendors (for example, the vendors according to the selection of the **Star Vendors Only** field at the time of export).

In the **Line Items** worksheet, the **Requestor Estimates** column is locked, by default. The color format, as mentioned, is according to the color format of the sheet. The rest of the columns show the vendors (for example, the vendors according to the selection of the **Star Vendors Only** field at the time of export).

When you are on the **Compare** window, you can select the **Star Vendors Only** option before exporting the data and compare the requestor estimates with bids submitted by only the star vendors in the comparison sheet.

In general, on the **Compare** window, you can conduct a combination of comparisons by selecting or not selecting the **Attachments Only** or the **Star Vendors Only** options and selecting various bids (under the **Compare With** drop-down field). The **Sort** icon (on the upper-right corner) enables you to sort the bids displayed on the on the **Compare** window.

Again, all the selections or views set in the **Compare** window will be reflected on the generated export file.

Lease Business Processes

Lease business processes (BPs) are a Cost type BP. You can use the Lease BP at the project/shell level to set up and manage real estate leases and view the expected Payment Schedule (regular as well as straight line) using the lease data from the BP. You can set up a Lease BP if you are the landlord (lessor), or if you are the tenant (lessee). You can use it for new leases you have just contracted, or existing leases. The Lease BP lets you track incoming or outgoing payments, and you can use the Generic Cost Manager to roll up the amounts.

Lease BPs are typically used to auto-create invoices (if you are the landlord) or payment requests (if you are the lessee). These auto-created business processes are designed and set up by your administrator. For more information, see ***Auto-create an Invoice or Payment Request from a Lease Business Process*** (on page 400).

Lease BPs can be workflow or non-workflow cost business processes. If they are workflow business processes, you can route them like other workflow business processes.

Notes:

- Lease BPs cannot be defined at the Company level and do not support CBS functions.
- By design, the Line Item Details in the Lease BP cannot be auto-created.

Leases can be designed with fields that you can use in line items to perform lease data calculations. These calculations generate lease payment schedules. For example, you could add lines items for rent, cost of maintenance, or taxes to a lease. The data in these line items is data that you enter, or data that is populated based on calculations.

On Leases, you can:

- View expected payments for the lifetime of the lease using the Regular Payment Schedule and Straight Line Schedule reports
- Disable the auto-creation of related BPs, or re-enable these auto-created BPs as needed
- Create Payment Schedules (regular and straight line)
- Create snapshots of the lease for historical purposes

In addition to typical behavior, the Lease BP supports:

- Consolidation from other Cost BPs
- Snapshot creation
- Auto-creation
- Auto generation of Regular and Straight Line Payment schedules
- Integration methods for creating upper form as well as line items of all tabs
- Multiple tabs for line items (up to 8 tabs)
- An allocation template to divide lease payments into different amounts for multiple tenants in a building.

Lease BP Payment Schedule

Changes to Lease Payment Terms will be always applied on future payment schedules, starting from the first payment of the next term, depending on the term type and length. The change in escalation rate or value can happen in two ways:

- Line Item: Change the escalation value or switch the Index Rate picker record on the line item.
- Index Rate BP: Change the rate value on the source Index Rate BP record in the Company workspace.

Lease (Payment Setup) Details

Field	Example
Start date	03/01/2021
End date	02/01/2027
Payment Frequency	Monthly
Initial Amount	$1,000.00
Payment Due Day	1
Latest Payment Due Day	1
Payment Notice Lead Time	10
Escalation Method	Index Rate
Escalation Frequency Term Type	Yearly
Escalation Frequency Term Length	1

Lease Payment Schedule

Start Date	End Date	Due Date	Payment Type	Amount (with initial Index Rate 10)	Amount (with new Index Rate 20, switched on 27th Nov, 2023)	Yearly escalation
03/01/2021	**03/31/2021**	**03/01/2021**	**GTO**	**$1,000.00**	**$1,000.00**	**Start of Lease**
04/01/2021	04/30/2021	04/01/2021	GTO	$1,000.00	$1,000.00	
05/01/2021	05/31/2021	05/01/2021	GTO	$1,000.00	$1,000.00	
06/01/2021	06/30/2021	06/01/2021	GTO	$1,000.00	$1,000.00	
07/01/2021	07/31/2021	07/01/2021	GTO	$1,000.00	$1,000.00	
08/01/2021	08/31/2021	08/01/2021	GTO	$1,000.00	$1,000.00	
09/01/2021	09/30/2021	09/01/2021	GTO	$1,000.00	$1,000.00	
10/01/2021	10/31/2021	10/01/2021	GTO	$1,000.00	$1,000.00	
11/01/2021	11/30/2021	11/01/2021	GTO	$1,000.00	$1,000.00	
12/01/2021	12/31/2021	12/01/2021	GTO	$1,000.00	$1,000.00	
01/01/2022	01/31/2022	01/01/2022	GTO	$1,000.00	$1,000.00	
02/01/2022	02/28/2022	02/01/2022	GTO	$1,000.00	$1,000.00	
03/01/2022	**03/31/2022**	**03/01/2022**	**GTO**	**$1,100.00**	**$1,100.00**	**First year**

Start Date	End Date	Due Date	Payment Type	Amount (with initial Index Rate 10)	Amount (with new Index Rate 20, switched on 27th Nov, 2023)	Yearly escalation
						escalation
04/01/2022	04/30/2022	04/01/2022	GTO	$1,100.00	$1,100.00	
05/01/2022	05/31/2022	05/01/2022	GTO	$1,100.00	$1,100.00	
06/01/2022	06/30/2022	06/01/2022	GTO	$1,100.00	$1,100.00	
07/01/2022	07/31/2022	07/01/2022	GTO	$1,100.00	$1,100.00	
08/01/2022	08/31/2022	08/01/2022	GTO	$1,100.00	$1,100.00	
09/01/2022	09/30/2022	09/01/2022	GTO	$1,100.00	$1,100.00	
10/01/2022	10/31/2022	10/01/2022	GTO	$1,100.00	$1,100.00	
11/01/2022	11/30/2022	11/01/2022	GTO	$1,100.00	$1,100.00	
12/01/2022	12/31/2022	12/01/2022	GTO	$1,100.00	$1,100.00	
01/01/2023	01/31/2023	01/01/2023	GTO	$1,100.00	$1,100.00	
02/01/2023	02/28/2023	02/01/2023	GTO	$1,100.00	$1,100.00	
03/01/2023	**03/31/2023**	**03/01/2023**	**GTO**	**$1,210.00**	**$1,210.00**	**Second year escalation**
04/01/2023	04/30/2023	04/01/2023	GTO	$1,210.00	$1,210.00	
05/01/2023	05/31/2023	05/01/2023	GTO	$1,210.00	$1,210.00	
06/01/2023	06/30/2023	06/01/2023	GTO	$1,210.00	$1,210.00	
07/01/2023	07/31/2023	07/01/2023	GTO	$1,210.00	$1,210.00	
08/01/2023	08/31/2023	08/01/2023	GTO	$1,210.00	$1,210.00	
09/01/2023	09/30/2023	09/01/2023	GTO	$1,210.00	$1,210.00	
10/01/2023	10/31/2023	10/01/2023	GTO	$1,210.00	$1,210.00	
11/01/2023	**11/30/2023**	**11/01/2023**	**GTO**	**$1,210.00**	**$1,210.00**	*Index Rate switched or rate changed (27 November 2023)*
12/01/2023	12/31/2023	12/01/2023	GTO	$1,210.00	$1,210.00	

Start Date	End Date	Due Date	Payment Type	Amount (with initial Index Rate 10)	Amount (with new Index Rate 20, switched on 27th Nov, 2023)	Yearly escalation
01/01/2024	01/31/2024	01/01/2024	GTO	$1,210.00	$1,210.00	
02/01/2024	02/29/2024	02/01/2024	GTO	$1,210.00	$1,210.00	
03/01/2024	**03/31/2024**	**03/01/2024**	**GTO**	**$1,331.00**	**$1,452.00**	**Third year escalation**
04/01/2024	04/30/2024	04/01/2024	GTO	$1,331.00	$1,452.00	
05/01/2024	05/31/2024	05/01/2024	GTO	$1,331.00	$1,452.00	
06/01/2024	06/30/2024	06/01/2024	GTO	$1,331.00	$1,452.00	
07/01/2024	07/31/2024	07/01/2024	GTO	$1,331.00	$1,452.00	
08/01/2024	08/31/2024	08/01/2024	GTO	$1,331.00	$1,452.00	
09/01/2024	09/30/2024	09/01/2024	GTO	$1,331.00	$1,452.00	
10/01/2024	10/31/2024	10/01/2024	GTO	$1,331.00	$1,452.00	
11/01/2024	11/30/2024	11/01/2024	GTO	$1,331.00	$1,452.00	
12/01/2024	12/31/2024	12/01/2024	GTO	$1,331.00	$1,452.00	
01/01/2025	01/31/2025	01/01/2025	GTO	$1,331.00	$1,452.00	
02/01/2025	02/28/2025	02/01/2025	GTO	$1,331.00	$1,452.00	
03/01/2025	**03/31/2025**	**03/01/2025**	**GTO**	**$1,464.10**	**$1,742.40**	**Fourth year escalation**
04/01/2025	04/30/2025	04/01/2025	GTO	$1,464.10	$1,742.40	
05/01/2025	05/31/2025	05/01/2025	GTO	$1,464.10	$1,742.40	
06/01/2025	06/30/2025	06/01/2025	GTO	$1,464.10	$1,742.40	
07/01/2025	07/31/2025	07/01/2025	GTO	$1,464.10	$1,742.40	
08/01/2025	08/31/2025	08/01/2025	GTO	$1,464.10	$1,742.40	
09/01/2025	09/30/2025	09/01/2025	GTO	$1,464.10	$1,742.40	
10/01/2025	10/31/2025	10/01/2025	GTO	$1,464.10	$1,742.40	
11/01/2025	11/30/2025	11/01/2025	GTO	$1,464.10	$1,742.40	
12/01/2025	12/31/2025	12/01/2025	GTO	$1,464.10	$1,742.40	
01/01/2026	01/31/2026	01/01/2026	GTO	$1,464.10	$1,742.40	

Start Date	End Date	Due Date	Payment Type	Amount (with initial Index Rate 10)	Amount (with new Index Rate 20, switched on 27th Nov, 2023)	Yearly escalation
02/01/2026	02/28/2026	02/01/2026	GTO	$1,464.10	$1,742.40	
03/01/2026	**03/31/2026**	**03/01/2026**	**GTO**	**$1,610.51**	**$2,090.88**	**Fifth year escalation**
04/01/2026	04/30/2026	04/01/2026	GTO	$1,610.51	$2,090.88	
05/01/2026	05/31/2026	05/01/2026	GTO	$1,610.51	$2,090.88	
06/01/2026	06/30/2026	06/01/2026	GTO	$1,610.51	$2,090.88	
07/01/2026	07/31/2026	07/01/2026	GTO	$1,610.51	$2,090.88	
08/01/2026	08/31/2026	08/01/2026	GTO	$1,610.51	$2,090.88	
09/01/2026	09/30/2026	09/01/2026	GTO	$1,610.51	$2,090.88	
10/01/2026	10/31/2026	10/01/2026	GTO	$1,610.51	$2,090.88	
11/01/2026	11/30/2026	11/01/2026	GTO	$1,610.51	$2,090.88	
12/01/2026	12/31/2026	12/01/2026	GTO	$1,610.51	$2,090.88	
01/01/2027	01/31/2027	01/01/2027	GTO	$1,610.51	$2,090.88	
02/01/2027	02/28/2027	02/01/2027	GTO	$1,610.51	$2,090.88	

Lease Business Process Terminology

Lease: An agreement whereby the owner of real property (the landlord or lessor) gives the right of possession to another (the tenant or lessee) for a specified period of time (the terms of the lease) and for a specified consideration (the rent or lease payments).

Straight line: The straight-line method implies that the cash flows in the form of fixed lease payments over the lease term are aggregated and divided by the lease term to arrive at the monthly income or expense. This results in an equal impact in the income statement in each reporting period irrespective of the fact that cash flows differ.

Escalation: A clause in a lease which provides for the rent to be increased to reflect changes in expenses paid by the landlord such as real estate taxes, or operating costs. An escalation can be accomplished by several means such as fixed periodic increases, increases tied to the Consumer Price Index, or adjustments based on changes in expenses paid by the landlord in relation to a dollar or base year reference.

In addition to the terminology above, you can find more information about the special fields that can be used on Lease business processes in the *Unifier Data Reference Guide*.

Lease Business Process Use Cases

The following are examples of how you can the Lease BP to manage leases.

Various Payment Terms for the Same Lease

You start a lease on December 1, 2003, with a commencement date of April 1, 2004, and a termination date of March 28, 2005.

Payment Term 1: A term of $4,000 per month for rent begins on April 1, 2004, and ends on March 28, 2005. The due day is 1.

Payment Term 2: A term of $300 per month for common area maintenance (CAM) starts on April 1, 2004, and ends on March 28, 2005. The due day is 1.

Payment Term 3: A semi-annual term of $500 for taxes begins on September 1, 2004, and ends on March 28, 2005. The due day is 1.

Different Payment Allocations for Multiple Tenants

For accounting purposes, the rent for a building is to be charged back to departments, based on each department's space usage. The Marketing Department uses 60% of the space and IT uses 40% of the space. If the total rent for the building is $5000 per month, Marketing would be charged $3000 and IT would be charged $2000 per month.

Semi-annual Lease Terms with Proration

The lease term start date is February 15, 2002, the end date is January 1, 2003. The frequency is semi-annual, and the amount is $1,000 per term. The Proration Rule accounts for the date difference in days, with the end date included.

Handling Rent Pre-payments

The lease term start date is January 1, 2003, the end date is June 30, 2003. The frequency is monthly, and the amount is $6,000 per month. The due day is 1. The pre-payments are the first and last month's rent.

Straight Lining with Quarterly Payments

The lease begins mid-month on 15 January 2002 and ends mid-month on 14 January 2003.

- Rent for the first quarter is $100
- Rent for the second quarter is $200
- Rent for the third quarter is $300
- Rent for the fourth quarter is $400
- Rent for the fifth quarter is $500

The rent abatement of $10 is given only in the first month. The rent is scheduled to be paid in full at the beginning of each month.

> **Note:** Information about Straight-line Payment Adjustments: Straight-line payments can be modified if the business process design includes special data elements (fields). These fields can override the start and end dates of a lease, add or subtract days from the lease term, or add or

subtract specific dollar amounts to the lease amount. These adjustment fields do not change the line item dates or amounts. The system takes these adjustments into consideration when it calculates the straight-line payments after you click Save or Submit. When you open the form in view mode, you will see the adjustments reflected on the Payment Schedule you open from the Payment Schedule button on the toolbar.

Straight Lining with Monthly Payments

The terms are a 12-month lease, with the first month rent-free. The rent is $1000 per month. Real estate rules (FASB 13) require that this rent be normalized (or straight-lined) across the entire lease term.

Lease Term of 20 Years with Escalation

The base, or primary, lease term is 20 years. During the base lease term, the monthly lease payment is $10,000 for the first 10 years and $12,000 for the next 10 years.

Note: Payment Schedule calculations for Lease base frequencies and Escalation frequencies will differ slightly depending on the frequency used. For example, a 10 year lease escalating each year will differ slightly from a lease escalating every 52 weeks (as opposed to a lease escalating every 365 days). Over a 10 year period, if the lease calculation is done in days, there can be years with more than 365 days. Also, if the calculation done in weeks, 52 weeks might be a day or two short of a full year depending on the year used.

Escalation Based on Index Rate

Set lease payments to increase based on the Consumer Price Index of a country. This escalation method allows lessors to increase the rent by aligning it with inflation and without going into an agreement using a pre-determined % escalation. On the Lease Business Process, you can specify the index rate to use, the payment schedules are updated whenever the index rate is changed.

Create and Manage Lease Business Processes

To create a Lease business process record:

1) Navigate to the Lease business process log.
2) In the Lease BP log, click **Create**. The Lease form opens.
3) Complete the Lease business process record. Add the basic lease information to the upper form, including the lease name, number, class of lease, and other details. Add the routing information for the workflow if the BP is a workflow BP.
4) On the detail form, add the payment terms in the Payment Setup tab. Click the **Add** button to add a line item for each aspect of the lease for which you want to create a payment schedule. For example, you can add individual line items for rent, maintenance costs, and taxes.
5) Click **Save**.

To edit a line item:

If the Lease BP form is still a Draft, you can edit a line item at any time.

1) Open the grid by clicking the **Add** button.
   The Line Items window opens.
2) Enter the payment general setup, payment trigger dates setup, straight line settings, payment escalation setup, and the cost account setup.
3) Make changes and click **Save**.

To remove a line item:

In the Lease BP form, select the line item to remove and click the **Remove** button.

If you have created an allocation template, you can link the record to it. See ***Create and Use an Allocation Template (Classic view)*** (on page 398).

Create and Use an Allocation Template (Classic view)

If the rent you charge (or pay) should be pro-rated for different tenants in a building, you can create an allocation template and assign it to a Lease BP. The template will designate a breakdown of the costs for each tenant and the system will use this breakdown to create the payment calculations.

For example, for accounting purposes, the rent for a building is to be charged back to departments, based on each department's space usage. The Marketing Department uses 60% of the space and IT uses 40% of the space. If the total rent for the building is $5000 per month, Marketing would be charged $3000 and IT would be charged $2000 per month.

To create an allocation template

1) Open the Lease BP you want to create the template for.
2) Click **Menu Options** (☰)and select **Allocation**. The Allocation Templates window opens.
3) Click the **New** button. The Add/Edit Allocation Details window opens.
4) Use the information in the first table below to complete the top three fields in this window.
5) Click the **Add** button. The system enters a row number and opens an editable text box in the Description field.
6) Use the information in the second table below to add rows to the allocation template.
7) To add more rows to the allocation template, repeat steps 5 and 6.
8) Click OK.

In this field:	Do this:
Allocation Name	Enter a name for the allocation template. This name will appear on the list of allocation templates you can select for the record or line item you create.
Payment Type	Click the arrow and select the payment type that should be used for the allocations.

In this field:	Do this:
Allocation Type	Select the type of allocation to use for the pro-ration. ▸ Percent will pro-rate the lease according to the percentage you specify (see Allocation Value). ▸ Fixed will allocate a fixed cost to each tenant. ▸ Area will pro-rate the lease according to the square footage each tenant occupies (see Allocation Value).
Allocation Value	Enter the value of the Allocation Type. ▸ For Percent, enter the percentage of the lease that should be paid by the tenant. If you specify percent, the values in all these fields must add up to 100%. ▸ For Fixed, enter the lease amount that should be paid by the tenant. ▸ For Area, enter the square footage for which the tenant is paying.
Cost Code	From the picker that opens, select the cost code for the allocation.

To link an allocation template to a lease business process:

1) Open the Lease business process record to which you want to link the template.
2) Click the **Menu Options** (☰) and select **Allocation**. The Allocation Templates window opens.
3) Select the template you want and click **Open**.

View or Export Payment Schedule

The Lease BP creates the Regular Payment Schedule and the Straight Line Schedule to allow you to view your future lease payments.

The lease payment schedule is generated automatically after you add or change a line item for the Lease BP. The schedule is time stamped, and is overwritten each time you add or modify a line item. You can capture a particular schedule by exporting it to a PDF file.

To view or export payment schedule:

1) Open a Lease BP record from the log.
2) From the toolbar, click **Payment Schedules**, and choose **Regular** or **Straight Line**. The payment schedule window opens.

The schedule shows currency amounts to two decimal places (for example, $3120.33).

The Regular Payment Schedule lists the lease payments as calculated using Frequency, Start Date, and End Date.

The Straight Line Schedule lists the lease payments averaged over all of the line items of the payment terms for the lease over the life of the lease. You can specify which line items that you want to include in the Straight Line Schedule by clicking the Straight Line radio button on the detail form of each line item to Yes for each item you want listed in the schedule.

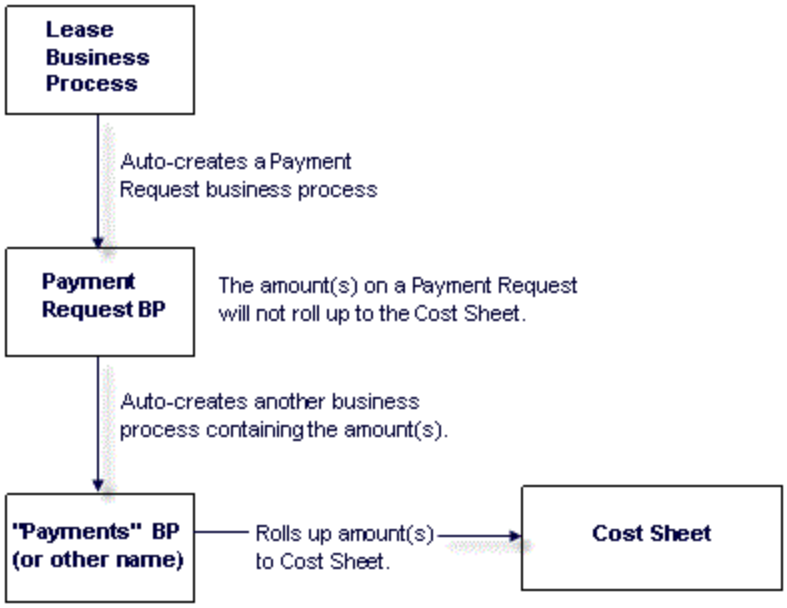
3) Click the **Export** button to save all the schedule rows or selected rows to a PDF file. Click **Save** to create the PDF file of the schedule.
4) Click the **Close Window** button when you are done viewing the schedule.

Auto-create an Invoice or Payment Request from a Lease Business Process

Lease business processes are typically used to auto-create invoices (if you are the landlord) or payment requests (if you are the lessee). For example, a lease business process with a payment schedule can use auto-creation to generate payment request records at appropriate days in advance of the payment due date to be routed for approval.

> **Note**: You receive a single auto-created line item based on the defined grouping criteria.

For cost purposes, these invoices/payment requests do not roll up amounts to the Cost Sheet. To roll up these amounts, the invoice/payment request should, in turn, auto-create another business process for the purpose of rolling up the amount(s) to the Cost Sheet.



Allocation Templates: Whenever a Lease BP auto-creates an invoice or payment request, the system will check for an allocation template. If one is linked to the Lease BP, the system will copy it to the invoice or payment request, and use it to calculate the payments. Each allocation will appear as a separate line item under the Standard tab of the invoice or payment request.

Take a Snapshot of a Lease (Classic view)

Use the lease snapshot feature to create a historical picture of the lease that you can preserve before the lease is amended or otherwise modified. The snapshot can be created automatically when the Lease BP reaches a certain status, or you can create it manually whenever necessary. Automatic snapshot creation is set up in uDesigner.

To save an automatically created snapshot:

1) When the status of the Lease BP changes and a snapshot is created automatically, you receive a message.

   Enter a title for the snapshot (if you want to overwrite the default title), and an optional description.
2) Click **OK**. The snapshot is saved in the system.

To create a snapshot manually:

1) While in the Lease BP, open the **Menu Options** (☰) and select **Create Snapshot**. The Create new snapshot window opens.
2) Enter a title for the snapshot (if you want to overwrite the default title), and an optional description.
3) Click **OK**. The snapshot is saved in the system.

To view and manage snapshots:

1) While in the Lease BP, open the **Menu Options** (☰) and select **Snapshots**. The Snapshots window opens.

   The snapshots are listed in the window. Manually created snapshots display **Yes** under the **User Created** column; system created snapshots display **No**.
2) To save the snapshot as a PDF file, select a snapshot from the list and click **Open**.

   Depending on your browser, the file may automatically be downloaded, or you will be prompted to download the file manually.
3) To view snapshot properties and change the title or description of the snapshot, select a snapshot from the list and click **Properties**.
4) To delete a snapshot, select a snapshot from the list and click **Delete**.
5) Click **Close** when you a done viewing snapshots.

Take a Snapshot of a Lease (Standard View)

Use the lease snapshot feature to create a historical picture of the lease that you can preserve before the lease is amended or otherwise modified. The snapshot can be created automatically when the Lease BP reaches a certain status, or you can create it manually whenever necessary.

To take a snapshot of a lease:

1) Open the Lease in Edit mode.
2) Click **More Actions** and select **Create Snapshot**. The Create Snapshot window will open.
3) In the **Create Snapshot** window:
   a. Enter a **Title** for the snapshot.

b. (Optionally) Enter a **Description** for the snapshot.
c. Click **Create**.

4) In the notification message confirming the snapshot has been successfully created, click **OK**.

To view the snapshots for a lease, open the lease in view mode, click **More Actions**, and then select **Snapshots**. To open a snapshot, click its title to download the .pdf file of the snapshot.

Calculating Net Present Value (NPV)

If the data elements corresponding to the Net Present Value (NPV) are included in Lease BP design, the following information will be available:

Annual discount rate	NPV Amount	Comments
Detail Form	Detail Form	The NPV amount for each payment setup will be calculated individually using the discount rate present on the respective setup. The calculated amount will then be populated into the NPV present on each payment setup respectively.
Detail Form	Upper Form	The NPV amount for each payment setup will be calculated individually using the discount rate present on the respective payment setup. The summarized NPV amount will be populated on the upper form.
Upper Form	Detail Form	The NPV amount for each payment setup will be calculated using the discount rate present on upper form. The calculated amount will then be populated into the NPV present on each payment setup respectively.
Upper Form	Upper Form	The NPV amount for each payment setup will be calculated using the discount rate present on the upper form and the summarized amount will be

Annual discount rate	NPV Amount	Comments
		populated on the upper form.
Upper Form, Detail Form	Upper Form	The NPV amount for each payment setup will be calculated using the discount rate present on each setup. If the rate is not present on the payment setup, the system will use the rate present on the upper form. The summarized amount will then be populated on the upper form.
Upper Form, Detail Form	Detail Form	The NPV amount for each payment setup will be calculated using the discount rate present on the payment setup. If the rate is not present on the payment setup, the system will use the rate present on the upper form. Calculated NPV amount for each payment setup will be populated in the respective form.
Detail Form	Upper Form, Detail Form	The NPV amount for each payment setup will be calculated individually using the discount rate present on the payment setup. The NPV for each payment setup will be populated in the respective form. Also, the summarized amount will be populated in the upper form.
Upper Form	Upper Form, Detail Form	The NPV amount for each payment setup will be calculated using the discount rate present on the upper form.

Annual discount rate	NPV Amount	Comments
		The NPV for each payment setup will be populated in the respective form. Also, the summarized amount will be populated in the upper form.

If you have added the following data elements, you will be able to calculate the Net Present Value (NPV):

- Annual discount rate
- NPV Amount
- Include in Net Present Value

The NPV calculation will be triggered after the following events:

- Finish editing
- Index rate change (at the end of the day)
- Index rate change through user interface (UI) or Integration.
- Reverse Auto-population of the base lease record.

After you finish editing, the system refreshes values in the Regular Line Schedule and Straight Line Schedules.

For a Workflow BP, the system calculates the NPV value when Payment Schedule is refreshed. This feature applies to the Line Item updates, as well.

The system checks changes in the following values, daily:

- Index rate
- Payment schedules
- Discount rate

If there are any changes in the values of the fields above, the system triggers NPV recalculation based on the updated values.

Reservation Business Process

Some objects in the system can be reserved for use. For example, you could reserve a piece of equipment that needs to be used at a project site for three weeks.

You can reserve the following objects:

- Assets
- Document Manager records
- Configurable manager objects
- The object of a line item or simple type business processes (both workflow and non-workflow)

When these objects (assets, shells, spaces, and so on) are designed, they can be "calendar enabled," which means that the business process form for these objects will show a calendar option, and the object will be available for reservation.

In conjunction with these calendar-enabled objects, the system provides a reservation type business process which you can use to reserve these objects. A reservation BP is considered a type of cost BP in that it integrates with the Cost Manager to use cost codes at the company and project/shell level.

There are two ways to make a reservation:

1) Using a reservation business process

   By using a reservation business process (that has been designed and configured for your use), you can specify the date and time of the reservation. Depending on its design, this business process can also:

   - Display availability and identify scheduling conflicts
   - Denote the reservation as "tentative" or "confirmed"
   - Gather cost information
   - Specify additional details, such as the number of attendees, A/V requirements, food catering, and so on
   - Show the reservation as a recurring event.
   - Trigger another business process, such as a work order.

2) Using a quick calendar

   By using the quick calendar option that is available on any business process (that was designed to be calendar-enabled), you can open the calendar and enter the parameters for your reservation.

Using a Reservation Business Process

The reservation business process is similar to any other business process. Fill in the upper form fields as necessary, and add line items for detail information about the reservation.

The upper form of the reservation business process should include **From Date** and **To Date** fields, which you need to complete, and should also include one or more data pickers, where you choose the object or objects that you want to reserve. In the example above, the room and projector fields are the data pickers from which you can select multiple objects to reserve for this event.

The reservation business process can be designed to include additional information about this reservation, such as food catering for the event.

The reservation business process has two special features:

- **Schedules**
  - Enables you to open the Schedules window and view the reservation schedule for the objects you are reserving with this reservation BP.
  - Is useful for comparing the availability of multiple objects being booked for the same event, and to resolve conflicts or identify openings in the schedule.
- **Recurrence**

- Enables you to specify how often this reservation should be created. When you use this options, the system continues to automatically reserve the object according to the specifications you select with this feature.

The following describes the reservation business process log (Standard View):

From your project, go to your reservation BP and click to open the reservation BP log. On the left pane, a set of toolbar options and a list of records, if available, are displayed. On the right pane, the following tabs explain more information about each item on the list:

- **Record Details** tab
- **Workflow Progress** tab
- **Attachments** tab

The following explains the toolbar options of the reservation BP log:

Option	Description
Create	Enables you to create a new reservation BP. From the **Requester Information** block, you can click the **Space** data picker field to open the **Usable Space Reservation** window which contains a calendar that enables you to determine the duration of the reservation.
Actions	Enables you to conduct the following on a selected record, or multiple records: - **Import** - **Export CSV Template** - **Export Microsoft Excel Template** - **Create From Template** - **Bulk Edit** - **Print** - **Transfer Ownership** - **Terminate Record**
View	The **View** data picker enables you to arrange the list of records listed, as follows: - **Records Created by Me** - **Records Received by Me** - **Records Created and Received by Me** - **Records from My Company** In addition, the **View** data picker enables you to: - **Create New View** - **Manage Views**

Option	Description
Edit View	To edit, or customize, the view of the log.
Refresh	To refresh the data displayed on the log.
Print	To print a record.
Search	To search for a record.
Find on Page	To find a record based on a column heading.
Help	To access documentation.

The following explains the columns on the reservation BP log:

- **Record Duration Status** (Calendar icon)
- **Attachments** (Paper clip icon)
- **Record Number**
- **Reservation name**
- **Space**
- **From Date**
- **To Date**
- **Amount**
- **Status**
- **Creation Date**
- **Creator**

For each item on the list, the *gear menu* (⚙) enables you to perform the following:

- **Open**
- **Copy with Attachments**
- **Copy without Attachments**
- **Print**
- **Transfer Ownership**
- **Terminate Record**

Using the Schedules Feature

The Schedules feature is most useful for resolving scheduling conflicts.

When you open a reservation BP record, the BP record page that opens contains the following menu options (on the upper-right corner):

Option	Description
Send	Enables you to send the BP to the next step.
Save	Enables you to save any changes that you have made.

Option	Description

Menu Options (☰)	Enables you to complete, set up, or access any of the following operations:
	▸ **Cancel Reservation**
	▸ **Export Line Item Template**
	▸ **Print**
	  ▸ **HTML**
	  ▸ **PDF**
	  ▸ **Custom**
	▸ **Recurrence**
	▸ **Reload**
	▸ **Review**
	  ▸ **Review**
	  ▸ **AutoVue Review**
	  ▸ **Open in Office for the web**
	▸ **Schedules** (See below for more details)
	▸ **Transfer Ownerships**
	▸ **Undo Accept Task**
	▸ **Help**
	▸ **Close**

When you open a reservation BP record, the BP record page that opens contains the following tabs:

- **<BP name> Reservation Details** tab

  This tab enables you to see the details of the BP and access the following tabs for the record that you had selected:

  - **Attachments**
  - **Comments**
  - **Linked Records**
  - **Lined Mail**
  - **Workflow Progress**
  - **Audit Log**
  - **Reference Records**
- **Reservation Charges** tab

  This tab enables you to view and work with all the charges related to your selected record.

When you open a record, click Menu Options, and select Schedules, a new window opens which contains the following tabs:

- **Schedule:** This tab enables you to set the schedule for the reservation. You can see and set the reservation period and see any conflicts.

- **Recurrence:** This tab enables you to set the frequency and range of the reservation. For more information, see ***Making a Recurring Reservation***.

Making a Recurring Reservation

The reservation business process includes a "recurrence" feature, where you can specify how often this reservation should be created. The system will continue to automatically reserve the object according to the specifications you select with this feature.

To make a recurring reservation (Standard View):

1) Open a record.
2) From the toolbar, **Menu Options** ☰ , and then select **Schedules**.
3) In the new window, use the following tabs to create the reservation:
   - **Schedule:** Use this tab to set the schedule for the reservation. You can see and set the reservation period and see any conflicts.
   - **Recurrence:** Use this tab to set the frequency and range of the reservation.

     Recurrence Daily

     In the **Recurrence** tab, when the "Recurrence On" check box is selected, the Frequency and Range of Recurrence sections will be displayed.

     In case the check box is deselected, the two sections are not displayed.

     In case of an existing recurrence, if the check box is deselected, all recurrences will be removed when you click **Save**. The interaction is the same as that occurs on clicking 'Remove Recurrence' button in existing screen.

     Recurrence Weekly

     In case of an existing recurrence, if the check box is deselected, and then it is checked again (without clicking **Save**), the values present for the frequency and range of recurrence sections will remain the same, as before.

Auto-Creating Another Business Process From the Reservation

If the reservation business process is designed to do so, it can automatically create one or more new business processes. For example, for a room reservation, the Reservation business process could auto-create a work order for catering two days before the event, and auto-create an "action item" follow-up business process that would go to all attendees eight hours after the event. To trigger the auto-creation, the form (either the upper form, or a line item form) will contain fields you must fill in.

If a reservation business process is designed to auto-create another business process, complete the following fields:

In this field:	Do this:
Before/After	Specify whether the system should auto-create the business process Before or After the reservation event.
Time (Days)	Specify the number of days before/after the event this business process should be created. For example, the Work Order in

In this field:	Do this:
	the illustration should be created 2 days after the event.
Time (Hrs)	Specify the number of hours before/after the event this business process should be created. For example, the Work Order in the illustration should be created 8 hours after the event.
Time (Min)	Specify the number of minutes before/after the event this business process should be created. For example, the Work Order in the illustration should be created 30 minutes after the event.
Trigger Date	This is a read-only field. Initially, it will display the date of the reservation. When you fill in the Time fields, the system will recalculate the trigger date according to the values you entered and display it in this field.

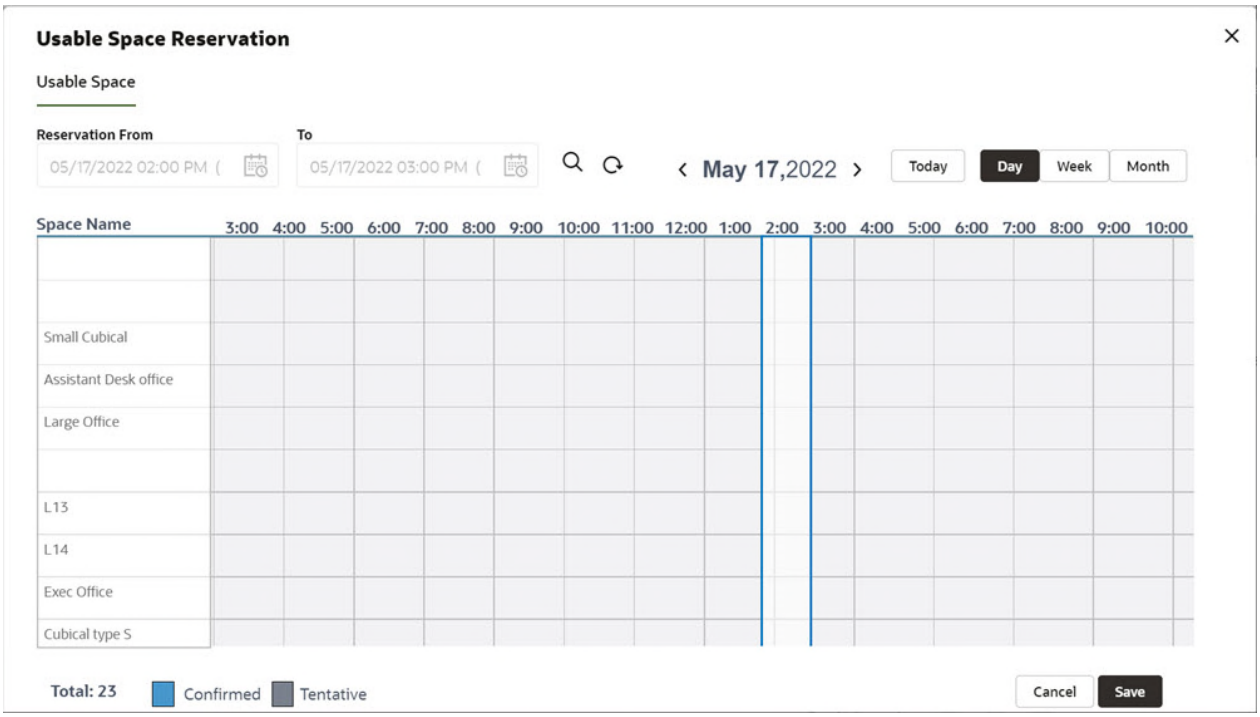
Auto-creation and recurring reservations: For auto-creation on a recurring reservation, the system re-evaluates the trigger date for each recurrence. The Reservation business process will show a hyperlink to only the last record created; however, you can see all the records created by opening the View References window. You cannot manually auto-create a business process for a recurring reservation.

How the Data Pickers Work on a Reservation Business Process

The data pickers designed for Reservation business processes differ from most other data pickers in that they are very interactive: You can check availability and change reservation dates and times from the picker itself.

> **Note:** This works best if you are reserving a single object, such as a room. If you are reserving multiple objects for the event, any time you change the date or time frame for any one of the objects, the system will reflect that change for all the objects, and you are likely to encounter scheduling conflicts this way. To change the dates or time frames of multiple objects on a reservation, use the Schedules feature.

The data pickers for reservable objects show the object in a schedule-like window:



To select a reservable object from the picker:

Double-click the object you would like to reserve on the leftmost column.

To change a reservation time on the picker:

At the top of the data picker window, the **Reservation From** and **To** fields show the time frame you specified in the **From Date** and **To Date** fields on the Reservation form. This time frame is also denoted by the green and red lines on the schedule. If the object shows a reservation conflict at that time, you can change the time frame on the picker before you select the object.

To change the time frame, drag the green and red lines to the time frame you want. The system will change the **Reservation From/To** fields at the bottom of the window to reflect your change. When you click the **Open** button to select the object to reserve, the system will update the Reservation record with the new time.

Using Quick Calendar Entry on a Business Process

The Quick Calendar is available on any business process that was designed to include the calendar feature (calendar-enabled). From the business process record, you can open the calendar and enter a reservation.

Any entry you make on the calendar will update the record.

> **Note:** The calendar does not show draft or terminated records.

To make a reservation using a Quick Calendar Entry:

1) From the log, open the business process record.
2) From the toolbar, click **Calendar**. The Calendar window opens.

   By default, the calendar opens in the "Month" view. You can change this to a day or week view if you want using the tabs at the top of the calendar. If there are more reservations than are visible on any day, click the down arrow at the bottom of the day cell to see the rest of the reservations.

   The calendar shows confirmed and tentative reservations in color. The current day is highlighted blue.
3) Click the day you want to make the reservation for. If you are using the Day view of the calendar, click the beginning hour for the reservation.

   The system displays a reservation window.
4) Fill in the Name, From, and To fields.
5) In the Status field, specify whether this reservation is tentative or confirmed.
6) Click **Create Event**.

   The system adds the reservation to the calendar.

To view all reserved objects in a log:

If you want to see all the reserved objects in a log, click the Calendar button above the log. The system displays a calendar showing all the reserved objects from that log. The Calendar button will not appear above the log unless there are calendar-enabled objects in the log.

To view and edit a reservation:

1) Open the record of the business process that is reservable and click the **Calendar** button.
2) On the calendar, click the reservation bar. The system displays a summary details window.
3) To see or edit reservation details, click the details link. The system displays the reservation window.
4) Edit the details, if necessary, and click **Update Event**.
5) To delete the reservation, click the delete link.

To print a calendar:

1) Open the record of the business process that is reservable and click the Calendar button.
2) On the calendar, click the printer icon in the upper-left corner. The system opens the Calendar Print Preview window.
3) Click the Print button. The system displays the Print window, where you can choose the printer and other options.

4) Click the Print button.

Canceling a Reservation

To cancel a reservation:

1) Open the reservation business process you want to cancel.
2) From the drop-down menu (☰) choose **Cancel Reservation**. The system displays a Cancel Reservation window.

   On this window, the system tells you exactly what will be removed from the calendars, and provides an area for notes on the cancelation. It shows:

   - Any business processes this reservation auto-creates. These will also be canceled.
   - All the objects associated with this reservation that will be canceled. In the example above, the room is being canceled as well as the projector that was reserved for the room.
   - Additional details about the reserved object being canceled. You can access these by clicking the hyperlinked ID next to the name of the reserved object.
3) In the **Cancelation Notes** area, enter any applicable notes.
4) Click **Done.**

Entering Values in Fields

This topic provides information about entering data in fields.

Field	Entering Data
Date Picker	When entering a date in the Date or Date Only pickers, the "Today" and "Now" options are not available.
Date Only Picker	When entering a date in the Date or Date Only pickers, the "Today" and "Now" options are not available.
Drop-down (Pull Down)	The quick search does not have a search bar, and by default, the cursor is placed at the end of 'Search.' The label must be cleared before entering value.

Business Process Forms, Managers Attributes, and Shell Dashboards - User Interface

Unifier has undergone significant changes in the overall user interaction in the Business Process forms, various Logs, Cost Sheet, and so on. These changes were focused on the user interface (UI) and a few structural changes related to the user interaction. Many changes were rolled out in phase throughout 2018. In November of 2019, the Classic View of the business process forms, managers attributes, and shell dashboards was replaced with the Standard View. There were other functional improvements made as a result of the UI improvements, such as type-ahead, auto-fill in pickers, tooltips, and so on. Those improvements have been covered in pertinent user documents.

> **Note:** The images marked "New View" do not necessarily show the latest UI.

The redesigned business process user interface allows you to:

View, edit, and manage all relevant details within a single form.

- Access record details with limited pop-up and clicks.
- See only relevant, context-sensitive menu, and toolbar functions.
- Use the enhanced form layout to navigate, expand, and collapse field blocks.
- Create, enter, and update record data and line items in one place.
- Navigate easily between tabs to complete the main and line item forms.
- Add and view attachments in one place.
- Route workflows with minimized alerts and errors.
- Use enhanced field interaction in text boxes, pickers, and data pickers.

> **Note**: This updated version does not impact the fundamental ways in which a business process, manager attributes, or shell dashboards are created in the newer User Interface.

The following describes the business process types that are not supported in the UI and will continue to be shown in Classic View:

- Resource, which includes Resource Booking
- Resource, which includes Time Sheet
- Schedule Manager, which includes Custom Calendars
- Schedule Manager, which includes Schedule Sheets

The following describes the business process types and sub-types that support the newer UI:

- Cost
  - Line Items with CBS codes
  - Line Items with Fund codes
  - Line Items with CBS and Fund codes
  - Commit at Company Level
  - Line Items with Company Accounts Code

- Line Items with Multiple Codes
- Document
  - With Folder Structure
  - Without Folder Structure
- Line Item
  - Line Item (Generic)
  - Line item to filter Company Business Process Records
  - Preventive Maintenance
- Simple
- RFB
  - Generic
  - Line Items with CBS Codes
  - Line Items with Generic Cost manager
- Project/Shell Creation
  - Project/Shell Creation - Simple
  - Project/Shell Creation - Line Item
- Text

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Classic View User Interface Features Not Supported in Standard View

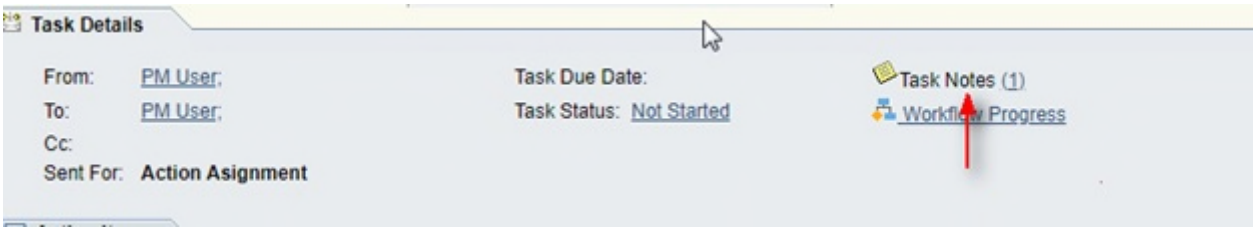
The following features will not be supported in the Standard View of the business processes forms:

- Adding or Viewing of Task Notes
- View Received Task option
- Uploading images from the toolbar
- Summary Items in business processes that support Summary line items
- Spell-check feature in business process

The following explains each feature in detail:

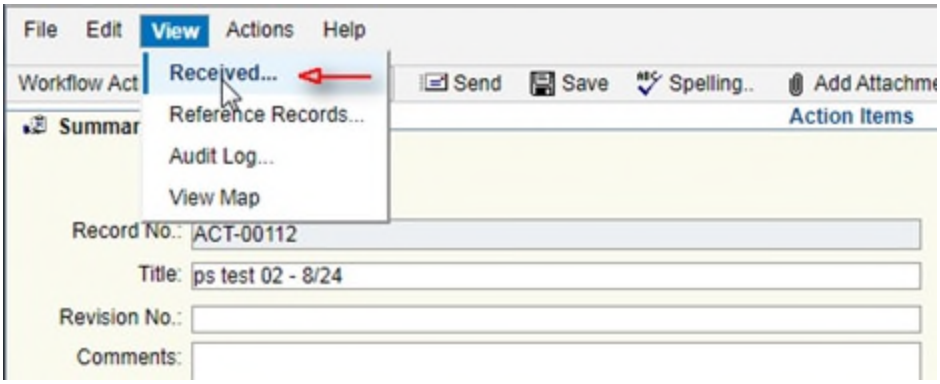
Adding or Viewing of Task Notes

In the Classic View, notes that are specific to a task can be added to a BP form. They are temporary notes that can be used as comments for, or specific instructions to, the next user in the workflow. Task notes are not forwarded throughout the workflow and are not archived. You can think of them as sticky notes that stay with the form for one step in the workflow only. A task note only applies to the current task.



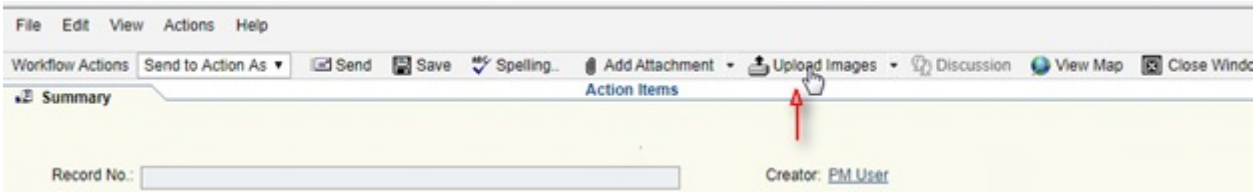
View Received Task option

In the Classic View, after a Task assignee accepts a Task, the form seen is based on the Action Form associated with the current step of the workflow. In the event that an assignee wants to see the received task, the assignee can click the View menu option and select the "Received" option.



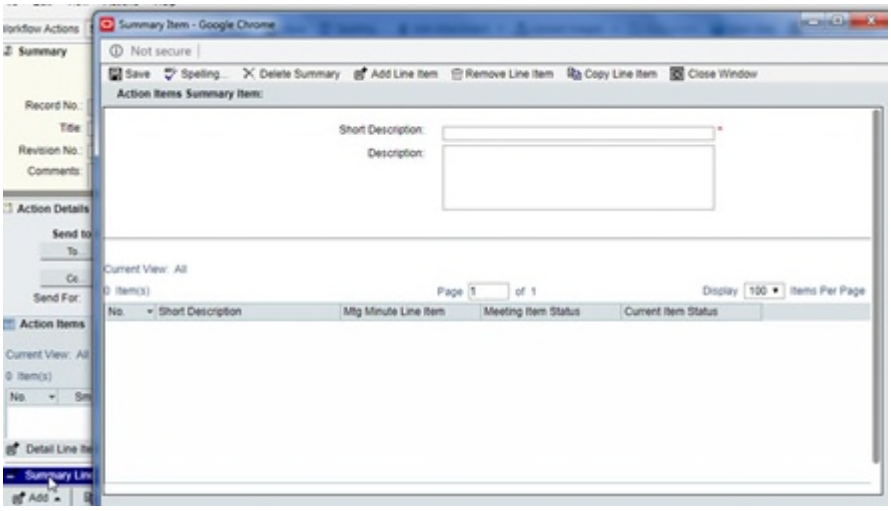
Uploading images from the toolbar

In the Classic View, if there are multiple image-picker fields in the form, the Upload Images option in the toolbar can be used to upload images in bulk.



Summary Items in business processes that support Summary line items

In the Classic View, the Summary Items window enables you to group regular line items together, with the summary only appearing on the BP. The sub-line items are rolled up to other areas, such as the Cost Manager.



Spell-check feature in business process

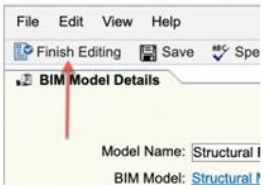
In the Classic View, the spell-check feature is available for all BP forms, including the Cost, Document, Text, Simple, and Line Item BPs. You can spell-check information that you have entered in the text fields and any other text areas.

Classic View and Standard View Labels

The following provides a comparison between the labels of the Classic and Standard View. The left picture shows the label in the Classic View, and the right picture shows the label in the Standard View.

In a non-workflow business process, the **Finish Editing** label has changed to **Submit** label, as shown below. When you click **Submit**, you submit the form changes.

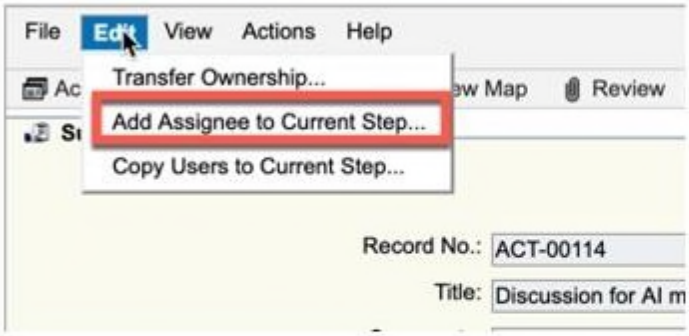
Classic View



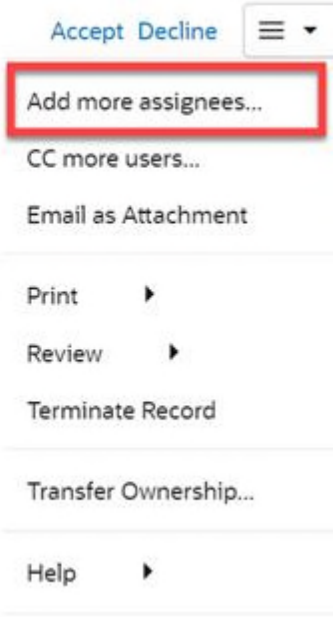
New View

In a workflow business process view form, The **Add Assignee to Current Step…** label has changed to **Add more assignees…**, as shown below:

Classic View

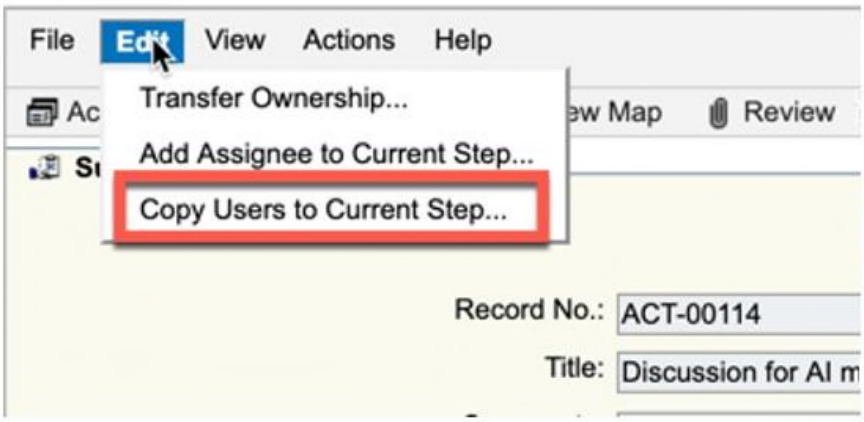


New View

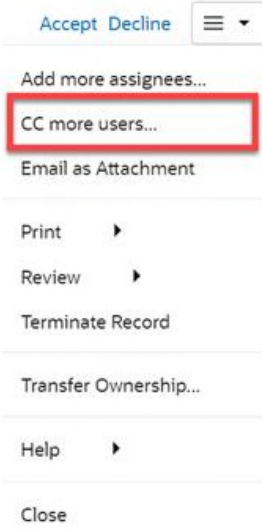


In a workflow business process view form, the **Copy Users to Current Step…** label has changed to **CC more users…**, as shown below:

Classic View

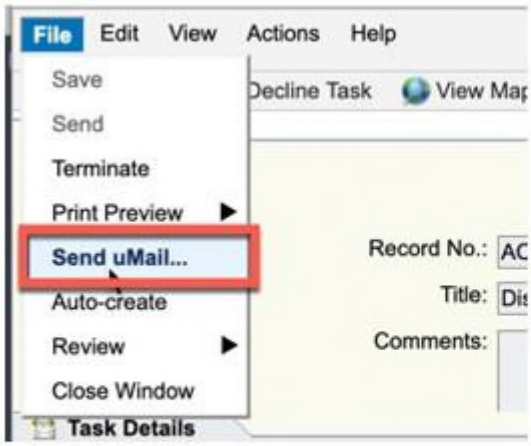


New View



In a workflow business process view form, the **Send uMail** label has changed to **Email as Attachment**, as shown below:

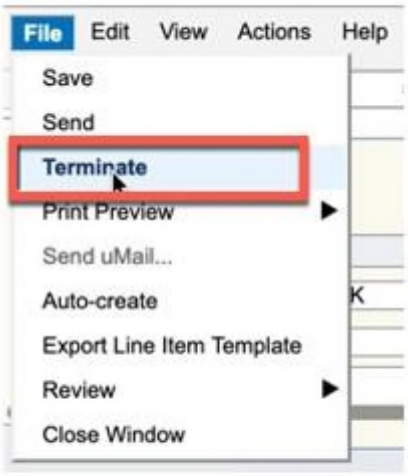
Classic View



New View

In a workflow business process view form, the **Terminate** label has changed to **Terminate Record**, as shown below:

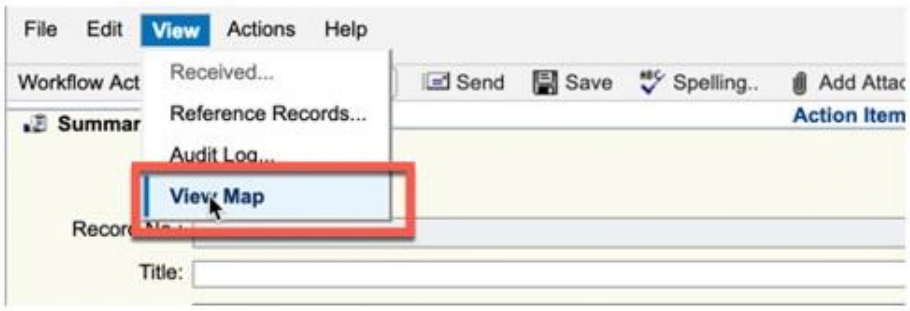
Classic View



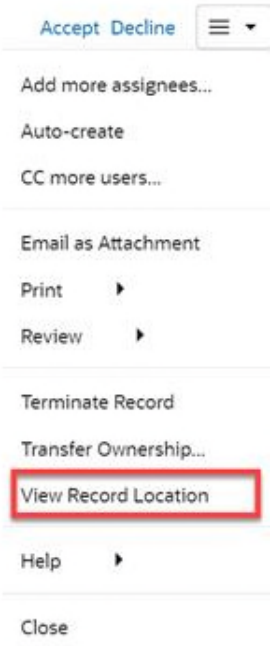
New View

In both the workflow and non-workflow business process forms, where the business process is enabled for **Geo-Coding**, the **View Map** label has changed to **View Record Location**, as shown below:

Classic View

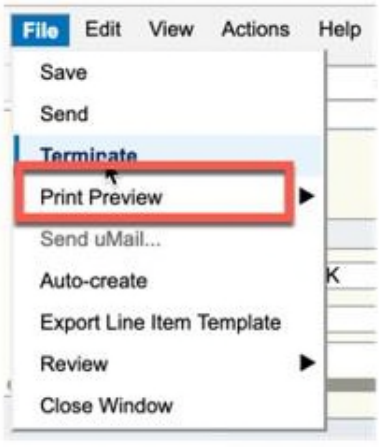


New View

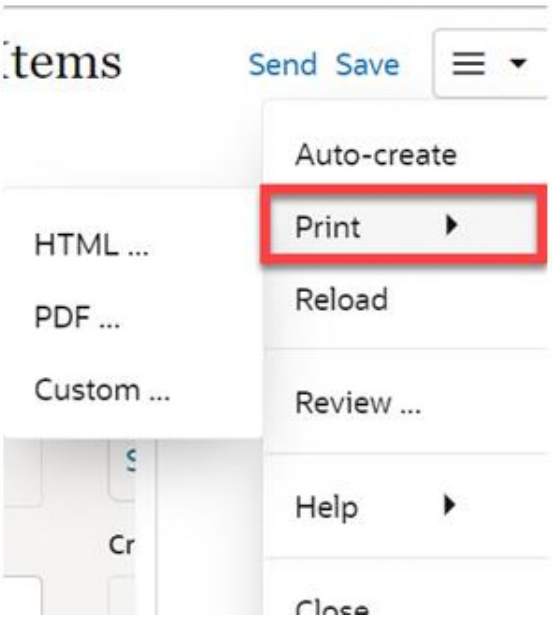


In both the workflow and non-workflow business process forms, the **Print Preview** label has changed to **Print**, as shown below:

Classic View

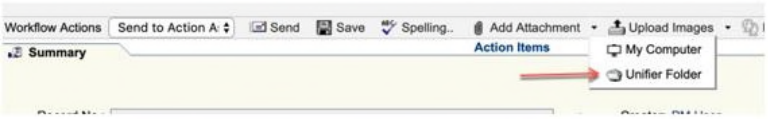


New View

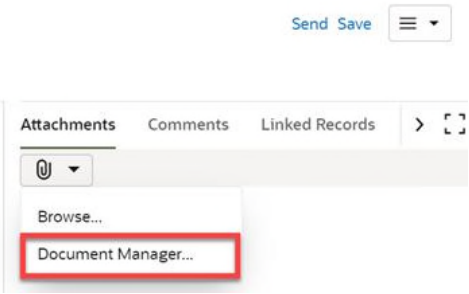


In both the workflow and non-workflow business process forms, the Attachment source **Unifier Folder** label has changed to **Document Manager**, as shown below:

Classic View

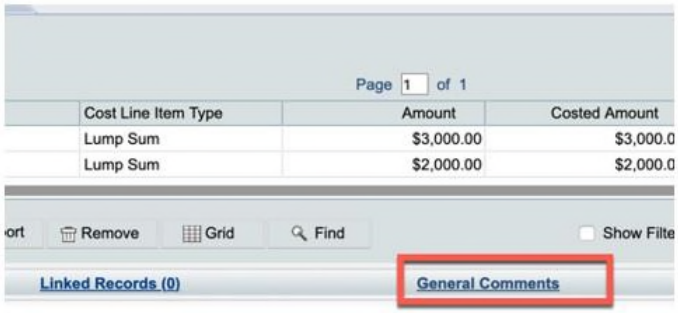


New View

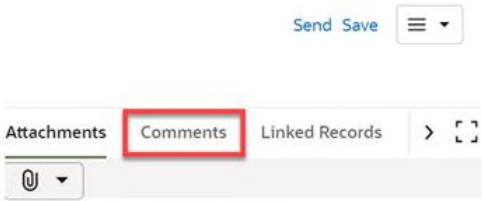


In both the workflow and non-workflow business process forms, the **General Comments** label has changed to **Comments**, as shown below:

Classic View



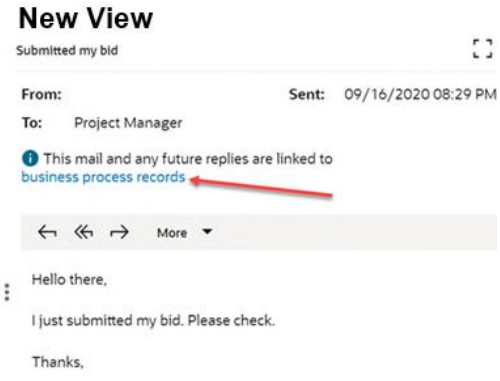
New View



In the **Mailbox**, when mails are linked to business process records, the **Show List** label has changed to **business process records**, as shown below:

Classic View

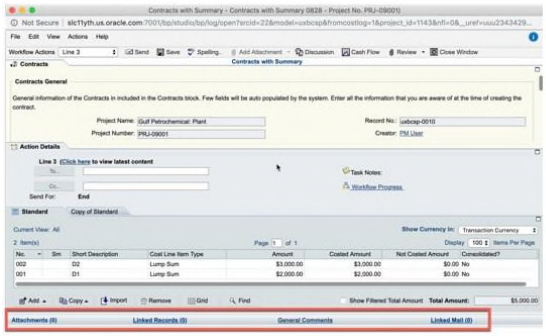
New View



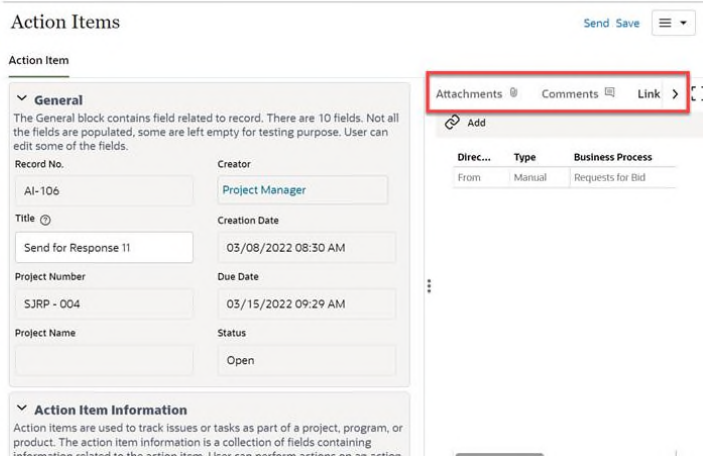
Classic View and Standard View Tabs, Menus, and Actions

In the Standard View of both workflow and non-workflow business processes, the right pane displays tabs that contain additional attributes of the business process record such as **Attachments**, **Comments**, **Lined Records**, **Linked Mail**, **Reference Records**, **Workflow Progress**, and **Audit Log**, in the Standard View, as shown below:

Classic View

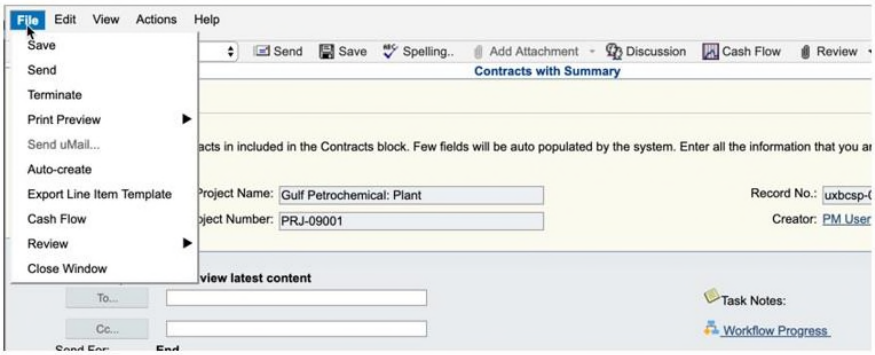


New View

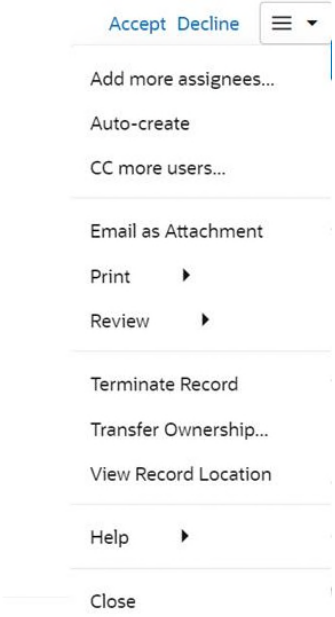


All non-primary actions such as printing record content, reviewing upper form and line item attachments at the record level, and setting up schedule for auto-creation are part of the Menu option (three horizontal line icon) ☰ , in the Standard View, as shown below:

Classic View

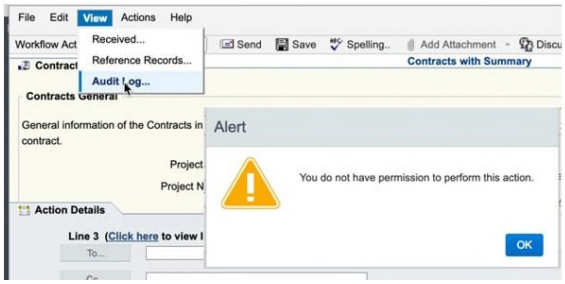


New View



In the Standard View, if the signed-in user does not have permission to view certain content of the record, the right pane does not display the corresponding tab. As an example, the following shows the Standard View when the signed-in user does not have View permission for **Audit Log**:

Classic View

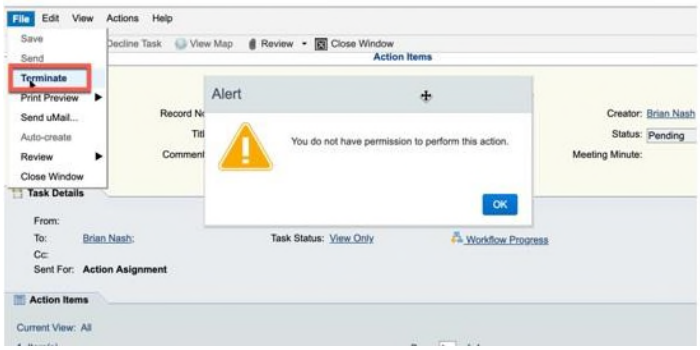


New View

Audit log tab will be hidden

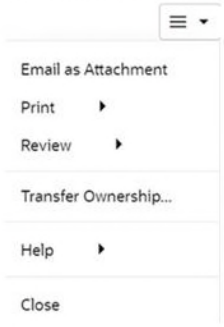
In the Standard View, if the signed-in user does not have permission to perform certain actions such as **Terminate Record**, the user would not see that action option under the Menu option (three horizontal line icon) ☰ , in the Standard View, as shown below:

Classic View



New View

Terminate Record option will be hidden

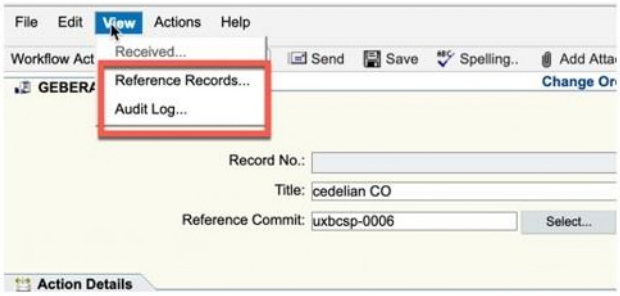


Classic View and Standard View Functions

> **Note:** If a Workflow Business Process was created in the Classic View and remained as draft, when you open the draft from Standard View, the draft will open in the Classic View. After you submit the draft, the submitted record opens in Standard View.

In a workflow business process, at any given step of a business process record, only those options (both tabs and menu) that are applicable to the given step will be displayed. For example, in the Classic View the **Reference Records** and **Audit Log** options were seen in the creation stage (although not applicable to the creation step). In the Standard View, these options are not displayed, as shown below:

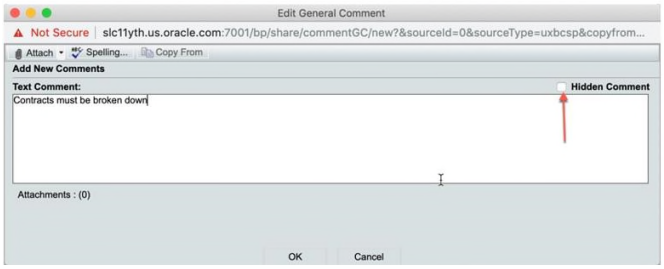
Classic View



New View

In the Standard View of both the workflow and non-workflow business processes, when you add a comment, by default the check box of **Hide** is selected, as shown below. This means that a comment is hidden by default and if you want your comment to be viewed by everyone, you must deselect this option.

Classic View

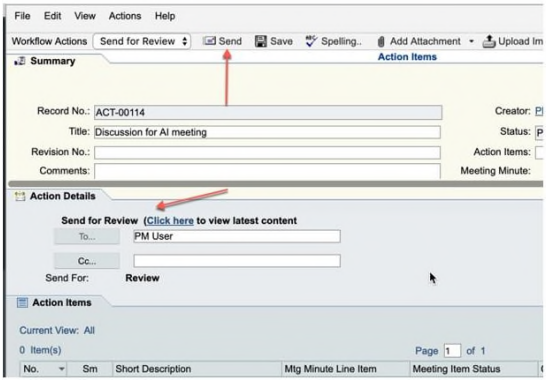


New View

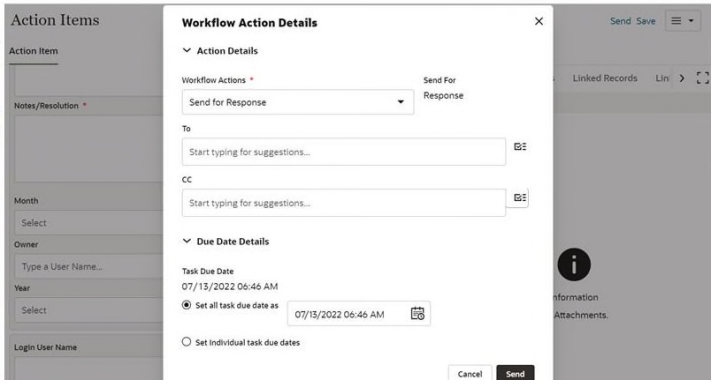
In the Standard View, when you add Linked Records to a workflow or non-workflow business process record, the list of the business processes displayed will be based on your (the user's) node access (items on left Navigation screen). For example, if you do not have access (for example, view permission) to a certain node (sub-node) under the **Logs**, that node (in this case a BP record) will not appear under the **Logs**. As a result, you cannot add the BP record as a linked record because you do not have permission.

In the Standard View, the workflow details are displayed after you click **Send**. When the workflow details are displayed, the data validations, filtering of assignees (if applicable), and so forth, have already been completed.

Classic View

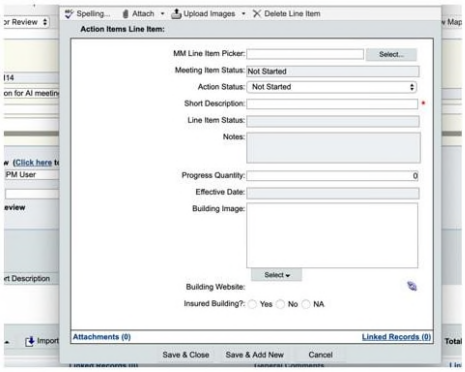


New View

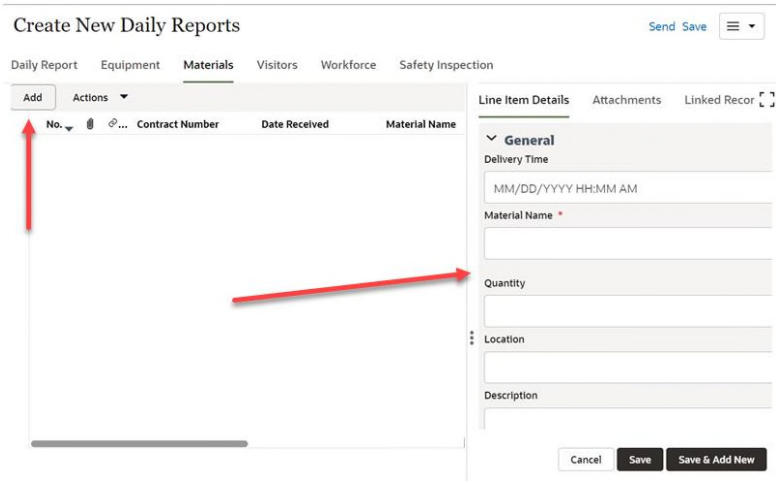


In the Standard View, the line item forms are no longer displayed as pop-ups. Instead, the line item detail form (**Line Items Details**) opens on the right-side of the line item list, as shown below:

Classic View



New View



In the Standard View, for auto-created records (**Auto Create BP**) that are in Initiation Step, but the job is not yet complete, the accept and decline actions will not be displayed.

In the Standard View, you cannot transfer ownership if the selected user is the record owner.

In the Standard View, the form design is retained without any exceptions.

In the Classic View of Change Commit BP, if the **Reference Commit** field is marked as read-only, in the design (uDesigner), in the Standard View the **Reference Commit** field will be rendered as a read-only data element.

> **Note:** Prior to this improvement, in the Classic View, this data element had an exception, wherein even if the field was marked as read-only, at runtime, the field would have been enabled.

In the Standard View, if a **Date Picker** field has been added to the Line Item List, the value displayed will include both the **Date** and the **Time.**

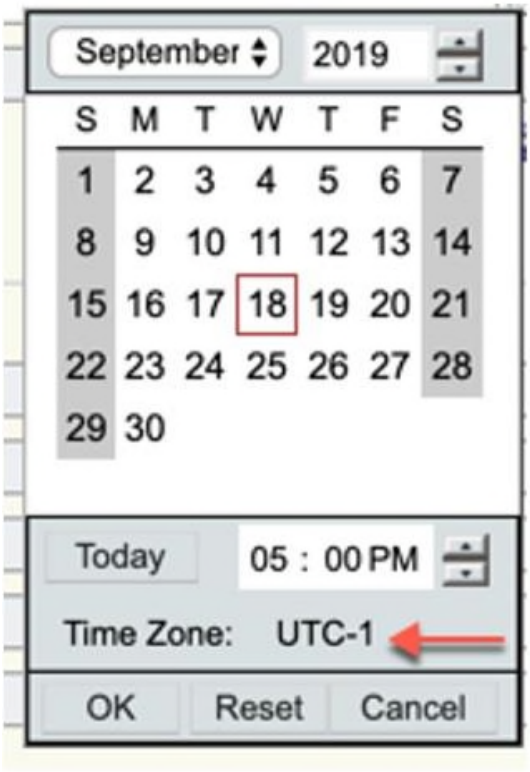
> **Note:** In the Classic View, the value displayed only included the **Date** and not the **Time**.

In the Standard View, you can change the BP picker field value (referenced by a **Line Item Picker** field) in a line item. The BP picker field value cannot be changed if the **Line Item Picker** field has a line item reference in the field.

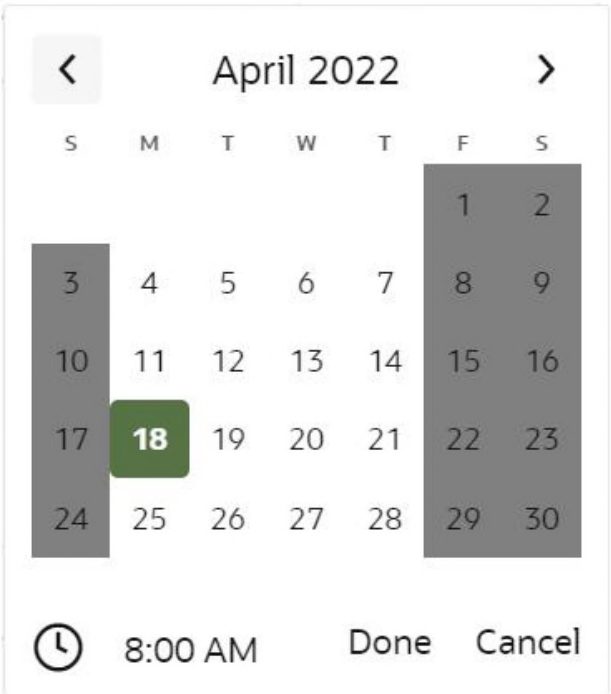
> **Note:** In the Classic View, you could not change the BP picker field value even if the **Line Item Picker** field in the line item did not have a value.

In the Standard View, the **Date Picker** controls will not have the **Time Zone** information, as shown below:

Classic View

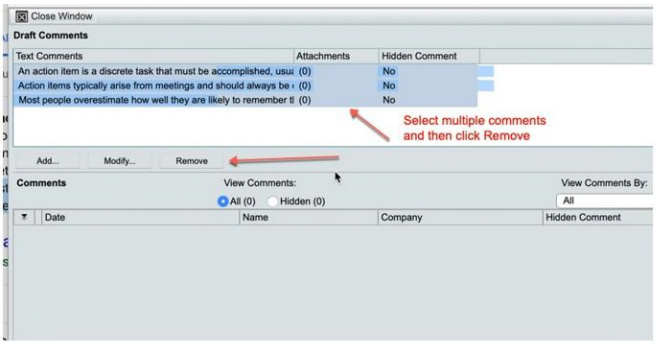


New View

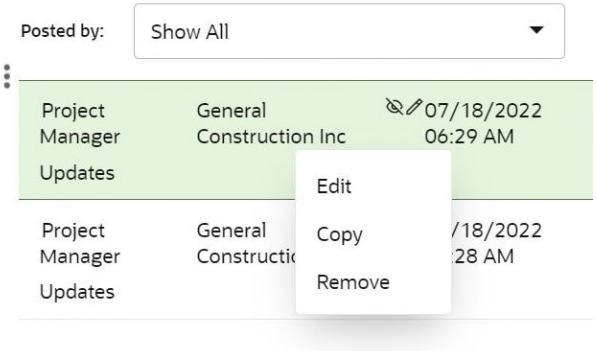


In the Standard View, you cannot delete multiple draft comments (from the **Comments** tab), as shown below:

Classic View



New View



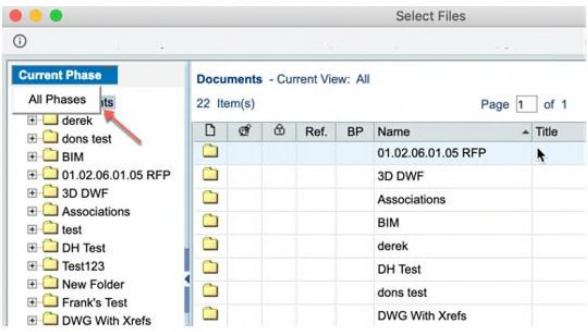
In the Standard View, the **Document Review** option is present at the time of creating the record, unlike Classic View where the option is seen only after creating the record, as shown below:

Classic View

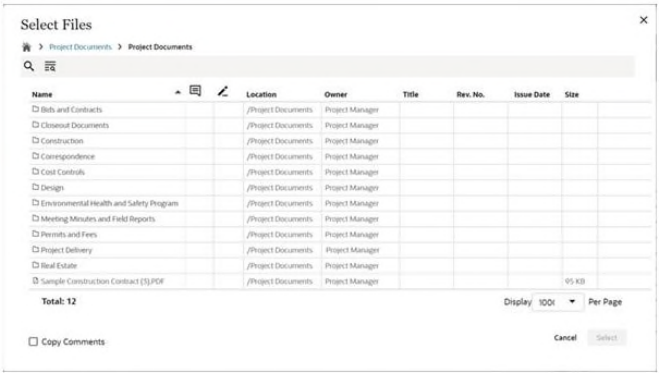
New View

In the Standard View, the document management picker (displayed when adding attachments from Unifier **Document Manager**) does not show phase selection, as shown below:

Classic View

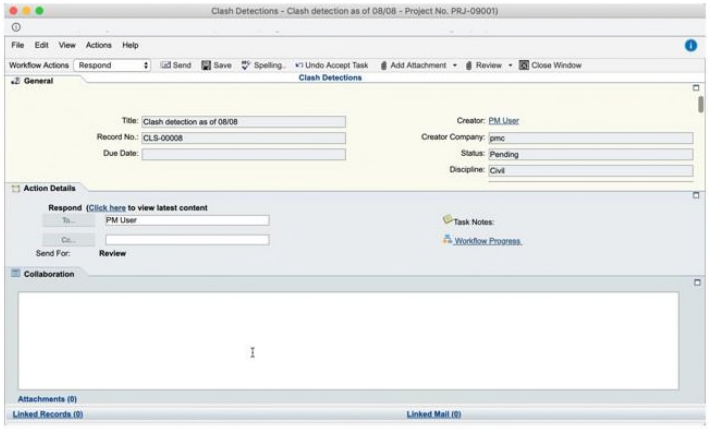


New View



In the Standard View, for the Text-type business process, the way the comments are added and displayed has changed, as shown below:

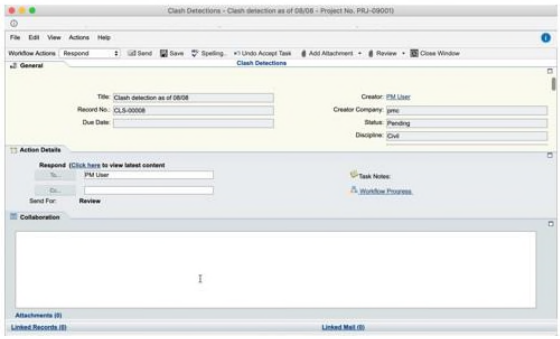
Classic View



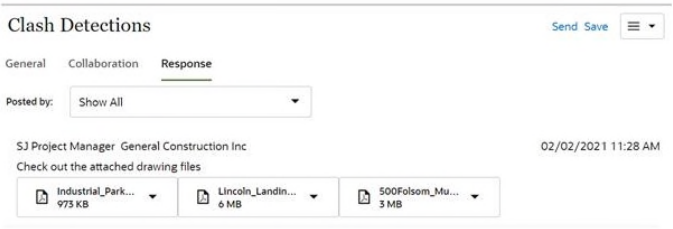
New View

Standard View, for the Text-type business process, you can view previous comments in the **Response** tab, as shown below:

Classic View

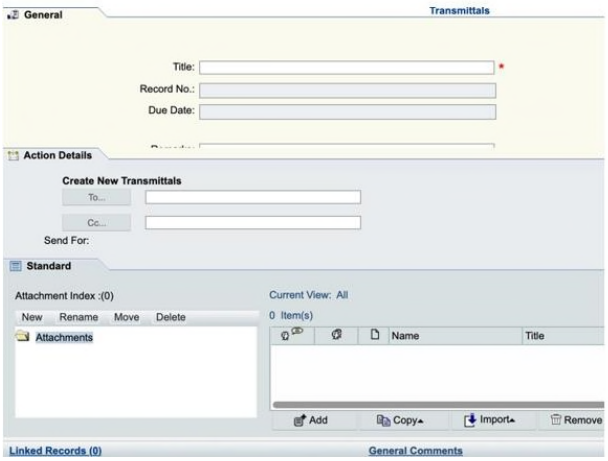


New View

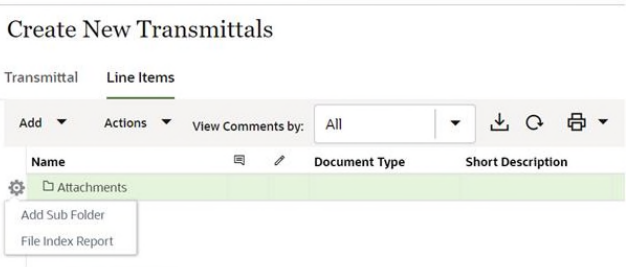


In the Standard View, for the Document-type business process, the steps to create folders and line items have changed, as shown below:

Classic View



New View



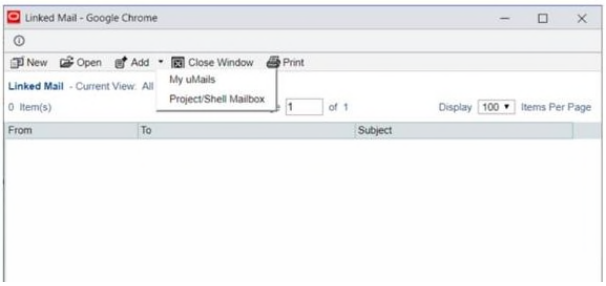
In the Standard View, for the Document-type business process, the steps to add an attachment to a line item has changed. In the Line Item tab, there will be an Attachments tab, similar to the attachments tab on the main business process form.

In the Standard View, in the **Linked Mail** tab, the **Add** drop-down list includes the options:

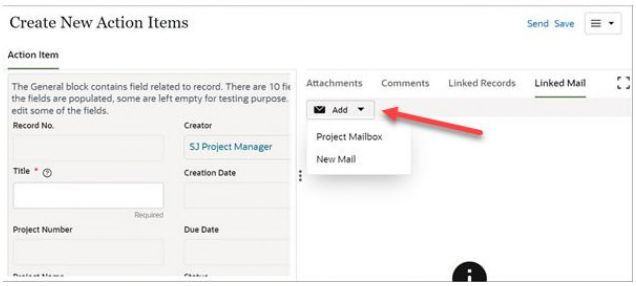
- **Mailbox**: To attach existing Mailbox mails as well as Project Mailbox inbound emails
- **New Mail**: To compose a new email

See below for details:

Classic View



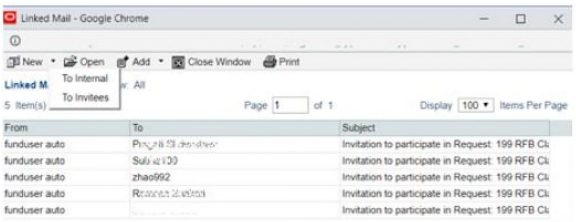
New View



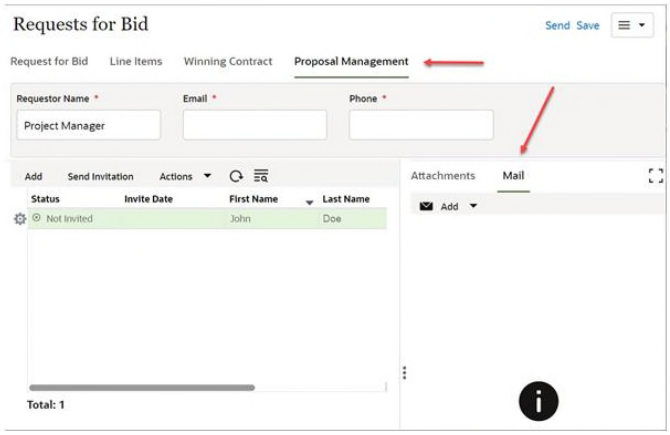
In the Standard View, in the **Linked Mail** tab of the RFB-type (Request for Bid) business process, you can send emails to Unifier users and bid invitees in the **Proposal Management** tab. The right pane has the Mail tab, which is used to send mail to users. The option to send mail to bid invitees is located in the *gear menu* (⚙).

> **Note:** In the Classic view, you used the New menu option to send emails to users and bid invitees.

Classic View



New View



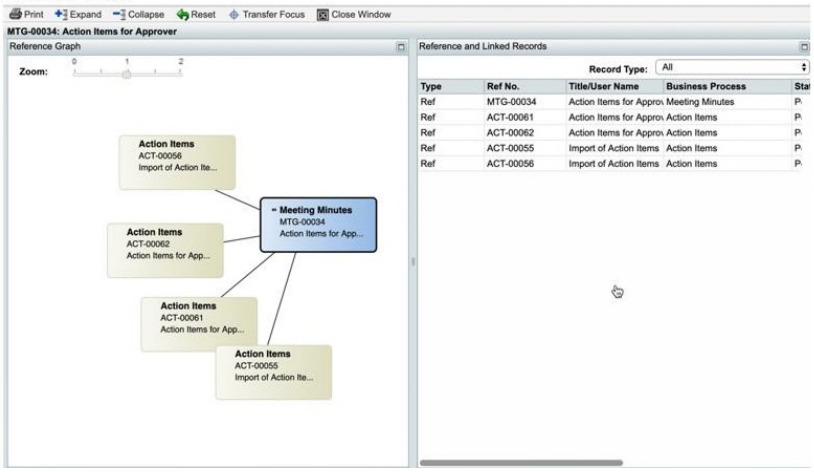
In the Standard View, for the RFB-type business process, when sending email to invitees, you can click the **To** *hyperlink* to access the list of all available invitees.

> **Note:** In the Classic View, you clicked the **To** *option* to access the list of all available invitees.

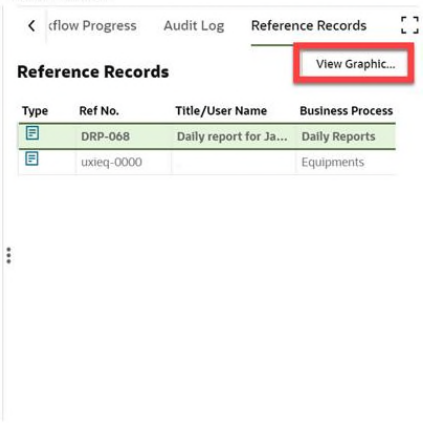
In the Standard View, for the RFB-type business process, after a bid is closed, the show bid screen (**Preview**) has been enhanced.

In the Standard View of both the workflow and non-workflow business processes, the graphical diagram and the list view (while viewing of reference records in the **Reference Records** tab) have been enhanced, as shown:

Classic View



New View



In the Standard View, the **Line Item Consolidation** window has been enhanced.