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# Oracle SCM Cloud
Using Product Development

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Preface

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

Oracle Applications Help

Use the help icon ☰️ to access Oracle Applications Help in the application. If you don’t see any help icons on your page, click the Show Help icon ☰️ in the global header. Not all pages have help icons. You can also access Oracle Applications Help at https://fusionhelp.oracle.com.

Using Applications Help

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

Additional Resources

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

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

• Training: Take courses on Oracle Cloud from Oracle University.

Documentation Accessibility

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

Comments and Suggestions

Please give us feedback about Oracle Applications Help and guides! You can send e-mail to: oracle_fusion_applications_help_ww_grp@oracle.com.
1 Introduction

Product Development: Overview

Product Development tracks the early development phases of products that are going to be designed or built. Product Development uses business objects called items, documents, and manufacturer parts to build development structures that describe the full assembly or product to be manufactured, or the content of the subassembly. Another business object, the change order, is used to track a change or multiple changes on an item, document, their structure, or on a manufacturer part that is associated with an item, with a revision attachment, or with the attributes of an item or document.

Product Development lets you accomplish these tasks:

- Introduce new items or documents to the enterprise, and add information and data to them with easily defined attributes and characteristics;
- Gather items (with associated manufacturer parts) and documents into a structure (Bill of Materials or BOM);
- Manage change orders formally and centrally on items, documents, AML, structures, and attachments, and analyze the impact of each change;
- Easily find items, documents, manufacturer parts, manufacturers, and change orders with simple or customized searches, and manage them with quick procedures that have immediate results;
- Differentiate between items with revision-specific lifecycle phases, and with calculated item grades that help evaluate for production readiness;
- Manage manufacturer parts with an Approved Manufacturers List (AML) that can be associated with any item or part;
- Incorporate Concepts or Requirements from Oracle Innovation Management Cloud applications;
- Connect items, documents, and change orders to Project Tasks; and,
- Hand over items, documents, and structures to manufacturing, and track them downstream to production and through to commercialization.

Related Topics

- Design and Develop Products: Overview

Innovation to Commercialization: Overview

Product Development’s functionality can be broadened by Innovation Management and by Product Hub applications. The enterprise can streamline its end-to-end business processes:

- Innovation and Proposals: Innovation Management applications;
- Design and early Development: Product Development;
- Manufacturing to Commercialization: Product Hub.
Innovation Management

Innovation Management is a suite of Supply Chain Management applications that promotes the abilities of the enterprise to build the right products. Innovation Management comprises three compatible applications:

- **Ideas** Workspace: supports and simplifies the innovation process to create, aggregate, and review ideas about potential products.
- **Concepts** Workspace: supports defining a product in its conceptual phase, building requirements specifications, concepts, and proposals.
- **Portfolios** Workspace: gathers product proposals into a portfolio. Portfolio scenarios are based on analyses of value, balance, strategy, resources, and product mix.

Product Development to Commercialization

The enterprise brings matured concepts, proposals, and requirements specification forward to become products. A product is designed and developed in Product Development, then handed over to Product Hub to be manufactured and commercialized:

- **Product Development** supports item and document creation and enrichment, and building items and documents into structures. A structure is a list of assemblies - of items and manufacturer parts - that constitute the design and prototype of the product. Documents may be on their own structures. Or, documents may be on the same structure as, and in support of, items. So, a structure may include documents that supports the assembly of items, or a separate structure of documents can support a structure of items and manufacturer parts.

  Using change orders to formally modify items, documents, and structures, the product evolves and moves through initial development stages to readiness for manufacturing.

  Product Development helps users manage Master Organization items and documents, while Product Hub helps users manage Site items.

- **Product Hub** takes the product through stages of manufacturing to commercial release, including multiple versions, packaging, and other downstream processes. Product Hub allows the detailing-out of commercial and operational attributes, and facilitates the management of part catalogs.

  Documents that are created in Product Development can be seen and modified in Product Hub; a document that is created in Product Hub is not the same kind of business object as created in Product Development.

Documentation

You can find the following documentation for these Supply Chain Management (SCM) solutions on the Oracle Help Center:

- Oracle SCM Cloud Getting Started with Your Implementation of Oracle SCM Cloud
- Oracle SCM Cloud Implementing Product Development
- Oracle SCM Cloud Using Product Development
- Oracle SCM Cloud Implementing Product Management
- Oracle SCM Cloud Using Product Master Data Management
- Oracle SCM Cloud Using Innovation Management
- Oracle SCM Cloud Securing Oracle Supply Chain Management Cloud
2 Getting Started with Product Development

Design and Develop Products: Overview

The building blocks to managing the design and development of products are: Items; Documents; Manufacturer Parts and their Manufacturers; Structures; and, Change Orders.

Items and Documents

Design engineers and product managers create items in Product Development or Product Hub to represent the parts and assemblies of a product. A document is another type of item or part, representing description or specification of items. The specific attributes of each new business object describe the characteristics of the item or document and, taken together, the particular product. In this way, item and document business objects carry the necessary technical and engineering information of the product.

Manufacturer Parts and Manufacturers

Product Development requires a manufacturer to be created before you may even create a manufacturer part produced by that manufacturer. A manufacturer part (that is, an item produced by a manufacturer) can be related to any item designed or produced by your company. Any items on a structure may be sourced with parts from the approved manufacturers list (AML); a document may not be associated with a manufacturer part. An item that is associated with a manufacturer part and belongs to a structure will have an icon next to it on the Structure table that indicates the association with a manufacturer part.

Manufacturer parts are identified with manufacturer part numbers (MPNs).

Note: Item grade is calculated for items only, not for documents nor for manufacturer parts. However, the configuration of item grade may allow the AML situation to be considered in the calculation of the item grade.

Item and Document Structures

In Product Development, a Bill of Materials is called a structure; a structure could be called an item structure or document structure as needed; items and documents may be in the same structure, with no restriction on maximum or minimum number of either type of business object.

Note that a structure is not created as a business object, that is, with the Create action. As collections of items or documents, structures do have business rules and user pages that are particular to this building block in Product Development.

In any case, a structure holds all the items and documents that make up an assembly or subassembly. Any item on a structure may be associated to one or more manufacturer parts. On the Structure table, an icon next to an item indicates the presence of manufacturer parts. So, a structure populated with items will likely comprise associated manufacturer parts.

When an item is added to a parent item, a Structure Definition now exists. As items are added, the structure is always named and referred to by its top-level item. A item structure may be only one item.

A document structure holds all the documents that make up a form of documentation. When a document is added to a parent document, a simple structure now exists. A structure of documents will be named and referred to by its top-level document. A document structure may be only one document.
Change Orders

The change control process, also called change management, includes all procedures that manage the alterations or modifications to any item or document in your company’s design and manufacturing processes. Examples of entities that can be altered by a change order include: item or document attributes; item or document revisions; item or document structures; lifecycle phases; and attachments.

When a change order is used to formalize the enrichment of an item or document (that is, adding and modifying attributes) or the construction of a structure, no further modification on any scale can be effected without an additional change order. Change orders, like items, may be initiated in Product Development or Product Hub.

Related Topics
- Item and Document Structure Page: Explained
- Item AML Tile: Explained
- Information Tiles on Change Order Pages: Overview

Information Tiles on Product Development Overview Page

When you sign in to Oracle Supply Chain Management Cloud, on the "splash page" click the Product Management icon. Then click the Product Development icon. The Product Development Overview page appears. You may also click the Navigator icon and click Product Development to open the application.

The information tiles organize information about the business objects in Product Development. They let you easily find additional data on favorite items, documents, change orders, and worklist notifications of approaching deadlines. Specific, or named, Item pages and named Change Order pages have their own set of information tiles.

To expand an information tile, click the blue "Go" bar at the bottom of the tile. This lets you select from, and drill down to, all the information in that tile.

Within any information tile, the number and often the adjoining text may be enabled to go to a list of the named category.

The Overview page information tiles are My Worklist, My Changes, My Favorite Structures, and Cycle Time.

My Worklist

My Worklist information tile filters and collects your notifications about tasks that you must act on. Click each category to see your notifications in that category: Overdue Deadline, Approaching Deadline, or Waiting for Review. Or click the Go bar to see your entire worklist.

The calculations for the Worklist categories are based on the Need-by Date attribute in change orders.

- Overdue deadline: Current system date > Need-by Date
- Approaching deadline: Need-by Date minus Current System Date must be 2 days or less
- Waiting for Review: All other notifications

For Approaching deadline criteria, the number of days is two, which is not configurable. If the Need-by Date not specified, it remains in Waiting for Review.
The available **Actions** on notifications are **Approve**, **Reject**, **Show in New Tab**, **Open Task**, and **Close**. For example, you may be notified to review a change order, and you can approve or reject the change order from here. Actions that are not available on a selected notification are disabled.

Comments notifications and Send Object notifications are also displayed on My Worklist.

**My Changes**

**My Changes** information tile compiles the number of change orders that you are involved with. Click each category to see pertinent change orders: the **Open** link shows all change orders in Draft or Open status; the **Pending Approval** link shows all change orders in Interim Approval or Approval status; the **Approved** link shows all change orders in Scheduled or Completed status.

Or click the Go bar to see all your change orders on the **My Changes** page.

The available Actions on the My Changes page are **Create**, **Edit**, **Change Status**, and **Delete**. The toolbar has several filters to sort the list of changes: **Status Changed** (sort by Open, Pending Approval, or Approved), **Type**, and **Cycle Time**.

**My Favorite Structures**

My Favorite Structures information tile organizes items and structures that you have marked as a favorite.

The categories in the tile - **Released**, **Unreleased**, **Obsolete**, and **Unclassified** - may be similar or parallel with lifecycle phases that are used by your company. The administrator will have associated these categories with a lifecycle phase type. When you click each category, you see the items in the system that are currently in the lifecycle phase associated with that category.

**Cycle Time**

**Cycle Time** information tile lists how many change orders have been open for a short, acceptable period of time, or a longer time that needs your attention. The standard open time for each type of change order can be configured.

The Go bar takes you to the My Changes page.

**Related Topics**

- Item and Document Details Page: Explained
- Change Order Changes Tile and Affected Objects: Explained
- Change Order Actions and Change Status: Explained
- Lifecycle Phases: Explained
Toolbar on Product Development Work Area Pages: Overview

The toolbar is a selection of functions that you can find at the top of every page in the Product Development work area. On, for example, the Overview page, you see from left to right:

- **Search** tools, including:
  - the **Search For** drop-down list,
  - the content field, and
  - the **Advanced** search button;

- **Create** drop-down list, that lets you create:
  - **Items**,
  - **Documents**,
  - **Manufacturer Parts**,
  - **Manufacturers**, and
  - **Change Orders**;

- **Settings** drop-down list, that lets you go to:
  - **Settings**, the setup and maintenance functions, and
  - **View Item Audit Trail**, an item history report;

- Two side tabs:
  - **Audit Results**, a change order audit report, and
  - Item **Clipboard**, a copy and paste function.

Search, Create, and the other tools listed above are detailed in the remainder of this chapter.

Search for Business Objects in Product Development: Explained

In the **Search For** drop-down list, select one of the Product Development business objects, enter a complete or partial object name in the open field, and click the **Search** arrow button. From the returned list, click an object to open it on its own tab.

Certain features speed your search definitions, especially while building structures or adding items to a change order. These include:

- **Type-ahead** lets you begin typing and, when typing stops for a couple of seconds, presents a list of objects containing the string you typed. When you add items to a structure or to a change order, the **Select and Add:**
Items dialog prompts you with a Search field. Enter, for example, the three letters "tab", and the type-ahead offers you a list of "tablet" items from the database.

- Starts with searches display a list of objects without requiring you to add a wildcard (for example, the % character) to the search string.

Fields Considered in All Searches

The application searches on Name and Description fields for all objects of the specified type. These are the precise searchable fields for each type of object in Product Development:

- Items: Item Name and Description;
- Documents: Document Name and Description;
- Manufacturer Parts: Manufacturer Part Number (MPN) and Description;
- Manufacturers: Manufacturer Name and Description;
- Change Orders: Change Order Number, Name, and Description.

Wildcard characters are not required in searches. The system begins its search when you type three characters and stop typing for a couple of seconds. For instance, type "tab" and stop, all items that contain the word "tablet" are returned.

Advanced Searches

To modify fields and search criteria parameters, click the Advanced button. The fields to be searched remain listed but now you can modify the search criteria operators, for example, Starts With, Equals, or Contains, using the drop-down lists with each field to be searched.

Click the Add Fields button to select from a list of Available fields, moving the ones you want to the Selected side. Then click OK. Note that the Add Fields list of Available fields changes with each type of business object.

You may want to use the list of search attributes and their parameters that you have just assembled. Click the Save button and use the Create Saved Search dialog to give your search an easy-to-remember name. Then select or deselect Set as Default and Run Automatically. Click OK. Later you may modify the parameters of a saved search and save it with a new name or save over the existing one.

When you have entered a string for each of the displayed attributes that you want combined to refine your search, click the Search button.

Create Product Development Business Objects: Overview

Every page in Product Development displays the + icon in the toolbar, which is the Create function. You can create or search for business objects regardless of any other task you are doing in the user interface. For instance, you can be building a structure of items, decide you need an item that does not yet exist, and simply create the item and add it to your structure.

To create a Product Development business object, click the Create icon and select from the drop-down list:

- Item
- Document
- Manufacturer Part
- Manufacturer
Change Order

Note: A Manufacturer Part can be associated with an item, through the AML. As a manufacturer part is created, it must be associated with a Manufacturer.

You can add information to any object as you create it; or, you can save it in simple form and add more data later.

Related Topics
- Information Tiles on Item Pages: Overview
- Information Tiles on Change Order Pages: Overview
- Create Change Orders: Overview

Other Tools in the Product Development Toolbar: Explained

At the top of every page in Product Development, to the right of the Search and Create tools, are the Settings drop-down list and side tabs for Audit Results and Clipboard.

Settings
The Settings drop-down list contains Settings and View Item Audit Trail. On the Settings drop-down list, if you select the Settings link and have been assigned rights to Setup and Maintenance functions, the Settings interface appears; see Oracle SCM Implementing Product Development. If you have not been assigned Setup and Maintenance rights, the Settings interface does not appear; see your Oracle Cloud administrator.

View Item Audit Trail
On the Settings drop-down list, select the View Item Audit Trail link. The Audit Reports page is displayed. An audit report is the history of an item or document, a listing of all actions or modifications that have altered the business object. Since the audit trail could show a complete history across all items and documents, it is necessary to filter first for the data you need. Your search for items or documents can be restricted by Business Object Type, Description, User, and Date.

Audit Results on Change Orders
To create an audit report on a change order, first open the Actions drop-down list on a change order, then select Audit, and select a list item on the fly-out list, say, Approval. This generates the audit.

Now click the Audit Results side tab. The audit checks for any problem or violation of the entry or exit criteria on the Status changes in the workflow of the change order.

Clipboard
The clipboard allows faster creating of structures by permitting temporary storage (copy) of multiple items and documents from other structures. This clipboard tool holds what has been copied until you perform another copy action. A palette shows the items and documents stored on the clipboard. Then you drag-and-drop (paste) what you need into the structure. The clipboard clears when the user logs out of the session. Note that the Copy and Paste actions on the item or document Structure page work the same way as the Clipboard tool.
Use Oracle Social Network with Product Development

Oracle Social Network (OSN) is a secure private network with a broad range of social tools. Embedded integration with OSN can be an additional tool in the Product Development framework, for example, pushing forward a dialogue with team members on the purpose of a change order. Some uses of Oracle Social Network include:

- Set up reviews, document sharing, or discussion to help you quickly correspond and make decisions;
- Capture information from people, enterprise applications, and business processes;
- Facilitate collaboration between individual users and teams of people both within and across your enterprises.

A conversation can be initiated from Product Development about a change order, an item, or a document. From the OSN conversation, the View Details button takes you to Product Development Cloud, and opens the business object being discussed.

Related Topics

- OSN Conversation Access to Change Order: Explained
- Oracle Social Network Objects in Product Development: Overview
- What are the prerequisites for Oracle Social Network integration?
- Social Networking: Highlights
3 Item and Document Management

Items and Documents in Product Development: Overview

Items and documents have many features in common. Both types of business objects are derived from the same original class type. From the primary Root Item Class, the administrator may create a Root Document Class. Additional class types may be created based on the root classes. Different class types allow different kinds of items and documents. Items created from the same item class inherit the same template of attributes; the same is true for documents.

There are some differences in how items and documents are displayed and what objects they can interact with. Items display certain details through information tiles, which documents do not have. The side tabs for documents and items are the same with the exception of AML, or manufacturer parts, which documents do not have.

Information Tiles on Item Pages: Overview

Four information tiles are at the top of every item or structure. (A structure is simply a top-level item.) The information tiles on items are Details, Structure, Changes, and AML. To expand an information tile, click the blue “Go” bar at the bottom of the tile. This lets you select from, and drill down to, all the information in that tile. The information tiles are also collapsible. The name of the tile and the Go bar remain so you can expand it easily.

Some information tiles on items and change orders let you apply filter criteria onto the list of records. A blue angle character “>” indicates currently selected filter criteria. A filter criterion is activated by clicking the right-side text label link. The icon is cleared when the Go bar is clicked, or when you navigate to another information tile or page.

See more information in topics about Item Details Tile, Item Structure Tile, Item Changes Tile, and Item AML Tile.

Details

With an item open, the default display is the General Information page, below the Details tile. Left Side tabs link to pages that provide more information about the item. Side tabs for Details pages are General Information, Where Used, Attachments, Team, Item Grade, and Relationships. The Where Used tab does not appear if the item is not referenced by any item or structure.

Structure

The Structure information tile can lead to two representations of the item or structure. When you click on a link in the tile, for example, Unreleased, you will go to a flat list of all component items in the structure by lifecycle. This is called List view. When you click the Go bar, you will see the Tree view of the multilevel structure.

Changes

The Changes information tile displays two categories, Items and Structure. Items category filters for change orders that are associated with that item. Structure category filters for change orders related to any item used in the item structure.

There is a distinction between Changes view and Item view. The Changes view lists, in the left-side panel, the change orders upon which this object and its child items are being routed. The right-side panel displays related Affected Objects, that is, those items that belong to the item structure.
**Items view** displays the list of items in the left-side panel and the related change orders in the right-side panel.

**Approved Manufacturers List (AML)**
The AML information tile lists manufacturer items, manufacturer details, and AML attributes for the components within this item.

**More about PD Documents: Overview**
The document business object behaves in much the same way as the item business object. A document may be added to an item structure in support or specification for an item or assembly. Or, documents may be added to a structure of only documents; the document structure may be parallel with an item structure if useful.

The main difference between items and documents is visual in that a document does not have information tiles. Also, documents are not associated with manufacturer parts; and documents are not supported by the Item Grade function and attributes.

All the tabs that are available on an item’s Details tile are available on a document. A document opens to its **General Information** tab, not information tiles like items. The icons and functioning of the tabs is the same for documents and items.

**Actions Menu on Items and Documents: Explained**
These tasks can be accomplished from the **Actions** menu on any page of any item or document:

- **Assign to Change Order**: you can be working in an item, document, structure, AML, or attachment and quickly get the item or document assigned to a new change order.
- **Save As**: a simple way to create a new business object from the one you are working in.
- **Delete**: if an item or document is in Draft status, it can be deleted through the Delete Group. If an item or document is in Approved status, it can be deleted but only if it is not being used in a structure. This Action simplifies the delete process; once the deletion is approved, and is placed on a Delete Group, a Product Hub administrator can delete that group.
- **Send Object**: this feature works for items, documents, and change orders. A message about the business object is sent to another user.
- **Refresh**: use this action to quickly refresh an item or document without saving, closing, and reopening it.

**Related Topics**
- **Create Product Development Business Objects: Overview**

**Item and Document Details Page: Explained**
An item’s **Details** information tile is the starting point to access its basic information. Documents carry most of the same tabs as items default page are the same as an item’s; they simply do not display information tiles. Depending on configuration and company needs, the attributes of an item or document might number a dozen or go well beyond one-hundred.
On an item, click the Go arrow at the bottom of the information tile to display the side tabs; the General Information page is displayed. On a document, the General Information page is the default display. Documents carry most of the same tabs as items. You can always click another side tab to view its contents.

These are all the possible tabs on items or documents:

- **General Information**
- **Where Used** - appears when the item or document is referenced by another item, document, or structure
- **Attachments**
- **Team**
- **Item Grade** - not supported on documents
- **Relationships**

**General Information**

The General Information side tab presents basic details about the item or document.

Fill in attributes for the item or document. The fields may be ready-to-use or they may be extensible flex-fields (EFFs) that were added by your administrator. The EFFs are defined in the item or document classification; so, available fields are derived from the item or document class hierarchy and respective attribute assignments. You can add a thumbnail or graphical image of the item or document on the General Information page.

**Product Line Attribute**

If configured, the Product Line attribute is used to assign the item or document to a product line in your company. This enhances the supply chain’s operational information.

**Display of Operational Attributes**

Besides extensible fields that the administrator adds to customize your product attributes during the development process, the enterprise may have hundreds of additional "operational attributes" for any item, document, or structure (assembly or product). These attributes do not need to be displayed on its main development pages, in fact, they may not become relevant until further down the path to commercialization. The administrator has access to Item Attributes Display Settings to define the visibility of attributes to Product Development users.

Click the navigational page dots at the top of the Details panel to see additional product categories and operational attributes.

> **Note:** Operational attributes are modified in Product Hub. Open an item, open its Specifications tab, see operational attributes under Item Organization.

**Where Used**

The Where Used side tab displays those structures to which this item or document has been added. Adding this item or document to a structure is done through its parent’s Structure information tile or the parent document’s Structure tab. If the item or document has not been added to any structures, the Where Used side tab is not enabled. Therefore, the Where Used icon also is not enabled in the top-level item or document of a structure.

The View drop-down list offers a variety of ways to display the selected structure or structures, as well as column adjustment options.
Attachments and Redlines

The **Attachments** side tab displays a list of document files or graphics or other files that have been attached to this item or document. The system tracks changes to attachment file attributes such as Name and Description. It discerns when an attached file that was previously checked in is now checked in with modifications. However, it does not discern or track the specific changes to the file. Once the item or document holds an attachment, the Attachment page actions include **Check In**, **Check Out**, and **Cancel Checkout**.

The modifications to attachments are called **redlines**. Redline information for an item or document is captured in its **Attachments** page. The Redline Summary panel displays the attachment modifications. Attachment changes are also considered in counts of redlines and Change Operations.

Files can be associated with this item using the Add icon + or **Actions > Add**. If you select a listed attachment, the Delete icon X and **Actions > Delete** are enabled. If you find the Attachments Add icon + or **Actions > Add** is disabled, possible reasons are: the item has another, later revision; or, the item is currently on a change order.

**Distinguish Purpose of Attachments on Items and Change Orders**

When you want to modify an attachment file, you must first distinguish the purpose and type of object to which the attachment was added. An attachment on a change order is a document file that further explains something about the change order itself. This attachment can be modified directly, as long as the change order is in an editable status; there is no need for an additional change order.

These business objects have an Attachments tab:

- **Items**: Attach files such as specifications or drawings that define the item or its structure. Attachments on items and document objects are subject to change control: you must create a change order to authorize and approve modifications to attachments. Also, you cannot modify an attachment on a released item or document without a new change order and approval.
- **Documents**: If used as part of an item structure, attach files that either define the item or structure but must have independent revisions; or, are used to attach files that are independent of items and may be part of a document structure.
- **Manufacturer Parts**: Attach files that define the manufacturer part, assembly instructions, safety information, or information about the manufacturer agreement for that part.
- **Change Orders**: Attach files that define the reason for the proposed changes and why approval should be granted.

**Team**

The **Team** side tab displays the Team members. You can add or remove a team member through the administrator, who adds users or groups to the Security tab of the Item Class. It is also possible to add team members to items in Product Hub.

**Item Grade**

The **Grade** side tab displays the Grade page. The application computes a temporary grade for the item, using standard rules from the industry. Your administrator has configured the system’s grading rules. Note that item grade does not apply to documents.

**Grading Risky Conditions**

Grading is computed for all the Items from the entire item structure. It takes into account certain risk conditions of the item and its structure to compute the grade. Risky conditions that merit attention and modification may include the following:

- a child item at leaf node that has no approved manufacturers list or AML
• a child item that has an unapproved manufacturer part number or MPN
• a child item that is at a lower lifecycle than its immediate parent item or the structure’s top-level item. For example, a bicycle wheel might be at the Production phase of its lifecycle, while the bicycle itself is still in Pre-production: since there are other subassemblies that are not yet ready for Production, this is appropriate. You would not want the bicycle to have achieved Production phase while its wheel is still in Design. The grade rule provides an alert on the bicycle’s Details tile.

Default Grading Rules

Grade computation can be configured to ignore or take into account any of the rules. You can select one to five of these issues to be involved in item grading:

• Lifecycle Mismatch
• Unapproved MPN
• Inactive Items
• Unreleased Items
• No AML

Grading Standards

These are the default grading standards. The application does not count all the instances of violations; it counts an issue or criteria as "1 issue" no matter how many times the issue is violated:

• An item with 0 issues that has an Approved status is graded A.
• An item with 1 issue is graded B.
• An item with 2 issues is graded C.
• An item with 3 issues is graded D.

It can also be configured to use a numeric grading system, so that the number 5 corresponds with the letter grade "A", 4 with "B", and so forth.

Click an element on the Grade tab to discover what issues or conditions affect its grade.

Relationships

Click the Relationships side tab, the Relationships page displays. Relationships can be set with the item or document you are working in. When you set a relationship from one item or document to another, the association is established in both objects; that is, both objects display the name of the other, related object as a live link. Click the link to open the related object in its own dynamic tab.

There is no differentiation or hierarchy to relationships.

Use the Add icon + or Actions > Add; the Add Relationships dialog appears. You can click the Refine button to bring up the familiar fields for Advanced or Basic searches. The Search drop-down menu lists available types of objects that can be searched; the default is Items.

Some details about each item or document that is returned on the search appear on mouse hover-over, including the object’s Name, Revision, and Lifecycle Phase. Only the latest revision of any item or document is returned on the search.

If you select an associated object, the Delete icon X and Actions > Delete are enabled.

Relationships with Business Objects in Other Applications

The administrator may have set up object types from other compatible applications on your system. These external object types may be listed on the Relationships Search drop-down list. For instance, if there are Oracle Cloud Innovation
Management applications configured on your system, object types such as Concepts, Requirements, and Ideas are available for your search.

**Note:** Product Development items and documents are specifically available for relationships with Innovation Management business objects. If a relationship is established between a requirements specification or requirement and an item or document, and the requirement is modified in any way, the relationship link to the requirement in the item or document is then tagged with an indicator with the label **Has changed**. (The indicator or icon will display this tool tip: **Modified in a later version**.)

A relationship may also be established to an object in another, external application. However, you may find your privileges to modify such an object are more constrained than objects from Product Development. See your Product Development administrator.

**Related Topics**
- Change Order Details Tile: Explained
- Change Order Changes Tile and Affected Objects: Explained

**Lifecycle Phases in Product Development: Explained**

Lifecycle Phases are used as an indicator of the stage for an item or document during the design and development process. Each phase represents a set of standard tasks or deliverables that are required before promoting an item to the next phase.

Each item or document must have a lifecycle phase associated with it. An object from a given class can be assigned to any of the lifecycle phases associated with that class. Before you can create or import items or documents or structures, the appropriate lifecycle phases must be created and assigned to the class used to create that object or structure (or to a parent class of the class used to create the object). When a business object is assigned to a lifecycle phase, that phase is visible as part of the object's attributes. In item or document structures, lifecycle phases name specific processes that are somewhat different - or in any case named differently - than the phases for the objects on the structure.

Four lifecycle phase types are predefined in the application:
- **Design**;
- **Preproduction** or **Prototype**;
- **Production**;
- **Obsolete**.

The administrator may have created names for the lifecycle phases that are particular to your company's processes. There may also be multiple phases based on the same predefined phase; for example, the predefined Production phase may be split into phases named Production and In Manufacturing, each having company-specific meaning in the steps to build and ship products.

**Item and Document Structure Page: Explained**

The structure contains all the items or documents required by the parent object for manufacturing a subassembly, assembly, or the product. A structure is known by its parent item or document. The Structure information tile counts the structures in
each of these four categories: Unreleased, Unclassified, Obsolete, and Released. The categories are associated with Lifecycle Phases.

Building a Structure

A structure can be built up by either selecting and adding existing items or documents, or creating business objects dynamically ("on the fly") on the structure’s page. Search for items or documents to add, then assign a single object by clicking the arrow icon to the left of the record. Actions and Views assist you in building and modifying a structure.

Actions on a Structure's Page

The Actions that are available to an item or document structure are mostly self-explanatory and can be quickly mastered. Several Actions on the drop-down list are duplicated by icons on the toolbar (at the same level, with hover names). It can help to do a little practicing on some test structures. If you prefer to work with live structures as you learn, it is good to save what you have before you execute some action that can quickly change the entire structure.

- **Create, Duplicate, Remove**
- **Export to Excel**
- **Select and Add**: the Select and Add: Items dialog lets you search for and select items using Ctrl-click and Shift-click. You can also use the type-ahead feature to bring up multiple items and select. Then click Apply or Apply and Close and the selected items are added to the structure at once. You may reorder, add, and delete as needed. Be sure to click Save before closing your new or modified structure.
- **Assign to Change Order**: refer to "Create Change Orders: Overview".
- **Copy, Paste**: these work the same as the Clipboard side tab at top right of the page. (This is detailed in the topic "Other Tools on the Product Development Toolbar: Explained").
- **Fill Up, Fill Down, Fill Selected**: you can quickly fill in attributes when you have added new items or documents (this is also available when modifying a change order). By selecting a consecutive range of rows, Fill Up and Fill Down are available; or use Ctrl-click to select nonconsecutive rows and use Fill Selected. Note that the Effectivity Date attribute is not automatically populated.

Views on a Structure's Page

The Views that are available to a structure are mostly self-explanatory and can be quickly familiarized.

- **Columns** offer a Show All list that you simply select and deselect for column visibility. **Manage Columns** lets you select which columns are Visible Columns and which are Hidden Columns. **Reorder Columns** lets you work directly with the Visible Columns list.
- **Collapse, Expand All Below, Collapse All Below, Expand All, Collapse All**
- **Scroll to First, Scroll to Last**

Other Icons on a Structure's Toolbar

Clicking the blue dot in a row of that column switches you to pages about the structure:

- **Attachments**
- **Changes**
- **Where Used**
- **AML**
These represent larger areas of functionality, which are described in other topics.

Each item or document on a structure indicates if it has attachments, where-used information, AML associations (not possible with a document), or whether a child object is assigned to a change order. Pending Changes information is also included.

Related Topics

- Other Tools in the Product Development Toolbar: Explained
- Create Change Orders: Overview

Item and Document Changes Page: Explained

The Changes information tile on items contains two subcategories, Item and Structure. When you click Item, you see change orders that are assigned to the top-level item only. When you click Structure, you see all the change orders assigned across the multilevel structure. Similar change information is available for documents on the Changes tab.

Changes View and Objects View

When you click the bar of the Changes information tile, with an item or structure open, you see two links: Changes View and Items View. On documents the links are called Changes View and Documents View.

- Click the Changes View link, the left panel displays all change orders that are associated with any of the items in the item structure. Then click a specific change order to see, in the right panel window, the items that are assigned as affected objects.
- Click the Items View or Documents View link, the left panel displays all items or documents that are part of the structure. The right panel shows each change order with which the business object is associated.

When to Use Change Orders

Manage item revisions by submitting the item for approval by a change order. This procedure is the only way that an approved item’s structure or its attributes can be changed.

Attachments and AML must also be modified through a change order. You cannot directly modify a manufacturer or an attachment, that is, a file that has been associated with an item, manufacturer part, or structure.

Item AML Tile: Explained

Manufacturer parts can be created only per manufacturer: the manufacturer is always created first, and every manufacturer part is associated with a manufacturer. Create or search and add manufacturer parts to the approved manufacturers list (AML). Once that association has been set, a change order pointing to the specific AML is required to authorize and approve AML modifications, that is, alteration to the manufacturer part.

Additional attributes can be described on the manufacturer part. Custom attributes are displayed in a dialog when you click the Additional Information icon.
Manufacturer parts can be associated with any item in a structure. The same manufacturer part can be added to multiple items in a structure. Use the Where Used side tab on the manufacturer part to locate where it is assigned across all items and structures. Manufacturer parts cannot be associated with document objects.

A manufacturer has a status of Active or Inactive.

Each manufacturer part has one of three simple statuses: Active, Inactive, or Pending.

The relationship between manufacturer part and item can be marked Preferred, Alternate, or Obsolete. The Preferred status indicates that manufacturer part can be sourced from its manufacturer or suppliers.

You cannot modify AML on a released item. Again, any change to AML on an item at that point requires a change order.

FAQs for Item and Document Management

How do I assign which lifecycle phases are in each category?

The Structure information tile lists four Lifecycle Phase categories. Open the Settings drop-down list, select Settings, select the Items tab, and use the Life Cycle Phase Definitions section to assign categories.

How do I set the parameters used to calculate Item Grade?

Open the Settings drop-down list, select Settings, select the Items tab, and use the BOM Grade section.

How do I attach files to an item or document?

After creating a new item or document, you want to attach an important drawing to it. On an item, select the Details information tile, click the Attachments tab, and click the Add button. On a document's main page, click the Attachments side tab, then click the Add button. Browse to the file you want to attach select it and click OK.

Why can I not attach files to an item or document?

You need to attach some files to an item or document, but the Add icons on the Attachments tab are grayed out. The item or document either has another Revision or is on a Change Order currently.

How do I add items or documents to a structure?

After creating a new item or document, you want to add child objects to make a structure. Select the Structure information tile and click the Select and Add button.
Why can I not modify the structure?
You attempt to add an item to a structure, but find that nothing is happening. This may be because the item structure either has another Revision or is on a change order with a Pending revision.

How can I inform other users about my new structure?
After creating a structure, you want to inform another user about it. Select Send Object under the Actions menu and add the users you want to inform. Or, you may post the structure on Oracle Social Network and invite users to the discussion.

What's the difference between an item and a manufacturer part?
An item is produced or assembled by your company, and it is tracked using an internal part number (IPN). A manufacturer part is entirely produced by an outside manufacturer. It is identified by a manufacturer part number (MPN).

How do I create a manufacturer?
Before you can create a manufacturer part, there must first be an existing Manufacturer to assign to that manufacturer part. Click the Create button and select Manufacturers.

How do I create manufacturer parts?
You are involving a new Manufacturer in your product designs. Therefore, you must assign their manufacturer part numbers to your item structure. Click the Create button and select Manufacturer Parts.

How do I assign a manufacturer to a manufacturer part?
You are creating manufacturer parts for a new Manufacturer account. While creating the manufacturer part, select the correct manufacturer from the Manufacturers list.

How do I assign a manufacturer part to an item?
You have contracted with a new Manufacturer, and must now associate their parts to items produced by your company. Open the item, click the AML information tile, and click the Add button next to the desired item number. To be included in a structure, a manufacturer part must be associated with an item, and that item is added to the structure.
4 Change Management

Information Tiles on Change Order Pages: Overview

When a change order is created, or an existing change order is opened, four information tiles are displayed. The tiles common to all named change orders are Details, Changes, Impact Analysis, and Workflow. Here are the tile contents briefly described.

Details
A change order’s Details information tile displays a Priority rating and a link to the attachments on the change. You can edit some attributes on the change order.

Changes
Through a change order’s Changes information tile, you can add or remove items or documents to be changed, and you can edit these objects on the change. The tile displays links to Affected Objects or Change Operations on the change, and the Go bar takes you to the list of affected objects with the same links available. The Changes tile also gives a count of redlined or modified business objects on the change.

Impact Analysis
A change order’s Impact Analysis information tile counts the products (structures) that are going to be impacted by this change order. Click the Go bar to display a list of all impacted products.

A part on the change order that is on 10 structures contributes "10" to the count of impacted products. If a second part also is on 10 structures, but 4 of the products are identical to those for the first part, the second part adds only 6 products to the impact analysis of that change order.

Workflow
The Workflow information tile displays this change order’s workflow in concise form. Click the Go bar to see the workflow in expanded display, the Workflow Summary, and the list of approvers.

Change Order Actions and Change Status: Explained

This topic details the Actions and Change Status drop-down lists on a change order with any information tile expanded.

Actions on Change Orders
The actions on change orders are Delete, Send Object, and Audit:

- **Delete**: If you want to remove a change order from the company’s database, first it must be moved to the Cancel status. From the Actions drop-down list, select Delete; this moves the change order to Product Hub, where it is
placed in a Delete Group. The change must meet constraints that ensure it is not incorrectly deleted; when the constraints are satisfied, the deletion of the change order is completed.

- **Send Object**: This feature works for change orders and development items. It is a simple "send" to another user, not a part of the manufacturing process.

- **Audit**: Along with **Audit Results** side tab, this action creates an audit report on a change order. Select **Audit**, and select a status from the fly-out list. This generates the audit. (Which statuses are displayed depends on workflow definition.) Now, click the **Audit Results** side tab, at upper right of any page. The audit checks for any problem or violation of the entry or exit criteria on the Status changes in the workflow of the change order. The Audit Results lists all these as well as more general issues with the change order.

### Change Status on Change Orders

The list of default statuses that can be set from the **Change Status** list on changes depends on the workflow definition, that is, the workflow used by the change order defines the available statuses. The workflow in Product Development always has an Approval status. These are the statuses always found on the list:

- **Approval**
- **Hold**
- **Cancel**: Select this status if you must delete the change order. Refer to the Delete action in this topic.

**Related Topics**

- Other Tools in the Product Development Toolbar: Explained

### OSN Conversation Access to Change Order: Explained

In an OSN conversation that is associated with a Product Development change order, there is a link called **View Details**. Click the link to go to the relevant change order in a new browser tab, OSN opens the new tab even if the change order is already open on your tablet or device.

You could already access Oracle Social Network from a particular change order, and start a conversation with one or more colleagues about the ECO’s content. This link permits you to easily return to the change order for viewing or modifying details.

**Related Topics**

- Use Oracle Social Network with Product Development

### Change Order Details Tile: Explained

When a change order is created, its Details tile collects information, which is added to the tile as it becomes known or pertinent. You can edit the change order general information and its attachments.

**General Information**

When you click the Details bar, at the bottom of the information tile, the **General Information** page displays. Fill in attributes for the change order. The change order ID may be filled in during creation by the user, or, depending on the configuration, it can be automatically numbered.
The Change Order Type is assigned during the create process and cannot be modified later.

By default the Priority is set to Low. Priority can be defined during initial creation or later.

Customer-specific attributes for the change order are displayed at the bottom of the screen.

Attachments

Click the Attachments side tab, the Attachments page displays. Files can be associated with this change order using the + Add icon or Actions > Add. If you select a listed attachment, the X Delete icon and Actions > Delete are enabled.

When you want to modify an attachment, you must first distinguish the purpose and place where the attachment appears. An attachment on a change order is a document that further explains something about the change order itself. This attachment can be modified directly, as long as the change order is in an editable status; there is no need for an additional change order.

Attachments on items are managed with the mechanism of a change order, in which proposed modifications to the attachment are described, reviewed, and approved, much like proposed modifications to the item’s design or attributes. (See the section on Attachments and Redlines in “Item Details Tile: Explained”.)

Related Topics

- Item and Document Details Page: Explained

Change Order Changes Tile and Affected Objects: Explained

Affected Objects and Change Operations are live links in the Changes information tile. The number of Redlines held in that change order are reported.

The Tree view and List view may always be selected by clicking the toggle icon on the right side of the Affected Objects page on change orders.

The Summary of Changes panel of information is next to the list of Affected Objects (make sure List View is selected with the icon at the far right). Use the Summary of Changes to understand the details of the change order and the affected objects it holds. The summary displays detailed information, such as change operations and redline details, for each object that is affected by the change.

Links to Affected Objects and Change Operations

On the Changes tile of a change order, click the Affected Objects link for a list of all business objects that are affected by this change order.

Click the Change Operations link for a list of every modification that has been done in the progress of this change order. So, if you modify both an attribute of an affected object and its structure, two change operations are displayed in this view.

Details about Affected Objects

Affected objects are the items and documents that have been changed by the fulfillment of a change order, that is, its approval and release. The Affected Objects page lists the affected objects that are changed, as well as the change operations
that are involved, and the information types, such as Item, Document, or Structure. So, the Affected Objects page is a condensed overview of the change order.

Here are several tools and other information to assist in understanding and managing affected objects.

**Actions on Affected Objects Page**

When you click the Changes tile Go bar, or the Affected Objects link, these Actions are available from a drop-down list, from the icons next to Actions, and also by clicking an icon at the right of each affected object.

- Select and Add: the Select and Add: Items dialog lets you select items and documents using "Ctrl-click" and "Shift-click". You can also use the type-ahead feature to bring up multiple items and documents, and select. Then click Apply or Apply and Close and the selected items or documents are added to the structure at once. You may reorder, add, and delete as needed. Or, assign a single item or document by clicking the arrow icon to the left of the record. Be sure to click Save before closing your modified change order.
- Edit
- Remove
- Change Revision
- View Impact Analysis
- Bulk Edit (icon only, in List View; see below)

**Table View and List View**

The standard or default view of affected objects are in a list. Click the Table View icon at the right side to switch to a modifiable display, allowing you to edit certain attributes directly, for example, Item Revision. You can also edit any custom change line attributes.

Table View and List View are a toggle; as such, it is easy to work always or often in the view you prefer, or to switch views sometimes or frequently. The system will hold the last view you worked in to your next session.

**Edit All Affected Objects - the Power User View**

The Edit All Affected Objects icon appears between the change order name and the Actions drop-down list. One click brings you to a special view - it may be called the "power user view" - where you can combine maintenance tasks on affected objects, such as Add, Edit, and Delete, and edit the Details of affected objects. It permits easy navigation between affected objects, and also offers an automatic save function.

**Bulk Edit of Affected Objects**

You can modify certain attributes of multiple affected objects at once. In List View, click the Bulk Edit icon, the Bulk Edit Affected Objects dialog displays.

Click the Eraser icon to open the Clear Attributes dialog, then remove attributes or define new values for the attributes shown.

The attributes in items and documents that are supported are Revision and Lifecycle Phase.

**Additional Functions in Table View**

In Table View, some additional capabilities assist working with many items, documents, or change orders, such as these three additional Actions:

- Fill Up
- Fill Down
- Fill Selected
You can quickly replicate a just-modified attribute or attributes as you are adding new items or documents (this is also available when building a structure). For example, you have just modified the value of an attribute, and there are a dozen more items with the same attribute that need the same change. If you select a consecutive range of rows, the Fill Up and Fill Down actions will populate the attribute in all of them. Or, if you use Ctrl-click to select non-consecutive rows, the Fill Selected action performs the multiple changes.

The Table View offers these additional choices to modify the look of the list of affected objects, which are mostly self-explanatory and can be quickly familiarized.

- Columns: offer a Show All list that you simply check and then deselect for column visibility
- Reorder Columns: lets you work directly with the Visible Columns list.
- Query by Example (icon is added when switch to Table View)

Affected Object Selector

In the Edit Affected Objects dialog, the Affected Object Selector lets you switch to another affected object without leaving the dialog. Use the drop-down list to select another affected object, or the forward and backward arrows. When you change to a new affected object, the pending changes for the current affected object are automatically saved.

Automatic Naming of Revision of Affected Objects

The application automatically provides Revision numbers to an item or document when it becomes an affected object. However, this Revision number does not change at the beginning of the change process, when the business object is assigned to a change order. The application distinguishes that the object is going to be changed.

During the period that the change order is advancing through the workflow, the application displays the Revision number with the addition of the change order name in brackets. It uses this identification until the change order attempts to enter the Approved status. It then proposes a next-in-sequence number.

The sequence scheme has been set up by your administrator according to your company's revision numbering or naming system. The New Revision field is populated with this number. It can be manually changed by the user as needed. See your administrator.

Change Operations

Click the Change Operations link in the Changes information tile. This is a good way to view a summary of changes in that change order.

Change operations can be applied to items, documents, or structures. Change operations that are available for items and documents are:

- Modify
- Withdraw

Change operations that are available for item structures or document structures are:

- Add
- Withdraw
- Modify
Redlines

Redlines are the individual changes on the items or documents that show marked up, and therefore recommended, modifications. Any modification to a single attribute is counted as one redline. The same is true whether you are adding or withdrawing an element to a structure.

Any modification to an existing structure attribute counts as a single redline. So, modifying the content of the reference designator attribute is one redline, and changing a second attribute counts as a second redline.

Redline information for item or document extensible-flexfield (EFF) attributes are shown in the Additional Information tab, next to the Summary tab. The Additional Information tab appears only when EFF redline information exists.

Related Topics
- Item and Document Details Page: Explained

Change Order Impact Analysis Tile: Explained

Impacted products are detected by a "where used" query, which operates on multiple levels for each affected object. The where-used query collects all top-level items.

You can drill down into an impacted product to see the details of the product itself, its item structure, and its constituent items.

Affected objects are highlighted in the item structure, making it clear why a product is impacted by the change.

You can start an impact analysis from a specific affected object. The report shows all products that are being impacted by this single affected object.

Change Order Workflow Tile: Explained

The Workflow information tile shows a condensed view of the workflow. It also illustrates the current status of the workflow.

The Summary page displays the history of status transitions, that is, which status change was performed, when it was done, and by whom.

The Reviewers page defines the list of mandatory and optional reviewers. You can see if a change is awaiting approval by an approver, and see whether a particular approver has approved or rejected the change order.

Create Change Orders: Overview

Users can search for change orders using the same tools as described for items. Product Development offers advanced searches that can incorporate many other attributes to find one or multiple change orders.

When you click a change order link in the returned results, or anywhere in the application, the change opens.
Change Order Types

Depending on your administrator’s setup, when you create a change order, it will be of one of these Change Order Types:

- **Engineering Change Order** - this is the most comprehensive change order type, as it forces a Revision on a changed item or document any time it is submitted for review and released.
- **Change Order** - this change order does not impose Revision control.
- **Commercialization Change Order** - this C.O. type is from Product Hub; if it is available to you, find further information about its purpose and use in Oracle SCM Cloud Using Product Master Data Management.

Create drop-down list

1. On any Product Development page, click the **Create** icon and select **Change Order** from the drop-down list.
2. Select one of the predefined change order types. Define **Priority**, **Reason for Change**, and **Need-by Date**.
3. Assign attachments to provide more detailed and relevant information about the change order.

You can enter other information to the new change as part of the create process, or save it and add more data later.

The Need-by Date provides the key information required to calculate the overdue deadline in the My Worklist information tile on the Overview tab.

- Overdue deadline: Current system date > Need-by Date
- Approaching deadline: Need-by Date minus Current System Date must be 2 days or less
- Waiting for Review: All other notifications

For Approaching deadline criteria, the number of days is two, which is not configurable. If the Need-by Date not specified, it remains in Waiting for Review.

Assign to Change Order action

Use **Action > Assign to Change Order**, which is found in these places:

- on an item or document’s Edit page;
- in an item or document’s Structure table, with the List view active (for example, click Unreleased in an item’s Structures information tile);
- or, with the Tree view active (for example, click the Go bar).

You can delete a change order, but it must be in Cancel status before beginning the delete process.

Related Topics

- Create Product Development Business Objects: Overview

Define a Change Order: Explained

This is a sequence of steps to define and distribute a change order: Once items or documents are added to the change, you can view the **Summary of Changes** that displays all change operations and redline information for each affected object.

The change operations describe each modification to an item, document, or structure. The change operations are **Add**, **Withdraw**, or **Modify**.

1. Create the change order, giving it appropriate name and purpose (description).
2. Assign only necessary items and documents, that is, business objects that you anticipate should be affected by the change order. This can be one or more items or documents.
   - Manufacturer parts cannot be added to a change order; you must add a manufacturer part’s associated or parent item.

3. Edit the item or document and modify their definition:
   - Update the item or document attributes; or,
   - Modify the structure, in these ways:
     - by adding new structure components;
     - by withdrawing existing structure components; or,
     - by editing structure attributes.

4. Check the impact of the change by analyzing the impacted products.
   - Adapt the change order, ensuring that it will impact only the intended products.

5. Define the list of approvers for the change.

6. Save your change order.
   - If you review and modify it, always be sure to save your modifications before submitting it for approval.

7. Submit the change order for approval.

8. Approvers review and then approve or reject the change.

9. If rejected, rework the change order and resubmit it for approval.

**To add affected objects:**

1. Open the Affected Objects panel.
2. Click **Actions > Add** or the + Add icon.
3. Search for appropriate items or documents.
4. From the returned search results, use the gray arrow to assign an affected object.
5. Save your modifications.

**To change the revision of an affected object:**

1. Select the affected object.
2. Click **Actions > Change Revision**.
3. Specify the new revision. Save your changes.

**To change an item's metadata attributes:**

1. Select the affected object. Click **Edit** action, the object’s Details page displays.
2. Modify object attributes as desired. Save your changes to the business object.

**To change an object's structures:**

1. Click **Edit** action, a new object’s Details page displays. Switch to the item or document structure by clicking the **Structure** icon.
2. **Add** new item or document structure component. Or, **Modify** or **Withdraw** an existing structure component. Again, save your changes to the structure.
Impact Analysis: Explained

View the list of impacted products, and analyze why the product is impacted. Understand how many affected objects impact the product. Adapt the change definition to achieve the intended list of impacted products.

You can start the impact analysis from an impacted product (called "top down") or from an affected object (called "bottom up").

- **Top down**: use the Impacted Product panel and look into the details for a specific impacted product.
- **Bottom up**: go to the Affected Object panel, select a specific affected object, and start an impact analysis from Actions menu or toolbar icon.

You see all products that are impacted by the affected object.

When using the top-down impact analysis, you can filter the multilevel structure of the product, to see only that part of the structure that is impacted by the change. This is a good way to focus on the relevant part of a larger item or document structure.

Workflows in Product Development: Overview

Workflows are the mechanism to submit change orders for review and approval.

The type of the change order determines the kind of workflow. Define entry criteria for the workflow to enter a particular status. Define exit criteria for advancing to the next status. Workflow Summary documents the events of the workflow. Define and view the list of reviewers.

When you select a workflow status, it is highlighted with a blue frame. The workflow’s current status remains filled with blue. Each status can be selected to view details of that status, such as history and approvers. The system synchronizes and displays the Workflow Summary and Approver Panel for the selected status.

Once edits are made to attributes and structure, the change order can be submitted to a formal workflow to be approved. Once the change order is approved, the object’s Revision is changed according to the scheme defined by the administrator using the system’s automatic naming. The user accepts or changes the system-calculated Revision number.

Define a Workflow: Explained

When the administrator defines a Change Order Type, the process includes the definition of the workflow that will be available when you create a change order of that type.

Define the Sequence of Statuses

Although you can define individual status to be used in the workflow, each status must be derived from standard Status Types:

- Open
- Interim Approval
Every workflow has at least the following statuses by default:

- Open
- Approval
- Scheduled
- Completed

You can define multiple status of the types Open and Interim Approval. However, the statuses of types Approval, Scheduled, or Completed can each occur only once in a workflow.

A workflow for a change order always begins in Draft status after it has been created.

**Transition of Status**

To execute a status transition, either use the **Change Status** icon at the top of the page, or use the **Status Change** icon in the workflow graphic section.

If there is a problem in changing a workflow's status, running an Audit Report of the change order may indicate issues with status Entry and Exit criteria. This procedure uses the **Audit** and **Audit Results** actions, which are described in the topic referenced below.

**Hold and Cancel Statuses**

A workflow can be put on hold with the **Hold** status. Later this workflow could be resumed by moving it to another status.

A workflow can be canceled with the **Cancel** status. However, once the Cancel status is set, this workflow cannot be resumed.

**Related Topics**

- Other Tools in the Product Development Toolbar: Explained

**Approve or Reject a Workflow: Explained**

To approve or reject a change, click the **Approve** or **Reject** button at the top of the Workflow page.

Note that these buttons are displayed only if the opened change order is waiting for approval. If a change order is eligible for approval, a task notification appears in the Worklist panel on your Overview page. The notification provides the **Approve** and **Reject** buttons.

When you open the task details from the Worklist panel, you will see more details about the change order. You can approve and reject the change there, as well as when the change itself is opened.

You can assign approvers in each workflow status; click the link of the status name in the workflow graphic panel. Click this link to open the Reviewers panel for this status, so that you can edit the Approvers list for this status. If the workflow is set to autopromote from Open status to Approval status, you must finalize the list of (optional) approvers before the workflow commences. If not, you can set the approvers in the pop-up window when you route the change order to Approval status.
Edit a Released Item or Document with a Change Order

A change order is required to edit a released item or document, including its AML or attachments. The item or document must be added to the Affected Objects list. You can then edit the details of the business object, as well as any structure it is in.

FAQs for Change Management

How do I create a change order and add an item or document as an affected object?

You need to change the Lifecycle Phase of an item or document and therefore must assign the object to a change order. Open the item or document and select Assign to Change Order from the Actions menu.

How do I add items or documents to an existing change order?

With a change order open, click the Select and Add button to add existing items or documents, or click the Create button to add new business objects.

Why can I not modify the change order?

While reviewing a change order currently in an Interim Approval type status, you try to modify the change order but cannot. The Allow Updates option on the Interim Approval status row was not selected by the administrator.

What's the difference between One and All in an Approval type status?

For an Approval type status, on the Header Approval row, you can select One or All for the Response Required From property. "One" means that only one of the assigned approvers must approve the change order for it to advance, while "All" means that all assigned approvers must approve the change order for it to advance.

Why did a change order go back to Open status?

When rejected in the Approval status, the workflow of a particular change order type was supposed to move the change order back to Interim Approval, but instead it went back to Open status. The Automatic Demotion Status property on the Approval status line was set to Open by the administrator, not Interim Approval.
Why is a workflow status in the wrong place in the order sequence?

The **Sequence Number** for that status puts it in the wrong place.

How can I learn of problems with the statuses in my change order's workflow?

Run an audit and obtain the audit report. In the change order, click **Actions > Audit**, and select a name on the menu. Then click the **Audit Results** side tab at the top of the page.

How do I view a summary of changes in a change order?

You are requested to approve a change order. In the **Changes** information tile, click the **Change Operations** link.

How do I approve a change order?

Approve the change order through the configured workflow that is associated with the change. Notification appears on the worklist of all approvers or reviewers. Once they take action, the change moves to the next set of approvers, and so on until it is completed. Once completed, the Revision of the item or document being changed is automatically incremented.