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

Using Oracle Applications

Using Applications Help

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

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

You can also read Using Applications Help.

Additional Resources

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

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

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

Conventions

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

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

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

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

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

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

Overview of Innovation Management

Innovation Management promotes the abilities of the enterprise to build the best products. Innovation Management enables a company to:

- Collect ideas from different sources, collaborate on them, identify the best opportunities, and promote them as new or enhanced proposals;
- Identify key elements to build detailed requirements for these proposals;
- Publish their proposals to a portfolio to get recognition and acceptance from stakeholders; and
- Develop concepts supporting those proposals to ensure that the product goals are met.

These capabilities do not have to be done in any set procession of steps, but can be done in any order based on the enterprise’s business processes. See "Brief of Innovation Process."

INNOVATION MANAGEMENT SOLUTIONS

The Innovation Management suite includes the following:

- **Product Requirements and Idea Management** supports and simplifies the innovation process with creating and managing ideas, requirements specifications, and requirements business objects.
- **Concept Design Management** supports defining a product in its conceptual phase, using concepts and proposals. Requirements, concepts, and proposals are designed to work together closely.
- **Portfolio Management** gathers product concepts and proposals into a portfolio. Portfolio scenarios are modified based on analyses of value, balance, strategy, resources, and product mix.

INNOVATION MANAGEMENT WORK AREAS

You can access the work areas of the Innovation Management solutions from the Navigator based on roles assigned to you. The three work areas of Innovation Management are as follows.

1. Activities related to ideas are done in Ideas work area, which is accessed by company employees and trusted partners and customers.
2. Activities related to requirements, concepts, and proposals are done in Concept Design work area, which is open to design managers, design engineers, and product managers.
3. Activities related to portfolios are done in Portfolio Management work area, which is open to portfolio managers and other financial and resource managers.

BRIEF OF INNOVATION PROCESS

Entering ideas into the Ideas work area is the beginning of the innovation process. As ideas are enriched, grouped, and matured, they can be attached to a new or existing product proposal in the more restricted Concept Design work area. You can also convert ideas into more formal requirements specifications, which in turn serve as input for concept designs.

Another scenario might see new concepts developed without input from requirements or ideas. In this case, appropriate requirements specifications can be developed afterward, contributing to the maturing of the concept design.

Once a concept design is approved, structures of product concepts and product requirements specifications are delivered to Product Development or Agile Product Lifecycle Management (or other PLM application) for detailed design, creation of prototypes, and ultimately the introduction of a new product or enhancement.
Innovation Management Dashboard

Innovation Management consists of Ideas, Requirements, Proposals, Concepts, and Portfolio pages that provide detailed analytics and visibility into count, cycle time, and aging reports for each of these areas. The Innovation Management work area enables you to view and analyze your company’s performance on factors that drive innovation to bring clarity for decision making.

Each page provides visibility about key metrics, and displays certain charts that are created using the Innovation Management Subject Areas. Innovation Management Subject Areas help you create ad-hoc analytics based on business questions that must be answered. You can use these various chart types to visualize information with specific combinations of measures and dimensions to make the best decisions for your products and business.

In the Ideas tab, you can view information about ideas gathered in the application. For example:

- How many ideas have been generated and by whom?
- Which ideas are based on customer requests?
- How many ideas have one or more requirements specifications associated with them?

In the Requirements tab, you can view information about requirement trends, count, and status. For example:

- How many requirement specifications are yet to be approved?
- Which are the ten most important requirements we should focus on?
- What is the average period of time it takes for a requirements specification to be approved?

In the Proposals tab, you can view information about calculated metrics, cash flow, resources, related items, and aging in proposals. For example:

- What is the count of project tasks that are related to a selected set of proposals?
- How many proposals are submitted and pending approval?
- What is the difference between actual revenue and projected revenue of a proposal?

In the Concepts tab, you can view information about concepts, related items, and solution alternatives. For example:

- What is the count of ideas related to a selected set of concepts?
- How many suppliers are associated with a concept?
- On average, how often are concepts updated?

In the Portfolio tab, you can view information about portfolio revenue and cost, along with portfolio count and aging. For example:

- What is the average age of a portfolio in the application?
- What is the count of product proposals in a portfolio?
- What is the amount of projected revenue for a portfolio?

For more information about configuring reports see these guides:

- Oracle SCM Cloud Using Analytics and Reports
- Oracle SCM Cloud Creating and Editing Analytics and Reports
Overview of the Graphical Navigator

In the graphical view of structured data related to a particular context, you can do the following:

- View and navigate through a large amount of data or related components.
- View the number of children in a hierarchical structure.
- Expand and collapse relationships.
- Visually recognize different component types and different relationships between the components.
- View detailed information related to a specific component within the structure.
- Search for the required component.

📝 Note: If the focused component is part of the search results, it is highlighted in the search result area. If the component is not part of the current view or page, the application focuses on the first search result.

Structured data is displayed in the following different ways:

- Dependency Map: The dependency map allows you to map the data to visualization and configure possible interaction and visual properties.
  
  The dependency map has connector lines that depict the different type of connections between the components. Thick lines indicate a direct relationship between the two components, dotted lines indicate an indirect relationship.

- Dependency Graph: The dependency graph displays the visual cards related to the data and the relationship between the data.

  In the dependency graph, when you hover over the visual card, the tooltip displays the name of the component, if the mouse is over the attribute of the component, then the tooltip displays the attribute.

  📘 Note: Changes you make to the dependency map are reflected in the dependency graph, and vice-versa.

  📘 Note: Arrow lines depict the parent-child relationship between the components. Child components are indicated by arrow lines from the parent component. Click the connector lines to bring into focus the components that are on either end of the connector. All the other components are grayed out.

Related Topics

- Working with Structured Data: Explained

Reports and Analytics for Innovation Management: Explained

Innovation Management uses reports and analytics to quickly view or run analytics and reports that are related to your work.
The Reports and Analytics pane is where you create and edit analytics and reports with the proper permissions. Or, you can add them from the Business Intelligence (BI) catalog to the pane. You may find this pane in a panel tab or in the regional area on some work areas. In the Reports and Analytics work area (Navigator > Tools > Reports and Analytics), the pane appears as the Contents pane.

An analysis is an interactive display of data, for example in a table or graph. You use analyses to:

1. Summarize or break down simple, real-time data
2. Help you make short-term decisions

A report is output of data in a predefined format that provides little or no interaction. Print reports in these situations:

1. To get high-volume data in a high-fidelity output optimized for printing
2. For documents to support internal operations, statutory requirements, and other business needs

Create Deep Links to Objects in Reports

Video

Watch: This video shows you how to create deep links to objects in reports. The content of this video is also covered in text topics.

Procedure

Create deep links to navigate from Oracle Transactional Business Intelligence (OTBI) reports to specific objects. In this procedure, see how you can create a link to idea objects from a report.

Use the Navigator to go to the Reports and Analytics work area. OTBI folders are also accessible from the Reports and Analytics side tab of an idea. Click the Browse Catalog icon to create a report.

1. To create a report and add fields:
   a. In the Catalog page, from the New menu, click Analysis to create a report.
   b. Select Innovation Management - Ideas Real Time from the Select Subject Area menu.
   c. From the Subject Areas panel, click Ideas. Select and double-click the column names, Idea Name and Ideas ID, to add them to the reports. Other columns and data are optional.

   The Idea ID object does not work with a decimal, ensure that you set it to a non-decimal value.

2. To set a non-decimal value:
   a. Click the Idea ID. From the menu, click the Column Properties option.
   b. In the Column Properties dialog, click the Data Format tab.
   c. Select the Override Default Data Format check box.
   d. Set the value in Decimal Places to a non-decimal value. Click OK.

3. To configure the name column to be a URL that opens the selected object in another tab:
   a. Click the Idea Name.
   b. From the menu, click the Column Properties option and in the dialog, click the Interaction tab.
c. From the Primary Interaction menu, select Action Links and create a link format.
d. Click the + icon to add an action link.
e. From the New Action Link select Navigate to a Web Page.
f. In the Create New Action page, add the URL. This creates a web page and passes dynamic values to load the selected object. The template of the dynamic URL is

https://<hostname>/fscmUI/faces/deeplink?objtype=IDEAS&action=EDIT&objKey=ideaId=<IDEA_ID>

Note that:
- the Object Type is Ideas
- the Action is Edit
- the Object Key is Idea ID

4. To define Parameters:
   a. Click Define Parameters. The value for the object key is dynamic and the object ID is retrieved from the report data.
   b. In the Values column, in the third row, click the 123 menu, and select Column Value.
   c. From the menu select Idea Details: Ideas ID.
   d. Select the Fixed and Hidden check boxes in all the rows to ensure that the URLs work automatically.

5. Add the reference to Idea ID in the URL field of the Create New Action dialog after you define parameters.

6. Click Options to open the Action Options window.

7. Check the Open in New Window check box and click OK. You return to the Create New Action window.

8. Click OK. You return to the New Action link window.

9. Click OK. In the Column Properties window, select the 'Do not display pop-up if only one addition link is available at runtime' check box. This helps when there are multiple action links with different actions. Click OK.

10. Click Save Analysis to save the report.

11. Click the Results tab to view search results. If you click one of the links in the search results, the object opens in a new window.

Related Topics
- Configuring Deep Links in Oracle Product Lifecycle Management Cloud: Explained

Overview of the Traceability Report

The Traceability Report is generated by an action on requirements specifications and concepts. It displays attributes defined for requirements by the administrator and most likely created in Data Composer.

A traceability report lets you discover, during a product’s development cycle, whether all test cases have passed or if all requirements were met. It can demonstrate that, for instance, elements of equipment were fully tested, or meet regulations as described by requirements.

You can generate Traceability reports in these formats: XML, CSV and HTML and export the reports in the CSV and HTML formats. The HTML format highlights unfulfilled requirements and test cases.
Overview of the Oracle Social Network Objects in Oracle Innovation Management

You can transform Oracle Innovation Management business objects into Oracle Social Network objects in Oracle SCM Cloud. Use the Manage Oracle Social Network Objects task to locate the Oracle Innovation Management business objects. Enable the business objects listed in the following table for Oracle Social Network integration.

<table>
<thead>
<tr>
<th>Module Name</th>
<th>Business Object Name</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Concept Design</td>
<td>Concepts</td>
<td>Name, Description</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Concept Design</td>
<td>Proposals</td>
<td>Name, Description</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Lifecycle Portfolio Management</td>
<td>Portfolios</td>
<td>Name, Description</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Requirements and Idea</td>
<td>Ideas</td>
<td>Name, Description</td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Requirements and Idea</td>
<td>Requirements</td>
<td>Name</td>
</tr>
<tr>
<td>Management</td>
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Related Topics

- What are the prerequisites for Oracle Social Network integration
- Enable Single Sign-On for Innovation Management: Explained
- How do I share my ideas with key stakeholders in Oracle Innovation Management
- How do I share my opinion with development teams on terminating a product?
- Managing Oracle Social Network Objects: Explained
2 Develop Product Ideas

Post an Idea: Explained

Navigate to Ideas. Click the Post Idea button on either the Overview page or the Manage Ideas page to create an idea. In the Post Idea dialog, give your idea a name (required) and a short description (optional). From the Type list, select a type.

The assigned type allows finding and grouping similar ideas. Your administrator creates the idea types for your company, and defines specific attributes for each idea type. Remember that you can no longer change the type of an idea after you create the idea. Add and modify the attributes that define your idea on the Edit Idea page.

Posting an Idea: Video and Procedure

Video

Watch: This video demonstrates how to create and post an idea. The content of this video is also covered in text topics.

Procedure

The Post an Idea is a concept in Innovation Management to help customers find an idea that has potential to become a product. Use the Ideas work area to create and manage product ideas.

To create and post an idea:

1. Use Navigator to go to the Product Management work area. From the list of offerings, click Ideas work area.
2. To post an idea, in the Manage Ideas page, click the Post Idea button.
   - In the Name field, enter a name for your idea.
   - In the Description field, enter a brief description of your idea.
   - Click Save and Close.

If the idea is generated to help certain customers, you can associate the idea with these customers.

3. To choose customers, on the General Information tab, click the Associate Customers icon.
   - In the Associate Customers window, select customers from the Available Customers panel, and move them to the Selected Customers panel.
   - Click OK.

4. To enter details about your idea using rich text tools, click the Content tab.
5. To link other Innovation Management objects that relate to your idea, click the Relationships tab.
   - Click the Select and Add button.
Use the search dialog to search for and add objects. Click OK.

6. In the Attachments tab, you can add files, text, or URLs to further define your idea and add supporting information.
   - To add an attachment, click the Add icon.
   - Use the Add dialog to add a file or URL. The Title column is automatically updated with the name of the file.
   - Enter a brief description and click Save. The attachment is added.

   ✍️ Note: To remove an attachment, select the row and click Delete.

7. To add comments about the idea, click the Comments tab. Comments help bring in different perspectives about the idea.
   - Enter a comment and click the Publish button. Comments appear in the Comments panel.
   - Click Save.

8. To save the idea, click Save and Close.

9. To find specific ideas, select the Manage Ideas tab. The list of ideas stored in the application is displayed. You can use the search fields to filter your search.

10. To edit an idea, select the idea from the list and then select Edit in the Actions menu.

Overview of the Ideas Page

In the Ideas work area, the Overview page displays various statistics about existing ideas. It has regions such as Latest Updates, Customer Idea Status, Top Customer Contributors and Top Contributors, and Tags.

Filter By

Select a Type from the list to filter the displays according to a single Type. You can separately or additionally populate the Date Range fields to filter the displays within the selected time period.

Latest Updates

This panel provides the number of ideas in various categories, governed by the Filter By values.

Customer Idea Status

This chart depicts the status of all ideas that have at least one customer.

Top Customer Contributors

This graph shows the top five customer contributors.

Top Contributors

This graph shows the five internal users who contributed the most ideas. Each total is broken down by status of the ideas.
Tags
This panel displays the tag cloud for all ideas in the application, governed by the Filter By criteria. Each cited tag is an active link to the search results on the Manage Ideas page.

Edit and Manage Ideas
When you create an idea, the Edit Idea page appears with the idea enabled for editing. You can edit the name, description, and status of an idea and add a tag or tags to an idea.

The Basic search in Manage Ideas has two fields, Idea and Description. Click the Advanced button to expand to additional fields to refine your search criteria. This button is a toggle, so when the Advanced fields are visible, the button changes to Basic. A search may return a list of ideas that are active links. For a returned search of ideas on the Manage Ideas page, you can select and click the idea link.

The Actions menu options are:

- **Send**: opens a dialog to send notification to other users. You can even add a message in the notification.
- **Create Proposal**: a proposal is created that contains the content of the idea. The new proposal and idea appear on each other’s Relationships table.
- **Manage Team**: controls who has access to read and modify the object.
- **Delete**: opens a dialog to delete the object.

Creating a Proposal from an Idea: Video and Procedure

**Video**

**Watch**: This video demonstrates how to create a proposal from an idea.

**Procedure**

To create a proposal from an idea:

1. Use Navigator to go to the Product Management work area. From the list of offerings, click Ideas work area.
2. On the Manage Ideas tab, select an idea.
3. Select Actions > Create Proposal.

Alternatively, you may search for and open an idea, then click the Edit button, click Actions > Create Proposal.

4. Generally you would accept the same name for both the new proposal and the idea from which it came. But there could be a reason to give the proposal a modified name or entirely new name, per your company’s practices.

- Add a description.
5. Click the Save and Close button.
6. On the Relationships tab of the proposal, you will find a link back to the idea that was used to create this proposal. Go ahead and click that link.

7. Back on the idea’s Relationships tab, you will now find a link to the proposal.

This might be a good time to confirm certain things such as a difference in the name of the idea and the proposal, or adding information in the idea’s description about its evolution to a proposal.

Add Tags to an Idea: Explained

You can add one or multiple tags to an idea. Add tags using the Tags link from the Edit Idea page of an idea.

With an idea selected and open, click the Tags link. The Tags dialog opens and you may type one or more words. The word space is the delimiter. For example, if you type "mobile device", tags are created for both "mobile" and "device". When you are done, click the Save and Close button. The tags are added into the tag cloud shown on the Ideas Overview page. The application sorts the tags automatically, so if you type "mobile device", when you reopen the Tags dialog, you will see "device mobile".

Tags are searchable as a string through Advanced search.

Associate Customers with Ideas: Explained

An idea can be associated to a customer or customers by clicking the Associate Customers icon on the Edit Idea page. The Associate Customers dialog appears. To create or modify the list of Available Customers, open the Overview page, click the Manage Customers icon to open the Manage Customers dialog.

Add Relationships and Attachments to Ideas: Explained

Use attachments to enrich the idea with supporting information. In the Relationships table, you can add links to objects in Innovation Management, Product Development, Agile Product Lifecycle Management, and Agile EDM. Attachments can be in the form of files, text, and URLs. You can check in and check out files, view versions, download them, and view details in both Ideas and Proposals. Files are automatically uploaded to the server. If a graphic is available, it is the basis to generate a thumbnail picture on that idea’s page.

Comment on Ideas: Explained

Anyone who is permitted to create and search for ideas can add comments to an idea. Comments are used to contribute to a discussion about the proposed idea. The more that an idea with merit is collaborated on at this stage, the greater likelihood that it could evolve into a proposal, a design, and eventually a product. Click the Comments link on Manage Ideas page to add comments to an idea. Alternatively, leave a comment in the Comments panel on Edit Idea page. In both sequences, click Publish when you are done; no further action is required.
Vote on Ideas: Explained

Every user can click a simple vote to indicate liking or disliking a specific idea. This provides another means that helps product managers to assess the usefulness and acceptability of the idea. The Like icon or Dislike icon registers your opinion and keeps a tally of votes on each idea. Click the Like or Dislike link in the Your Vote area on Manage Ideas page to add votes to an idea. You can also vote in the Vote Summary panel on Edit Idea page. In both sequences, when you have voted, no further action is required.

Accept Ideas: Explained

New ideas are given a status of Draft. After reviewing and further detailing or enriching an idea, you may accept or reject it. On the Edit Idea page, select Accepted or Rejected in the Status field, then save the idea. Search ideas based on their status, which is displayed on the Manage Ideas page.

Idea Team Information in Oracle Transactional Business Intelligence: Explained

View complete team information, including team member email addresses in Oracle Transactional Business Intelligence (OTBI). Select an idea from the Idea Name drop-down list, to view team member names, employee email addresses and the business unit they belong to. Select a team member to view the list of ideas they are members of and the number of ideas they have contributed. Track ideas and notify members of idea updates through OTBI alerts.

FAQs for Create and Manage Ideas

What's the difference between the Top Customer Contributors chart and the Top Contributors chart?

A customer contributor is an external customer or partner who contributes ideas. The names listed in the Top Customer Contributors chart on Overview page are tabulated from the names in the Customer field of ideas from external customers.

A contributor is an internal user, someone who works at your company and who contributes ideas. The names listed in the Top Contributors chart on Overview page are tabulated from the names in the Posted By field of ideas from internal contributors.

How can I delete an idea?

Select an idea from Search Results table on Manage Ideas page, then click the Edit button. On the Edit Idea page, open the Actions menu, and select Delete. You are prompted to continue or cancel the action.
How do I create a proposal in relationship to an idea?

If an idea has potential to become a product, or this potential develops as the idea is enriched or associated with other ideas, there is a choice to create an associated proposal. On an Edit Idea page or the Manage Ideas page, click the Actions list and select Create Proposal. A proposal is created.

When you create a proposal from an Edit Idea page, it appears on the idea’s Relationships table only after reloading the idea. Also, the idea has been inserted on the proposal’s Relationships table. When you create a proposal from the Manage Ideas page, it appears on the idea’s Relationships table only after clicking the Refresh button.

How can I manage my customer list?

On the Ideas Overview page, click the Manage Customers icon to open the Manage Customers dialog. You can create, rename, delete, and organize the customers or partners who create ideas for your company. You can also export your customer list to Microsoft Excel.
3 Develop Product Requirements Specifications and Requirement Structures

Overview of Requirements Specifications

Requirements Specifications are documents that define market requirements for a particular purpose, such as product requirements or business requirements. Two types are ready to use: requirements specification and test case specification. But you can create your own types, and define attributes specific to each type. Creating new types is the administrator’s task.

In a requirements specification, you create a hierarchy of requirements. You can even include other specifications in the hierarchy. A graphical navigator helps you see the structure, relationships, and dependencies. You may find the table view useful for updating multiple attributes or viewing a summary analysis.

Create a Requirements Specification: Explained

Navigate to the Concept Design work area.

On the Overview page, click the Tasks panel to open the list of available tasks. The tasks are grouped in three categories or applications for Innovation Management, namely Concepts, Requirements, and Proposals.

- Each category includes a Create task, which lets you create and continue working on a new instance of that business object.
- Each category also has a Manage task, which lets you search for business objects, navigate to a specific object, and to modify it.
- The Requirements category contains two additional tasks, View Audit Trail and Link Requirements.

Create Requirements Specification

In the Requirements category of the Tasks list, click the Create Requirements Specification link to bring up the Create dialog. Enter a name, and select a type. Entering text into the Description field is useful since the field is searchable. From the Actions list of the specification, select Create to create requirements for the specification.

The list of requirements specification types is created and modified by the administrator. The Type attribute permits grouping and finding requirements specifications by their type. Define new attributes in Data Composer that are specific to a given type of requirements specification.

Displayed Views of Requirements Specifications

On a requirements specification’s Edit Requirements Specification page, the default view is the Standard view. Click the grid icon for the Table view, which presents the structure’s items in an editable table format.

The Graphical Navigator is another viewing option. Select the Launch Graphical Navigator option to view a graphic display of the selected requirements specification or requirement, including its structure, relationships, and dependencies. The graphical navigator is quite dynamic: click any object to see its associated objects, as well as on many visual controls.
Manage Requirements Specifications

In the Requirements category of the Tasks list, click the Manage Requirements Specifications link. Creating, naming, and enriching requirements is done in the context of building a structure of requirements within a top-level requirements specification. A requirement is always part of a structure in a requirements specification.

Related Topics

- Tabs on Requirements Specifications and Requirements: Explained
- Details of the User Interface in Requirements: Explained
- Overview of the Graphical Navigator
- View Audit Trail: Explained
- Link Requirements: Explained

Creating Requirements Specification: Video and Procedure

Video

Watch: This video demonstrates how to create a requirements specification.

Procedure

A Requirements Specification is a document that specifies market requirements for a particular purpose. For instance, a market requirements document, a product requirements document, or a business requirements document. This video demonstrates how to create a requirements specification.

To create a requirements specification:

1. Navigate to the Concept Design work area.
2. Use the Tasks panel to create a requirements specification.
   
   Click the Create Requirements Specification link.
3. Enter a name for the new specification.
   
   You can add an optional Description. You must select a Requirement Type.
   
   Click Save and Close.
4. A requirements specification is often a collection of separate requirements. A requirement can be called a requirement line, because they are separate lines beneath the parent requirements specification.
   
   Select Requirements from the list next to the Add icon.
5. Enter a name for the requirement as it appears in this requirements specification.
You may click OK, or continue to add requirements that appear in the list by clicking the Create Another button.

6. To add requirements that exist but do not appear in the list, use Actions > Search and Copy to find the ones you want.

When you are done, click OK.

7. After adding a few requirements, use the Actions menu to organize them into a hierarchy.
   - Change the indent on a requirement, making it a child to the requirement to which it’s indented.
     Just as requirements specifications may contain a few or many requirements, a requirement line may become the parent of a few or many requirements. In this way, a requirement becomes a requirements specification. For this reason, there are no restrictions to pulling a requirements specification into a parent requirements specification.

8. When you are done, click Save.

Modifying a Requirements Specification: Video and Procedure

Video

Watch: This video demonstrates how to modify a requirements specification.

Procedure

To modify a requirements specification:

1. Navigate to the Product Management > Concept Design work area.
2. Use the Search panel and search for and open a requirements specification.
   - In the Search For field, select Requirements Specifications.
   - Enter the name of the specification and click Search.
   - Click the name of the specification in the search results to open it.
3. The requirements specification has a list of requirements. Use the Actions menu to organize the requirements hierarchy. Some things you might change are:
   - Reorder the requirements using Actions > Move Up or Actions > Move Down;
   - Make one requirement become a child to another by increasing its indent in the structure. Use Actions > Increase Indent or Actions > Decrease Indent; or,
   - Move a requirement to a different place, in the specification; you must match a requirement’s indent with others to move it in relationship to them, that is, you may find as you move a requirement that it belongs on a different hierarchy level.
     Along with adjusting hierarchy through directional moves, you can move requirements to new places in the requirements specification.
With a little practice, you can make many changes to a large requirements specification quickly. It is good to click **Save** when you have made several adjustments, so you don’t have to repeat these adjustments if you do too much and want to return to a hierarchy that you had established.

4. Select the **Table View** icon in order to modify multiple attributes quickly and review the analysis.

   There is an **Analysis** column of pie charts for things like **Total Estimates** and **Fulfillment Status**, which can prompt further changes or reverting to previous states.

   The Warning icon next to Total Estimates indicates that there is at least one field that is empty. You can experiment with different estimates in the empty field to see how it affects the Total Estimates. If you have filled in an estimate and click Save, you will see the Warning icon disappears and the various fields are updated with the new values.

5. As you modify attributes and save them, you can click the refresh icon to update the **Analysis** panel.

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### Approving a Requirements Specification: Video and Procedure

#### Video

**Watch:** This video demonstrates how to approve a requirements specification.

#### Procedure

To approve a requirements specification:

1. Navigate to the Product Management > Concept Design work area.
2. Use the **Search** panel to search for and open a requirements specification.
   - In the **Search For** field, select **Requirements Specification**.
   - Enter the name of the specification and click **Search**.
   - Click the name of the specification in the search results.
3. Select **Actions > Submit for Approval**. The Submit for Approval dialog opens.
4. Click the Reviewers icon. The **Select and Add: Reviewers** dialog opens.
   - Click the radio buttons for Users or User Groups, and click **Search**, and select names.
   - Or simply type in the name of a reviewer you know - but still click **Search** to bring up the name and select it.
   - Select one or more reviewers.

   Click **OK**.

5. Click **Submit**.
6. When reviewers sign in, they will be able to approve or reject from the notification.
Overview of Requirement Structures

On a requirements specification, you can add or order one, several, or many requirements, as well as other requirements specifications, into a hierarchy. This composes a requirements structure. A structure provides all the details of what is expected of the product being described or proposed by the top-level requirements specification. A requirements specification is supported and enriched by its structure which is composed of requirements.

Build a Structure

Create requirements by typing-in, or by searching requirements from another requirements specification. Create and add requirements to a structure. You can also search for and add requirements specifications to the structure.

A requirements specification and its structure of requirements is displayed and managed in the Requirements pane, of the named business object’s Edit Requirements Specification page. Use the Move Up and Move Down commands on the Requirements pane Actions list to adjust the order of requirements.

Requirements can be organized as a flat-list or in a hierarchy. Use the Increase Indent and Decrease Indent commands to establish hierarchy, or parent and child sequences of requirements. These commands are also on both the Actions list. If a movement command or icon is grayed out, that movement cannot be performed on the selected requirement. Move the selected requirement away from its parent, and you quickly learn the internal rules of movement in the structure.

You can also select and move a requirement anywhere in the structure. Be sure to save the modified requirements specification when you are ready to leave its page.

A requirement is sometimes called a requirement line because it fills another line of the structure of a requirements specification. Create multiple layouts for requirement lines within a specification by configuring each layout to become active when it meets certain criteria. Use groovy scripting in the Application Composer to define the criteria.

Related Topics

• Edit a Structure of Requirements: Explained

FAQs for Requirements Specifications and Requirement Structures
What's the difference between a requirements specification and a requirement?

A requirements specification is always the top level of a structure. The structure is known by its top-level requirements specification. A requirement is a detailed statement or information, with different attributes than a requirements specification. A requirement can have multiple child requirements, like a requirements specification, but a requirement is never found at the top level of a structure.

A requirements specification object can be included in the structure of another requirements specification. This behavior is the same as a requirement. When a requirements specification is added to a structure, it cannot have any child requirements.

How do I create a requirement?

A requirement is always created within the context of a requirements specification. With a requirements specification selected, click the Actions button on the menu bar of the Requirements pane and select Create Requirement. Enter information about the new requirement in the dialog. When you click OK, the requirement is added to the structure.

You can continue creating requirements, with a requirement selected, by selecting Create Another.

You can also use the context menu to create and add requirements.

After creation of requirements by any of these methods, remember to save the requirements specification. From then on, any of the new requirements can be searched, viewed, and modified. They can be moved in the structure, removed from the structure, or added to other structures.

Can I change the version of a requirements specification?

No, the Version field of a requirements specification cannot be changed until it is approved. When a requirements specification is approved, it becomes read only, and Save As New Version appears in the Actions menu on the Edit Requirements Specification page. Selecting this action creates a new, modifiable requirements specification with a new Version number.

How can I delete a requirement or requirements specification?

With a requirements specification opened, click the Actions menu and select Delete. You are prompted to confirm your decision to delete. When you click Yes, there is a protection and restriction: the application does not delete a requirements specification that has even a single impact association with another requirement or component. If such an association exists, an error message displays, and when you click out of the message, the requirements specification remains open and is not deleted.

To delete a requirement from a structure, select the requirement and click the Actions menu on the Requirements toolbar, then select Delete.

To delete a requirement from the application, first open it, click the Actions menu, and select Delete. There is no prompt to confirm your request to delete a requirement; however, the application does not delete a requirement if it impacts any other requirements or components. If such an association exists, an error message displays, and when you click out of the message, the requirement remains open and is not deleted.
4 Manage Requirements and Relationships with Objects

Edit a Structure of Requirements: Explained

On any Edit Requirements Specification page, from the pane called Requirements, manage the structure and content of a requirements specification with the same tools you used to build it.

To add a requirements specification or requirement to the structure at a lower level of the selected object in the structure, use Search and Copy from the Actions menu.

Use Move Up and Move Down to adjust the order of its requirements. Use Increase Indent and Decrease Indent to adjust the parent-child hierarchy of the requirements. Or select and move objects from one part of the structure to another.

No modification of the structure is committed until you click Save.

Related Topics

• Overview of Requirement Structures

Tabs on Requirements Specifications and Requirements: Explained

The tabs distribute information and data about the selected requirements specification or requirement.

General Information Tab

The General Information tab provides basic information about all requirements specifications and requirements. It has a Content field for a full description of the requirement, which is enhanced by the Rich Text Editor capability. The Content field also accepts graphics, attachments, and URLs; since it supports the description and creation of the new item or product, you can even insert and format programming code.

The General Information tab on requirements specifications includes the Requirements Specification, Description, Type, Status (read-only), and Product attributes.

The General Information tab on requirements carries the scoping attributes, which are Priority, In Scope, Fulfilled, and Estimates.

Attachments Tab

The Attachments tab on a requirements specification displays a requirements specifications, requirement or other files that are attached to it.

You can also add or upload a file or a URL to the requirement to provide a more detailed information about the requirement. Click the Add icon or the Add option from the Actions menu to add an attachment. Select the File or URL from the Type
column. Click Choose File to select a file name or URL. To delete an attachment, select the row in the attachments table and click the Delete icon or the Delete option from the Actions menu.

Relationships Tab
The Relationships tab of a requirements specification displays the Innovation Management objects that are related to it.

In the Edit Requirements Specification page, click the Relationships tab. Click the Select and Add icon to add relationships. In the Select and Add: Relationships dialog box, the drop-down list in the Search field displays objects based on the user access to these objects. Ensure that you have the Review or Manage privilege on an object to add that object as a relationship to a requirements specification.

You can also delete object relationships using the Delete action.

Relationships Summary Tab
On a requirements specification, the Relationships Summary table lists requirements in the structure that carry relationships. Also on a requirements specification, the Impacts Components table lists impacts from requirements in the structure.

The tables on this tab of requirements specifications are read-only tables. They automatically aggregate all established relationships with other business objects from all of the requirements in the requirements specification's structure. So, relationships that were created by users in individual requirements are summarized in the top-level requirements specification.

Analysis Tab
The Analysis tab gives us a comparison of solution alternatives in a graphical view.

An analysis helps you make decisions based on the data that you gather from the tables or graphs.

Details of the User Interface in Requirements: Explained
On an Edit Requirements Specification page, as you select an object in the tree structure within the Requirements pane, the heading and contents of the opposite pane changes.

For example:

- If the top-level requirements specification is selected, the pane’s heading is Requirements Specification: [named object]. The pane’s content is the General Information tab of the requirements specification.

  When you click the Save As option in Save and Close button, a new requirements specification is created with structure.

- If a requirement is selected, the pane’s heading is Requirement: [named object]. The pane’s content is the General Information tab of the requirement, which contains different attributes than a requirements specification. The Content field of requirements has a large capacity and full Rich Text Editor functionality. As a requirement is enriched, the description can add fully formatted text, technical specifications, and graphics.

  Note: Attachments tab is another way to enrich the requirement with graphics, URLs, documents, and so forth. The Content field can hold portions of same or point to and list materials that are held in the requirement as attachments.
Standard View and Table View

There are Standard and Table view icons.

The Table view is a powerful editor, as you can edit all rows of requirements in a requirement specification - attribute by attribute - without having to open each requirement or even select its row. You can even view and edit a requirement's description in the Content field, in a Table view row, again without opening, editing, and saving the requirement. (You must reattach a document or graphic file that has been modified, or reestablish a URL link that is changed.)

Other Buttons and Links

There are also Save, Save and Close, and Cancel buttons. Save and Close has a list, Save As. You can create a duplicate of the requirements specification, giving it a new Name and editing the Description, in the Save As process.

Related Topics

- Add a Requirements Specification to a Requirements Specification: Explained

Viewing Related Objects Graphically: Video and Procedure

Video

Watch: This video demonstrates how to view related objects graphically.

Viewing Related Objects Graphically: Procedure

To view related objects graphically:

1. Navigate to the Concept Design work area.
2. Use the Search panel to search for and open a concept structure.
   Choose Concepts in the Search For list. Enter the name of concept and click Search. In the search results, click the name of the concept to open it.
   A concept structure is simply a concept that has requirements specifications associated with it.
3. Select Actions > Launch Graphical Navigator.
   A tab opens with the concept structure displayed graphically by the graphical navigator.
4. The high-level map shows the concept structure and its related requirements specifications.
   Click on an object in the high-level map to zoom in on that object.
5. The graphical navigator's internal Search panel is helpful to find specific objects in a large concept structure.
   In the search results - or on the high-level map - right-click on an object and select Focus to zoom in on the object.
6. You can right-click on other objects in the search results, such as Information, Focus, or More Details, to see different summaries about the object.
   For instance, on the Information pop-up, click More Details to open the object in a dynamic tab to view all information.
Actions Menu on Requirements Specifications and Requirements: Explained

On requirements specifications and requirements, the **Actions** list items offer ways to modify the business object or gather more information about the object.

The **Actions** menu options are:

- **Send**: opens a dialog to send notifications to other users. Select users from the menu in the Send dialog box and add a message to the notification, to help solve issues.
- **Launch Graphical Navigator**: opens a graphical display of the business object and its related objects. It’s also an useful tool to understand details about large requirements structures.
- **Save as New Version**: saves the object with same content, but you give it a new name.
- **Manage Team**: controls who has access to read and modify the object.
- **Submit for Approval**: opens a dialog to name who will receive the object for approval.
- **Export**: opens a dialog to configure an export procedure of the object’s content. Click the **Export** option in the **Actions** menu to export the requirements specification history report. Download the report to either HTML, PDF, Word or XML formats for future reference. Remember that history is recorded only if the version of the requirements specification is two and higher.
- **Generate Traceability Report**: on requirements specifications and concepts, launches a report that lists administrator-defined attributes and helps you understand details. Click the **Generate Traceability Report** option to run a report in either HTML, CSV or XML formats. Click **View Audit Trail** in the Tasks panel to view the historical records of the export and traceability reports generated.
- **Delete**: opens a dialog to delete the object.
- **View Approvals**: a quick-view access to the Approval History of a Submitted or Approved requirements specification (from within the object). The dialog displays a read-only summary that corresponds to the History section of the worklist notification. (You cannot approve or reject the requirements specification with this dialog.) Remember that the **View Approvals** action appears only when the requirements specification moves beyond the Draft state.

**Related Topics**

- Overview of the Graphical Navigator
- Overview of the Traceability Report

Relationships with Other Business Objects: Explained

A relationship is a linked association from one business object to another. Establishing a relationship on one business object automatically creates a relationship on the other object back to the first. There is no differentiation or hierarchy to relationships. The type of relationship being established is important for the user to assess dependencies, to track verification and validation, and fulfillment. Knowing if there is an impact coming from the object or if the object impacts another object, and if the object fulfills a required relationship all help the user know how to proceed with the innovation process.

Duplicating relationships with objects is not possible.
RELATIONSHIPS BETWEEN BUSINESS OBJECTS IN APPLICATIONS OR SYSTEMS

Listed by application, relationships may be established between business objects from these applications or systems:

- between business objects that were created in any of the Innovation Management modules, that is, the Concepts, Proposals, or Ideas work spaces;
- between an Innovation Management object and a Product Development item; or,
- from an Innovation Management object to a business object in another compatible system, such as Agile Product Lifecycle Management or Agile Engineering Data Management.

A relationship link to an Innovation Management object opens that object in a new tab. A relationship link to an object in a configured compatible system, such as Agile Product Lifecycle Management or Agile Engineering Data Management, opens in a new tab.

**Note:** For business objects outside Innovation Management to be available for relationship, the administrator must set up object types for compatible applications on your system. For instance, if Product Development is configured on your system, you should see Items on the list of types that are available on a search.

The current releases of Oracle Cloud Innovation Management (IM) and Oracle Agile Product Lifecycle Maintenance (PLM) are certified for bidirectional relationships; properly configured on both sides, an IM business object can be viewed in PLM as well as PLM to IM. And since relationships are version-specific between IM (versions) and PLM (revisions); the version is maintained as part of the relationship.

**Note:** The relationship type for a PPM object will remain an empty value and will not be an editable field in the Relationships table.

NEW VERSION OF REQUIREMENTS ON RELATIONSHIPS TABLES

Given that relationships can be established between business objects per the previous information, this list indicates the appearance of the "Has Changed" icon when one of the objects is modified and therefore exists in a "later version". Hovering your mouse over the Has Changed icon displays the tool tip "Modified in a later version".

There may be reasons that the original relationship - that is, the relationship of an object with a particular version of another object - remains valid after one or the other object moves to a new version; so, the application does not automatically update, or change, the object in the Relationships table. It does, however, indicate that a later version now exists.

The Has Changed icon appears on the Relationships table of these business objects when modified and a new version exists:

- Requirements that appear in any of the Innovation Management modules (on Concepts, Proposals, and Ideas work spaces);
- Items from Product Development that are in relationship with requirements; or,
- Requirements (from IM) and business objects from Agile PLM, which are in relationship, appropriately indicate a new version exists in each others’ Relationships table(s).
Add a Relationship to a Requirement: Example

Requirements are an object type that can have relationships to other business objects.

Adding a Relationship to a Requirement

These are the steps to add a relationship to a requirement.

1. Go to Navigator > Product Management > Concepts > Tasks panel > Manage Requirements Specifications.
2. Search for a requirements specification and open your desired result.
3. On the Edit page click the Relationships icon to show the Relationships table.
4. Click Select and Add to add a relationship.
5. In the dialog, select the object type you want to add of Proposal.
6. Enter a description term and click Search.
7. From the results table select the proposal you want to add and click OK.
8. With that added to the Relationships table, click the Relationship Type list and select the type of Fulfills.
9. Click Save.

Link Requirements: Explained

On the Concepts Overview page, click the Tasks icon to open the list of available tasks. In the Requirements category, click the Link Requirements link. The Link Requirements page opens.

In both panels, click the Search icon to search and select the requirements specifications that you want to have linked to each other. The entire structures of both are displayed in the respective panes.

With a requirement selected in one pane, select one or more requirement (or test case) in the opposite pane. Then click the Link icon in the middle. The relationships from the two panes are established. Click Save to preserve your work.

You may want to exploit this feature with the requirements specification in one pane being populated with test cases for the requirements in the opposite pane. Whenever two requirements specifications are open in the panes, requirements in one pane display a relationship icon if they have any relationships with test cases in the opposite pane. Select one requirements specification, and the requirements that are related to it now display the same icon.

Also, hover over a relationship icon, and a list of related test cases appears. These functions makes it easy to isolate and select additional test cases to be linked as they are added to the test case requirements specification.
Requirement Attributes that are Collected in Requirements Specifications: Explained

On a requirement, there are four attributes that are used by product managers to assess progress or completion status: Priority, In Scope, Estimates, and Fulfilled. The values for these attributes are tabulated and summarized at the requirements specification level of the structure. A requirements specification displays two pie charts on the General Information tab:

1. Fulfillment Status depicts percentages of requirements in the structure that the In Scope attribute is set to Yes and that the Fulfilled attribute is set to Yes, No, or No Value. In other words, it shows the tabulated percentages of the various Fulfilled values on all in-scope requirements.
2. Total Estimates adds the number of estimates named in Estimates attribute in all the requirements, and depicts them in the chart according to their Priority settings. The application keeps count of the estimates entered in those requirements that In Scope is set to Yes.

Note: The Table view icon can always be clicked to show certain values quickly. Also, the pie charts can be clicked to go directly to Table view. In Table view, the pie charts are visible unless the pane is collapsed.

These four attributes are defined as follows:

- **Priority** default settings are Must Have, Should Have, and Nice to Have. The default settings can be renamed. (Since Priority is a list field, its settings are sorted alphabetically, so the order of the default settings are: Must Have; Nice to Have; Should Have.)

- **In Scope** is set to Yes or No depending on the product manager evaluating whether this requirement must be included in the scope of the requirements specification. The application keeps count of the estimates entered in those requirements that In Scope is set to Yes. As long as In Scope is set to Yes, that requirement’s Fulfilled setting is tabulated, and its Estimates value are included in the rolled up value, adjusting as the number of Estimates is adjusted. The "caution" symbol indicates "Some in-scope requirements that are counted in this requirements specification have no estimate."

- **Estimates** is a numeric field, to be filled in with an integer value. Estimates can be thought of as Level Of Effort (LOE), and the product manager may dictate that the values reflect, for example, "man hours", "person days", or some other form of estimated LOE. Be aware of its relationship to the In Scope attribute.

- **Fulfilled** can be set to Yes or No. If it is either not changed or returned to the blank setting, the application counts that as "No Value". The product manager may determine that a requirement has been described in sufficient detail for its purpose in the requirements specification, that its purpose is, in effect, fulfilled. For those requirements whose In Scope attribute is set to Yes, the Fulfilled settings are rolled up and depicted in the Fulfillment Status chart, allowing some tracking of how evolved the requirement is.

Let us say requirements specification RS-1 has three requirements, R-2, R-3, and R-4. These requirements have, respectively, 200, 300, and 400 as entered values for Estimates. As long as In Scope is set to Yes for R-2, R-3, and R-4, the total of Estimates in RS-1 is 900. If In Scope for requirement R-2 is set to No, however, the rolled up total of Estimates in RS-1 is 700.

Use the Table view to spot certain things more quickly, such as whether there is a requirement marked In Scope that has no value for Estimates. Use the Standard view to see the structure.

Note: The Standard view is dynamic, in that it refreshes as you make entries, without saving changes. The Table view is not dynamic, and you have to click the Refresh icon to have your latest changes reflected in what you see, such as the pie charts.
Converting a Requirement Line Item into a Requirements Specification from the Tree View: Worked Example

Here you learn how to convert a requirement line item into a requirements specification from the tree view.

Converting a Requirement Line Item into a Requirements Specification from the Tree View

1. Edit a requirement
2. Select a requirement line item in the tree view.
3. Click Convert to Specification from the Actions menu.
4. In the new Create Requirements Specification dialog enter required fields.
5. Click OK and stay on the same page with the parent specification.
   The child specification is created and saved.
6. Click Save on the parent specification.

Note: If you do not click Save and cancel out of it, though the child specification is created, it does not appear in the hierarchy of the parent specification. Run a search to find the child specification.

FAQs for Manage Requirements and Relationships with Objects

What is the Comments icon that is next to some requirements?

You can create a comment by clicking the Comments link on Standard view when a requirement is selected in a structure. In the Comments dialog, type in your comment and click the Publish button. When a comment is published, the default status is Open. The Change Status field can be set to Closed, and set back to Open. If the requirement has at least one Open comment, an icon displays next to the requirement in the structure, which alerts the product manager or requirement owner of actionable comments.

What's the difference between a managed team and an approval or review team?

The Manage Team action controls who has access to read and modify the object. The Allow Access To setting is always set to “Everyone”. You can select “Team members only” and select users to have access to the object. So, when the Submit for Approval action is executed, some users, who do not have access to read or modify the requirements specification itself, may be notified of a Worklist task to Approve or Reject the object.
How can I associate Agile Product Lifecycle Management business objects with requirements?

Navigate to the Relationships tab of a requirements specification or requirement. Click the Select and Add icon to search for and find the Agile Product Lifecycle Management item or design that you want to be associated with the requirement. With the Product Lifecycle Management object selected, click OK. Click Save.

How can I add an attachment to a requirements specification or requirement?

With a requirements specification or requirement open, navigate to the Attachments tab. Select the Add option from the Actions menu or click the Add icon. Select a Type of File or URL. If the attachment is a file, click the Browse button and find the file on your system and select it, then click Open. If the attachment is a URL, enter it in the field provided. You can add a title or description to either type before or after adding the attachment.

How can I associate a requirements specification with a product?

With a requirements specification opened, click the General Information tab. Click the Product menu and select the appropriate product. Another version of the requirements specification can be associated to another product. The administrator creates the names of products that appear in the menu of this attribute.

How can I associate a requirements specification or requirement with a proposal?

Open a requirements specification or a proposal and navigate to the Relationships tab. Click the Select and Add icon to add the objects you want to associate with the requirements specification to create the relationship. Select the Proposal option. Click OK.

How can I associate a test case with a requirement?

According to the situation, you can use either a dependency or a relationship. Dependencies imply stricter control than relationships, because you cannot delete a requirement if it impacts another requirement.

What's the Impacts Components table?

The Relationships Summary tab of requirements specifications has a read-only Impacts Components table that collects components from all the requirements in the structure. The Relationships tab of requirements has a read-only Impacts Components table, that lists the components that the selected requirement impacts. If the selected requirement changes,
it affects those components on Impacts Components. Each component listed is an active link to open that component. If a component is fulfilled and tested successfully in Concept Design Management, this table displays the updated status.

What happens if I convert a requirement line item into a requirements specification from the tree view?

Converting a requirement line item into a requirements specification action from the tree view creates a new requirements specification, moves the selected requirement line item and its child objects from the original specification to the newly created specification along with all the attributes, attachments, relationships, and team settings. You can only convert a requirement into a requirements specification if the requirement and its child objects are not associated with a concept or a component.

Can I add or remove attachments and relationships for a requirement?

In the table view of a requirement you will find the Manage Attachments and Manage Relationships option from the Actions menu. Also, there are icons indicating if there are attachments or relationships associated with the requirements in the table. By clicking on the icon you can manage the existing attachments or relationships of the requirement in the dialog.
5 Version and Approve Requirements Specifications

Save As New Version: Explained

A new version of a requirements specification can be duplicated before it goes through the approval process, as well as after it has been approved. A new version can be created only when the requirements specification is in either Draft or Approved states, and the status of the new version is Draft. This process is to baseline a requirements specification.

With the requirements specification open, use the Actions list and select Save As New Version. It can be named according to your needs; no file name is prompted by the application. Once a file is created and named by this method, it cannot be renamed.

The new iteration of the requirements specification is a replica, except that Comments and Impacts information are not carried over to the new requirements specification.

When Save As New Version is used once from a specific version of a requirements specification, the action is no longer available on that version.

View Audit Trail: Explained

You can track the history of a requirements specification from the second version on, and the history of requirements. The data recorded is who made a change to an object, what the change was, and when it occurred.

On the Concepts Overview page, click the Tasks icon to open the list of available tasks. In the Requirements category, click the View Audit Trail link. The View Audit Trail page appears.

Use the Basic or Advanced search fields to find objects of interest.

If you find that the objects you seek are not being returned, or that no search can be set up, consult your administrator, who must enable the Track History capability for a specific requirement class or subclass.

The actions that are tracked are Create, Add, Delete, and Update. When a new version of a requirements specification is created by the Save As New Version procedure, you will note this action is recorded as Create. Certain actions, such as Export, are not tracked.

Submit a Requirements Specification for Approval: Explained

Approving a requirements specification is not required, but the review and approval process helps to codify the completion of the requirement design work. An approved requirements specification is locked from further updates. You can submit a requirements specification for approval by selecting Submit for Approval from the Actions menu.
The **Submit for Approval** dialog enables you to select who must review and approve. Click either Add Approvers or Add Observers to search for the desired users with the necessary manage or review privileges to meet your needs. Reviewers can also comment on the requirements specification. When you have finished adding reviewers, click the **Submit** button. Once a requirements specification is submitted, it cannot be further modified. However, at any time, an approved requirements specification can be saved to a new version and then modified.

### Approve or Reject a Requirements Specification: Explained

After a requirements specification is submitted to reviewers, each one sees a new task in their **Worklist** displayed in the **Overview** pane of the **Concepts** page. You click the task link to open the details of the task. The details and history of the requirement approval is displayed.

You can see who has already approved or rejected, along with other information. The workflow for requirements specifications is simple and cannot be modified. For instance, you cannot add or remove statuses from the approval workflow.

There is a notification also sent to the user that includes a URL link of the object. The URL link takes the user to the page where the user can look through the content of the object before deciding to approve or reject the object sent for approval.

Each reviewer clicks the **Approve** or **Reject** button. If the requirements specification is rejected by a reviewer, its **Status** reverts to **Draft**, which permits further modifications. The project manager can modify the requirements specification and resubmit it to the reviewers.

When all reviewers have approved the requirements specification, its **Status** changes to **Approved**. When this occurs, no further modifications of the requirements specification are possible.

### Add a Requirements Specification to a Requirements Specification: Explained

A requirements specification may be added to another requirements specification. There are two ways to do this:

- From the "parent" requirements specification, select Search and Copy from the Actions menu, and select Requirements Specification in the Search dialog.
- From the "parent" requirements specification, select Create from the Actions menu, or use the Add icon, and select Requirements Specification in the Create dialog.

While both these methods of adding are easy to accomplish, there are some business rules and considerations, as follows. The important thing is to know what you want to accomplish by adding a requirements specification to a requirements specification. For instance, it may be there is a set of requirements that should be reviewed and approved separately, or otherwise managed independently of the larger set of requirements contained in the parent requirements specification.

When a requirements specification is added to another structure, it does not lose any of its inherent attributes or qualities; it appears the same at the top level of its own structure. When the same requirements specification appears in the context of another structure, however, the attributes it displays are those of a requirement, such as the Priority or Fulfilled attributes.

The icon next to a requirements specification within a structure combines the icon for a requirements specification, an open book, and the icon for a requirement, a page or document.
Some other business rules follow:

- When a requirements specification has been pulled into a structure, it can be altered only as a requirement.
- So, you cannot change the Name of a requirements specification from a structure. However, the requirements specification’s name is an active link in Details that can be clicked to open it, and you can then modify the Name, Description, Product, and so forth.
- Once a requirements specification is added to a structure, you cannot add requirements underneath the requirements specification. But look back at that requirements specification at the top level, it retains its own structure no matter what has been modified in its context as a requirement.
- Regarding versions of a requirements specification, when it is at top level and in Pending/Draft or Released/Approved status, the Action **Save As New Version** increments the Version number. If a top-level requirements specification is in the Draft/Pending status, and Save As New Version increments Version 1 to 2, note that its Version 1 remains in the Draft status as it automatically changes to Read-Only condition. In this way, a requirements specification can exist in multiple versions in Draft status.

**FAQs for Version and Approve Requirements Specifications**

**How can I submit a requirements specification for approval?**

With a requirements specification open, open the **Actions menu** and select **Submit for Approval**. The **Submit for Approval dialog** opens, which has the Add Approvers and Add Observers buttons to begin your selection process. The **Select and Add: Reviewers dialog** opens, and you can search to find approvers and observers while seeing their role to be certain of their privileges in relation to the object sent to them for either approval or review. Note the team of reviewers that you select for this business object’s routing is different from the **Manage Team action**. Select from the returned results, and click OK. You can run additional searches for reviewers. When you are done, click the **Submit button** and the requirements specification is sent to them. Its status changes to **Submitted**, and it cannot be sent for approval in its current form again.

**How can I export a requirements specification?**

With a requirements specification open, click the **Actions menu**, then select **Export**. Select the format to save the exported file, as **HTML**, **Adobe PDF**, **XML**, or **Microsoft Word**. When you select to **Save** the file, **Browse** to a location on your local computer and enter a **File name**.
6 Develop Product Proposals

Product Proposal: Explained

A product proposal represents the business plan for a proposed new concept, new product, sustaining product or a product to be phased out. The product proposal contains financial information such as cost and revenue of the product. It also contains milestone and resource data that represents execution details.

Use the General Information tab of a proposal to enter basic information about the proposal. Update and modify the values in the **Name** and **Description** fields of a proposal within the proposal view. To define a complete proposal, add details about financial performance, product milestones, and other useful information. As an administrator, use Application Composer to configure each section of your proposal, adding additional attributes as necessary.

On a daily basis, multiple proposals are created globally and in various currencies. The Proposal Conversion Rate to US Dollar attribute enables aggregation of costs and revenue in US dollars and allows you to factor the conversion rate into reports and analytics.

Product Proposal Versions: Points to Consider

Versioning a product proposal stores and tracks all changes that occur during the review and approval process. It helps in capturing and retrieving the evolution of information for a product proposal.

Product Proposal Versioning

You can view previous versions of the product proposal, irrespective of the product proposal version you are currently on. You can only add the latest version of a product proposal to a scenario. If required, save an older version of a product proposal into the latest version. You can't edit a proposal that is submitted for approval.

Product Proposal and Product Concept

A product proposal and a product concept work in unison, but they can follow independent versioning. The newly created proposal is always in Draft status. The concept version displays the latest version of the concept.

Publish from Portfolio

When you publish a product proposal from a portfolio, a new product proposal version is created.

Search

When you search for a product proposal, the search results display the latest version of the product proposal.
Save As
When you do a Save As on a specific version of a product proposal, you can select any existing version of a product proposal.

Deleting a Proposal
You can only delete the latest version of a proposal in the Draft status. If there are several versions of the proposal, the Delete option of the Actions menu appears only in the latest version of the proposal. While deleting version 1 of the proposal, the concept associated with it is deleted only if it’s in the draft status in version 1 as well. If not, an error message warns you that you cannot delete the concept.

Overview of Product Proposal Workflows
Proposals are routed through a workflow to either approvers or observers.

The link available from the Worklist directs the user to add users with the correct privileges as approver or observer. The search results available are filtered to only return users with the correct privileges according to observer or approver. Approvers require the manage privilege and observers require the review or manage privilege.

The workflow statuses can include:
- Pending
- Submitted
- Approved
- Rejected

Note: While a concept and its corresponding proposal belong together, they do not have to share the same approval workflow, and each may be approved independent of the other.

Adding Details to a Proposal: Video and Procedure

Adding Proposal Details

Watch: This video demonstrates how to create a proposal from an idea.

Adding Details to a Proposal: Procedure
To add details to a proposal:
1. Navigate to the Concept Design work area.
2. Open the **Search** tab and search for a proposal:
   - Select Proposals in the **Search For** field.
   - Enter the name of the proposal and click Search.
   - From your search returns, choose and open a proposal.

3. On the **General Information** tab, enter information into the Business Objectives field, as well as other details. Click **Save**.

4. On the **Content** tab, enter information into the Business Case field. Click **Save**.

5. On the **Costs** tab, enter cost data:
   - Click **Add**.
   - Select values for Category, Type, and Status.
   - Enter an amount and select a date by which the cost will be incurred.
   - Click **Save**.

6. On the **Revenue** tab, add rows of revenue information:
   - Click **Add**.
   - Select values for Category, Type, and Status.
   - Enter an amount and select a date by which the revenue will be received.
   - Click **Save**.

7. On the **Resources** tab, add rows for the type of workers needed, and when you will need them:
   - Click **Add**.
   - Select values for Category, Pool, and Status.
   - Enter values for Headcount, Start Date, and End Date.
   - Click **Save**.

---

**Submitting a Proposal for Approval: Video and Procedure**

**Video**

*Watch:* This video tutorial shows you how to approve a proposal. The content of this video is also covered in text topics.

**Submitting a Proposal for Approval: Procedure**

To submit a proposal for approval:

1. Use the Navigator to go to the Product Management work area. From the list of offerings, click the **Concepts** work area.
2. To search for a proposal, do the following:
   - From the Tasks panel drawer, click Search.
   - In the Search For list, select Proposals.
   - In the Search list, select Proposal.
   - Enter the criteria and click Search.

3. To submit the proposal for approval, do the following:
   - From the search results, click the proposal link.
   - Click Actions > Submit for Approval. The Submit for Approval dialog opens.
   - Click the Reviewers icon. The Select and Add: Reviewers dialog opens.
     - You can click radio buttons for Users or User Groups, and click Search, and select names.
     - Or you can simply type in the name of a reviewer you know - but still click Search to bring up the name and select it.
     - Select one or more reviewers. Click OK.
   - In the Submit for Approval dialog, click Submit.

4. When reviewers sign in, they will be able to approve or reject from the notification.
   - In a practice environment, you can see how this process works by signing out, and then logging back in as the approver. The approver user sees a notification about this proposal as soon as they log in, and they can approve it by clicking the notification.
   - When you log back in as yourself, and open the proposal, you will see that it has been approved.

Submit a Proposal for Approval

You can’t edit a submitted or approved proposal. The status changes from Submitted to Approved only when all assigned approvers have agreed on the proposal. A rejected proposal reverts to the Draft status, and you can edit it again. If the latest version of a proposal submitted for approval is not approved, then you can’t submit the proposal again.

Remember that you can’t delete approved proposals. Instead, save them or make a copy using the Save As or Save As New Version features. They can serve as records of funding for audit.

Note: While a proposal and its corresponding concept belong together, they do not have to share the same approval workflow, and each may be approved independent of the other.
Using Workflows with Proposals: Examples

Here are some examples of routing proposals using workflows.

Sending a Proposal for Review

From this example you learn how to submit a proposal:

1. Navigate to the Concept Design work area.
2. Expand the Search panel and select the object type of Proposal.
3. From the Search Results table, select a proposal.
4. On the Edit Proposal page, click the Actions menu and click the Submit for Approval option.
5. In the Submit for Approval dialog, click Actions > Select and Add.
6. In the Select and Add: Reviewers dialog search for a user or user group you want to add.
7. In the Search Results table, select the user or user group and click OK.
8. In the Submit for Approval dialog select the role you want for the user or user group as Approver or Observer and click Submit.

Note: You must have at least one approver to submit the proposal.

9. On the Proposal page, on the General Information tab and Details pane, you can see the Status attribute is Submitted.

Reviewing a Submitted Proposal

Here you learn how to review a submitted proposal.

1. Sign in with your user name and password.
2. On the Home page click the Notifications icon.
3. Click the notification link to the proposal you need to approve or reject.
4. In the new window review the content of the submitted proposal, such as Details, Proposal Details of Business Use Case Summary, General Information, the Comments, and History,
5. Click Approve or Reject.
6. You can then search for the proposal object and see the updated status reflect your review.

Product and Proposal Metrics: Explained

Product Metrics and Portfolio Metrics are identical. In general, a Portfolio Metric is rolled up from the Product Metrics of all the Proposals or elements in the selected scenario of the Portfolio.

Revenue
### Developing Product Proposals

#### Metric Name

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<thead>
<tr>
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<th>Description</th>
<th>Data Type</th>
<th>If based on user entry</th>
<th>User Entry</th>
<th>Configurable</th>
<th>Identical metric exists on Portfolio?</th>
<th>If this metric is on Portfolio, what is the aggregation rule to roll-up from Product?</th>
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<tbody>
<tr>
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<td>Sum of all projected revenues for a product</td>
<td>Cost</td>
<td>Derived based on user entry</td>
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#### Costs by Type

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<td>Sum of all actual production costs for a product</td>
<td>Cost</td>
<td>Derived based on user entry</td>
<td>Proposal/ Copy of Proposal - Cost tab with appropriate list value selections</td>
<td>No</td>
<td>Yes</td>
<td>SUM</td>
<td></td>
</tr>
</tbody>
</table>

Resources (Number of heads) by Resource Pool
<table>
<thead>
<tr>
<th>Metric Name</th>
<th>Description</th>
<th>Data Type</th>
<th>If based on user entry</th>
<th>User Entry</th>
<th>Configurable</th>
<th>Identical metric exists on Portfolio?</th>
<th>If this metric is on Portfolio, what is the aggregation rule to roll-up from Product?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Resources</td>
<td>Sum of all projected resources for a product</td>
<td>Cost</td>
<td>Derived based on user entry</td>
<td>Proposal/ Copy of Proposal - Resource tab with appropriate selections</td>
<td>No</td>
<td>Yes</td>
<td>SUM</td>
<td></td>
</tr>
<tr>
<td>Actual Resources</td>
<td>Sum of all actual resources for a product</td>
<td>Cost</td>
<td>Derived based on user entry</td>
<td>Proposal/ Copy of Proposal - Resource tab with appropriate selections</td>
<td>No</td>
<td>Yes</td>
<td>SUM</td>
<td></td>
</tr>
</tbody>
</table>

Following metrics are derived from Revenue, Cost, Baseline date and Market Launch date information entered by the User

<table>
<thead>
<tr>
<th>Metric Name</th>
<th>Description</th>
<th>Data Type</th>
<th>If based on user entry</th>
<th>User Entry</th>
<th>Configurable</th>
<th>Identical metric exists on Portfolio?</th>
<th>If this metric is on Portfolio, what is the aggregation rule to roll-up from Product?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Margin</td>
<td>Difference between the Projected Revenue and Projected Cost Product Metric</td>
<td>Cost</td>
<td>Derived based on user entry</td>
<td>Proposal/ Copy of Proposal - Revenue/Cost tab</td>
<td>No</td>
<td>Yes</td>
<td>Revenue - Cost of all the Products in the scenarioRevenue-Cost - verified</td>
<td></td>
</tr>
<tr>
<td>Actual Margin</td>
<td>Difference between the Actual Revenue and Actual Cost Portfolio Metric value</td>
<td>Cost</td>
<td>Derived based on user entry</td>
<td>Proposal/ Copy of Proposal - Revenue/Cost tab</td>
<td>No</td>
<td>Yes</td>
<td>Revenue - Cost of all the Products in the scenarioRevenue-Cost - verified</td>
<td></td>
</tr>
<tr>
<td>Net Present Value</td>
<td>Difference between present value of cash inflows and the present value of cash outflows. Future cash</td>
<td>Cost</td>
<td>Derived based on user entry</td>
<td>Proposal/ Copy of Proposal - Revenue/Cost tab, annual discount rate, baseline date</td>
<td>No</td>
<td>Yes</td>
<td>SUM</td>
<td></td>
</tr>
<tr>
<td>Metric Name</td>
<td>Description</td>
<td>Data Type</td>
<td>If based on user entry</td>
<td>User Entry</td>
<td>Configurable</td>
<td>Identical metric exists on Portfolio?</td>
<td>If this metric is on Portfolio, what is the aggregation rule to roll-up from Product? Comments</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------</td>
<td>------------------------</td>
<td>------------</td>
<td>--------------</td>
<td>----------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Internal Rate of Return</td>
<td>The discount rate that makes the Net Present Value of all cash flows for a product equal to zero.</td>
<td>Number</td>
<td>Derived based on user entry</td>
<td>Proposal/ Copy of Proposal - Revenue/Cost tab, annual discount rate, baseline date</td>
<td>No</td>
<td>No</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Proposal/ Copy of Proposal - Revenue/Cost tab, annual discount rate, baseline date</td>
<td>Yes</td>
<td>SUM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Year Revenue</td>
<td>Sum of revenues for first 2 years after product launch.</td>
<td>Cost</td>
<td>Derived based on user entry</td>
<td>Proposal/ Copy of Proposal - Revenue/Cost tab, annual discount rate, baseline date</td>
<td>No</td>
<td>Yes</td>
<td>SUM</td>
<td></td>
</tr>
<tr>
<td>3 Year Revenue</td>
<td>Sum of revenues for first 3 years after product launch.</td>
<td>Cost</td>
<td>Derived based on user entry</td>
<td>Proposal/ Copy of Proposal - Revenue/Cost tab, annual discount rate, baseline date</td>
<td>No</td>
<td>Yes</td>
<td>SUM</td>
<td></td>
</tr>
<tr>
<td>5 Year Revenue</td>
<td>Sum of revenues for first 5 years after product launch.</td>
<td>Cost</td>
<td>Derived based on user entry</td>
<td>Proposal/ Copy of Proposal - Revenue/Cost tab, annual discount rate, baseline date</td>
<td>No</td>
<td>Yes</td>
<td>SUM</td>
<td></td>
</tr>
<tr>
<td>Return on Investment</td>
<td>Ratio of the benefit gain minus cost of the product divided by the cost to develop the product.</td>
<td>Number</td>
<td>Derived based on user entry</td>
<td>Proposal/ Copy of Proposal - Revenue/Cost tab, annual discount rate, baseline date</td>
<td>No</td>
<td>Yes</td>
<td>((Projected Revenue - Projected Cost) / Projected Cost) * 100 for all the Product Proposals in the Scenario Not average but this formula is</td>
<td></td>
</tr>
</tbody>
</table>
### Metric Name | Description | Data Type | If based on user entry | User Entry | Configurable | Identical metric exists on Portfolio? | Comments
--- | --- | --- | --- | --- | --- | --- | ---

### Payback Period
- **Metric Name**: Payback Period
- **Description**: Period of time required for the return on an investment to repay the sum of the original investment on the product.
- **Data Type**: Number
- **If based on user entry**: Derived based on user entry
- **User Entry**: Proposal/Copy of Proposal - Revenue/Cost tab, annual discount rate, baseline date
- **Configurable**: No
- **Identical metric exists on Portfolio?**: No
- **Comments**: Not Applicable

### Following Scoring metrics are entered by the User

### Metric Name | Description | Data Type | If based on user entry | User Entry | Configurable | Identical metric exists on Portfolio? | Comments
--- | --- | --- | --- | --- | --- | --- | ---

### Alignment
- **Metric Name**: Alignment
- **Description**: Alignment for portfolio on a scale of 1 = Low to 5 = High.
- **Data Type**: List of values
- **If based on user entry**: User entry
- **User Entry**: Elements table
- **Configurable**: Yes
- **Comments**: "Weighted Average is used sum (Product Net Present Value / Scenario Net Present Value) * Alignment)/n Where Scenario Net Present Value is based on sum of all the Revenue and Cost of individual Products. Scenario baseline date is used else defaults to current date. 'n' is the number of..."
<table>
<thead>
<tr>
<th>Metric Name</th>
<th>Description</th>
<th>Data Type</th>
<th>If based on user entry</th>
<th>User Entry</th>
<th>Configurable</th>
<th>If this metric is on Portfolio, what is the aggregation rule to roll-up from Product?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact</td>
<td>Impact for portfolio on a scale of 1 = Low to 5 = High.</td>
<td>List of values</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>Yes</td>
<td>*Weighted Average is used: ( \text{Sum}(\text{Product Net Present Value} / \text{Scenario Net Present Value}) / n ) Where Scenario Net Present Value is based on sum of all the Revenue and Cost of individual Products. Scenario baseline date is used else defaults to current date.</td>
</tr>
</tbody>
</table>
## Develop Product Proposals

<table>
<thead>
<tr>
<th>Metric Name</th>
<th>Description</th>
<th>Data Type</th>
<th>If based on user entry</th>
<th>User Entry</th>
<th>Configurable</th>
<th>Identical metric exists on Portfolio?</th>
<th>If this metric is on Portfolio, what is the aggregation rule to roll-up from Product?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive Advantage</td>
<td>Competitive Advantage for portfolio on a scale of 1 = Low to 5 = High.</td>
<td>List of values</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>Yes</td>
<td>n is the number of products in the scenario. In future releases it will be simplified to be the average of Impact score for all of the Proposals in the Scenario.</td>
<td></td>
</tr>
<tr>
<td>Supply Chain Fit</td>
<td>Supply Chain Fit for portfolio</td>
<td>List of values</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>Yes</td>
<td><em>Weighted Average is used Sum(Product Net Present Value / Scenario Net Present Value) / n Where Scenario Net Present Value is based on sum of all the Revenue and Cost of individual Products. Scenario baseline date is used else defaults to current date. n is the number of products in the scenario. In future releases it will be simplified to be the average of Competitive Advantage score for all of the Proposals in the Scenario.</em></td>
<td></td>
</tr>
<tr>
<td>Metric Name</td>
<td>Description</td>
<td>Data Type</td>
<td>If based on user entry</td>
<td>User Entry</td>
<td>Configurable</td>
<td>Identical metric exists on Portfolio?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
<td>-----------</td>
<td>-------------------------</td>
<td>------------</td>
<td>--------------</td>
<td>---------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RnD Know How</td>
<td>RnD Know How for portfolio on a scale of 1 = Low to 5 = High.</td>
<td>List of values</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Comments on a scale of 1 = Low to 5 = High.

- "Weighted Average is used: \[ \text{Sum} \left( \frac{\text{Product Net Present Value}}{\text{Scenario Net Present Value}} \times \text{Alignment} \right) / n \] Where Scenario Net Present Value is based on sum of all the Revenue and Cost of Individual Products. Scenario baseline date is used else defaults to current date. \( n \) is the number of products in the scenario."
<table>
<thead>
<tr>
<th>Metric Name</th>
<th>Description</th>
<th>Data Type</th>
<th>If based on user entry</th>
<th>User Entry</th>
<th>Configurable</th>
<th>Identical metric exists on Portfolio?</th>
<th>If this metric is on Portfolio, what is the aggregation rule to roll-up from Product?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Strategic Fit</td>
<td>scale of 1 = Low to 5 = High.</td>
<td>List of values</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>Yes</td>
<td>If the metric is on Portfolio, what is the aggregation rule to roll-up from Product?</td>
<td>&quot;Weighted Average is used Sum((Product Net Present Value / Scenario Net Present Value) * Strategic Fit)/'n' Where Scenario Net Present Value is based on sum of all the Revenue and Cost of individual Products. Scenario baseline date is used; else defaults to current date. 'n' is the number of products in the scenario. In Portfolio, it's called the Portfolio Strategic fit.&quot;</td>
</tr>
<tr>
<td>Probability of Commercial Success</td>
<td>Probability that the product can be sold commercially</td>
<td>List of values</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>Yes</td>
<td>Average</td>
<td></td>
</tr>
<tr>
<td>Probability of Technical Success</td>
<td>Probability that the product can be built successfully</td>
<td>List of values</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>Yes</td>
<td>Average</td>
<td></td>
</tr>
<tr>
<td>Risk Subjective</td>
<td>Overall risk for product on subjective basis, classified as High, Medium and Low.</td>
<td>List of values</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>Yes</td>
<td>User Entered (On Scenario Edit dialog box) For Portfolio metrics it is empty and not editable nor average. Looks like it can only be</td>
<td></td>
</tr>
<tr>
<td>Metric Name</td>
<td>Description</td>
<td>Data Type</td>
<td>If based on user entry</td>
<td>User Entry</td>
<td>Configurable</td>
<td>Identical metric exists on Portfolio?</td>
<td>If this metric is on Portfolio, what is the aggregation rule to roll-up from Product?</td>
<td>Comments</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------</td>
<td>------------------------</td>
<td>------------</td>
<td>--------------</td>
<td>---------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Risk Numeric</td>
<td>Overall risk for product on a scale of 1 for Low to 5 for High</td>
<td>List of values</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>Yes</td>
<td>User Entered (On Scenario Edit dialog box) For Portfolio metrics it is empty and not editable nor average. Looks like it can only be configured through triggers</td>
<td></td>
</tr>
<tr>
<td>Market Growth Percentage</td>
<td>Average year over year market growth percentage for the product</td>
<td>Number</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>No</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Market Share Percentage</td>
<td>Most recent market share in percentage for the product.</td>
<td>Number</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>No</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Product Categorization</td>
<td>Category in which the product is classified</td>
<td>List of values</td>
<td>User entry</td>
<td>Elements table</td>
<td>User entered</td>
<td>No</td>
<td>Not Available in Portfolio Metrics. For product metrics it is list of &quot;Cash cow, Dog, Star, Question Mark&quot; out of the box. More values can be added Not Available in Portfolio Metrics. For product metrics it is list of &quot;Cash cow, Dog, Star, Question Mark&quot;</td>
<td></td>
</tr>
</tbody>
</table>
Following metrics are calculated. It is possible to alter the formulas by configuration.

<table>
<thead>
<tr>
<th>Metric Name</th>
<th>Description</th>
<th>Data Type</th>
<th>If based on user entry</th>
<th>User Entry</th>
<th>Configurable</th>
<th>If this metric exists on Portfolio?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Value Index</td>
<td>Net Present Value divided by Projected Resources for product</td>
<td>Number</td>
<td>User entry but can be made a calculated field using groovy scripts</td>
<td>The formula can be changed using groovy scripts</td>
<td>Yes</td>
<td>Yes</td>
<td>There are no calculations performed here. Data Composer triggers can be created to update this attribute with values.</td>
</tr>
<tr>
<td>Cost Value Index</td>
<td>Cost Value Index is Net Present Value for product divided by Projected Costs for product</td>
<td>Number</td>
<td>User entry but can be made a calculated field using groovy scripts</td>
<td>The formula can be changed using groovy scripts</td>
<td>Yes</td>
<td>Yes</td>
<td>There are no calculations performed here. Data Composer triggers can be created to update this attribute with values.</td>
</tr>
<tr>
<td>Resources productivity index</td>
<td>Expected Commercial Value divided by Projected Resources for product</td>
<td>Number</td>
<td>User entry but can be made a calculated field using groovy scripts</td>
<td>The formula can be changed using groovy scripts</td>
<td>Yes</td>
<td>Yes</td>
<td>There are no calculations performed here. Data Composer triggers can be created to update this attribute with values.</td>
</tr>
<tr>
<td>Cost productivity index</td>
<td>Expected Commercial Value divided by Projected Costs for product</td>
<td>Number</td>
<td>User entry but can be made a calculated field using groovy scripts</td>
<td>The formula can be changed using groovy scripts</td>
<td>Yes</td>
<td>Yes</td>
<td>There are no calculations performed here. Data Composer triggers can be created to update this attribute with values.</td>
</tr>
<tr>
<td>Business Unit Strength</td>
<td>Composite metric to measure business unit strength in building and</td>
<td>Number</td>
<td>User entry but can be made a calculated field using groovy scripts</td>
<td>The formula can be changed using groovy scripts</td>
<td>Yes</td>
<td>No</td>
<td>There are no calculations performed here. Data Composer triggers can</td>
</tr>
<tr>
<td>Metric Name</td>
<td>Description</td>
<td>Data Type</td>
<td>If based on user entry</td>
<td>User Entry</td>
<td>Configurable</td>
<td>Identical metric exists on Portfolio?</td>
<td>If this metric is on Portfolio, what is the aggregation rule to roll-up from Product?</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------</td>
<td>------------------------</td>
<td>-------------------------------------</td>
<td>--------------</td>
<td>--------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Market Attractiveness</td>
<td>A composite metric to measure market share and market growth for a product.</td>
<td>Number</td>
<td>User entry but can be made a calculated field using groovy scripts</td>
<td>The formula can be changed using groovy scripts</td>
<td>Yes</td>
<td>Yes</td>
<td>There are no calculations performed here. Data Composer triggers can be created to update this attribute with values</td>
</tr>
<tr>
<td>Expected Commercial Value</td>
<td>Expected Commercial Value for a product is its Net Present Value factored by its probability of commercial success.</td>
<td>Cost</td>
<td>User entry but can be made a calculated field using groovy scripts</td>
<td>The formula can be changed using groovy scripts</td>
<td>Yes</td>
<td>Yes</td>
<td>There are no calculations performed here. Data Composer triggers can be created to update this attribute with values</td>
</tr>
</tbody>
</table>

**FAQs Develop Product Proposals**

**What's the difference between product proposal Save As and product proposal Save As New Version?**

With the **Save As** option, you can create a new product proposal and change the concept type. You can also selectively pick the contents of the product concept and the product proposal.

By selecting the **Save As New Version** option, you can only create a new version of the selected product proposal.

**What happens if I publish a product in the Elements table?**

When a product or element is published, the selected product of the scenario is published to the original product proposal and a new version of the original product proposal is created. A product can be published only if the scenario is in current state.
A product proposal of any state can be copied to a scenario. You can update cost, revenue, business details, and resource information for the product proposal that you added in the **Elements** table. Once you submit the scenario for approval and it is approved, you can then publish the product proposal. When you publish an element all changes are captured and sent to the original product proposal as a new version.

*Note:* When the product proposal is published, if the original product proposal has a currency that does not match the portfolio, then the currency automatically converts to be the same as the portfolio.

**How do I export a product proposal?**

A product proposal can be exported into a PDF or a Word document format. From the **Actions** menu, click **Export** and then select either PDF or Word format. In the PDF or Word output the Data Composer attributes will also be available.

*Note:* To include the complete information of the proposal you must ensure that all the proposal metrics are enabled.

**What attributes of a project can I view in the associated proposal?**

To enable complete visibility into the status of the projects associated with the proposals, additional information related to the project appears on the proposal. The attributes include the following: **Start Date and End Date, Percent Complete, Budgeted Total Cost, Actual Total Cost,** and **Estimated Cost to Complete.**

**Can I create a new version of a product proposal that is in submitted status?**

No. You can create a new version of a product proposal when it is in either draft or approved status.

**Can I add additional tabs to a proposal?**

Yes. Proposals have their own lifecycle and in order for approvers and reviewers to make informed decisions at each stage certain attributes are shown to make the best decisions and recommendations. Additional tabs can be added and configured by the administrator to include more attributes that will provide clarification and understanding.
7 Develop Product Concepts

Overview of Develop Product Concepts

Product Concept Design offers a collaborative design workspace for product architects, designers and executives to generate, capture, analyze, and approve, product concepts that address product strategy goals. Transfer approved concepts directly to PLM solutions for prototype planning, detailed design and product introduction.

The unique features of Product Concept Design are:

- Concepts can align toward strategy goals like optimal material and development costs, features, roadmap, partnership objectives, and future technology migration.
- Product managers can compare and optimize competing concepts to support product strategy goals, and securely share the results with existing and potential supply chain partners or external design teams.
- Concepts can be traced in detail from ideas and requirements to finished products, for engineering clarifications, process analysis and improvement activities.

Use the Concepts work area to create concepts and manage existing concepts. Use the Edit Concept task to develop, maintain, and analyze concept structures.

Web services are also available to help you create, get, edit, and delete a concept or its concept components, as well as manage concept versions.

Concepts, Requirements, and Proposals: How They Work Together

Concepts, requirements and proposals are intrinsically related.

Proposals

A Proposal contains all the business information for the concept. When you create a concept, a proposal of the same name is created; the converse applies as well. You can access a proposal from the Edit Concept screen.

When you delete a proposal, the corresponding concept is also deleted. You cannot delete a concept-proposal pair if the concept is in Submitted or Approved state. Deletion is possible only if both proposal and concept are in Draft state.

Concepts

Concepts address the technical design aspect of a product. You cannot delete a concept which has a requirement assigned to it, without disassociating them first.
Requirements
Requirements are design specifications that serve as inputs for concept design in Oracle Innovation Management, or as inputs for detailed product design in PLM. Requirements also help measure the completeness of a concept design.

Related Topics
- Product Proposal: Explained

Concept: Explained
Conceptual product design starts with concept creation.
A concept is defined by two characteristics:

1. Concept Type
2. Concept Status

Concept Type
Concept types, based on predefined attributes, define the grouping and search criteria of concepts.
Contact your system administrator for information about defining concept types and their attributes.

Note: You cannot change the concept type after you have created a concept.

Concept Workflow Status
A concept evolves through predefined states in a workflow. The concept workflow status, as listed and described in the following table, defines the actions you are allowed on the concept at each stage.

<table>
<thead>
<tr>
<th>Workflow Status</th>
<th>Workflow Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft</td>
<td>Design</td>
</tr>
<tr>
<td></td>
<td>This is the default status of a concept you create. As the concept owner, you can modify the concept structure as you require.</td>
</tr>
<tr>
<td>Submitted</td>
<td>Review</td>
</tr>
<tr>
<td></td>
<td>Submit a concept for review once you complete your concept design. You cannot make any further changes to the concept.</td>
</tr>
<tr>
<td>Approved</td>
<td>Approved</td>
</tr>
<tr>
<td></td>
<td>When a concept is approved, it is ready to move to a PLM system for production. The data of an approved concept continues to be available in Oracle Innovation Management as an item structure.</td>
</tr>
<tr>
<td>Rejected</td>
<td>Design</td>
</tr>
<tr>
<td>Workflow Status</td>
<td>Workflow Stage</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------</td>
</tr>
<tr>
<td></td>
<td>A concept that has been rejected in the Review stage reverts to the Draft status and is available for modifications.</td>
</tr>
</tbody>
</table>

*Note:* This is not a concept status. It is a workflow transition.

**Related Topics**
- Develop a Concept Structure: Explained

## Working with Concepts: Points to Consider

Concept designs typically evolve in the following ways:

- From ideas and formal requirements;
- From existing concepts or concept templates (using **Save As**);
- As independent concepts, which contribute to detailed design requirements of prototypes and future products.

### Create a Concept

Create a concept from the ground up for sole concept ownership, and to define concept structures that can fulfill specific ideas and requirements.

### Create a Concept Using Save As

Use **Save As** to create a copy of the original concept and its proposal, with the following benefits:

- Reuse specific concept versions;
- Select a different concept type from the original;
- Retain or remove content details of the original concept, including structure, attachments and designs, requirements, relationships, and team;
- Retain or remove content details of the original proposal, including cost, revenue, resources, attachments, relationships, and projects.

*Note:* You can copy concept attributes only if the source and target concept types match.

### Delete a Concept

When you delete a concept, all data and relationships concerning the concept removed are irrecoverable from the application.

Apart from the concept header itself, the deleted concept data includes:

- Concept structure;
- Product proposal;
- Attachments at concept and component level;
- Links to designs, bidirectional relationships, top-level requirements, and items;
- Solution alternatives;
- Concept team;
- All concept versions.

**Related Topics**
- Working with Concept Versions: Points to Consider

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**Teams and Data Security in Product Concept Design: Explained**

Roles provide access to functions and data. This topic describes the various user roles and their associated duty roles in product concept design, that ensure controlled access to system resources.

The primary roles associated with concept design are Product Design Manager and Product Design Engineer. Their associated privileges are listed and described in the following table.

<table>
<thead>
<tr>
<th>Job Role</th>
<th>Duty Role</th>
<th>Functional Privileges</th>
<th>Data Privileges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Design Manager</td>
<td>Concept Management Duty</td>
<td>Create Product Concept</td>
<td>Review Product Concept Data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Manage Product Concept</td>
<td>Manage Product Concept Data</td>
</tr>
<tr>
<td>Product Design Engineer</td>
<td>Concept Development Duty</td>
<td>Manage Product Component</td>
<td>Review Product Concept Data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Review Product Requirement</td>
<td>Review Product Requirement Data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Review Product Concept</td>
<td></td>
</tr>
</tbody>
</table>

The Supply Chain Application Administrator is assigned Product Innovation Administration Duty, and is required to set up Innovation Management.

For more information on job roles and data security, refer to the Oracle Supply Chain Management Implementing Innovation Management Guide.

---

**Teams in Concept Design**

A Product Design Manager can define a core team that is responsible for developing a concept, and assign specific tasks to team members that appear in their to-do lists. Teams facilitate controlled access to a concept in all its stages of development, including review and approvals.
Working with Requirements: Points to Consider

Use requirements specifications as design inputs for your concepts, and as measures of design completeness. Alternately, you can build requirements specifications from planned concept designs, for use in future product redesigning activities.

Requirements, Concept Components, and References

You can assign one or more requirements specifications to one or more concept components to track and measure design goals objectively across a concept structure.

When you assign a requirements specification to a concept component, the link to the requirement is automatically stored as a reference field in the concept component metadata. The assigned requirement is highlighted by a check mark.

Click the check mark in the Assigned column to view all the components that requirement is assigned to.

You cannot assign a requirement to an item. However, when you convert a concept to an item or item structure, the External Relationship data points to the item in the concept structure.

Requirements Filter

Use the Search function in the Requirements tab to filter the requirements specifications added in the concept work area, by predefined operators. You can also perform an advanced search for requirements using combinations of operators.

Search results within the requirements specification structure are highlighted by markers. The Previous and Next icons let you step through the search results sequentially.

Requirements Versions

Requirements can undergo version updates while they are assigned to your concept. The concept structure retains the version of the specification you assign, irrespective of the newer revisions available. In parallel, you are allowed to assign only the latest version of requirement specifications, available at that moment, in your concept structure.

An icon highlights requirements that have undergone changes after you assigned them in your concept. Click the highlighted requirements specification name to view the linked version, and to navigate to the latest version.

Fulfilled Requirements

When you decide a concept component is detailed enough to fulfill an assigned requirement specification, use the Fulfilled marker in the Details > Requirements panel, as a measure of tracking design completeness. You can then analyze the concept structure to determine how far your concept design has progressed.

Requirements Traceability

Generate the Requirements Traceability report from the concept structure work area to view the concept structure and all its associated linkages in xml form. For example, you can trace version-specific linkages between ideas, requirements, concepts components, items, and test cases, in a single view. The xml report also allows you to determine which assigned requirements have been fulfilled, or ideas have been met.
Related Topics

- Create a Requirements Specification: Explained
- Analyzing a Product Concept: Explained

FAQs for Develop Product Concepts

Why is a product proposal created alongside a concept?

A product concept and a product proposal are meant to address the technical design and business aspects respectively, of any product you develop in Oracle Innovation Management. The concept stores technical details such as product structure and alignment with requirements while the proposal stores business details such as costs and revenue.

A concept and a proposal cannot contain sufficient information individually to justify a project start, and are hence created alongside each other.
8 Develop Product Concept Structures

Develop a Concept Structure: Explained

A concept structure is a preproduction assembly of concepts, concept components, and PLM items, specifically brought together to meet a given requirement.

Edit a concept structure to include:

- concept components you create, and copies of existing concept components
- embedded concepts
- links to external items and item assemblies

The location of a concept structure line item is defined by the sequence number, which is automatically assigned to entries in the concept structure, as they appear. Edit the numbered sequence manually when you export the concept structure to an Excel worksheet.

You must aim to have a concept structure that eventually fulfills design ideas and requirements, and primarily contains PLM items and item assemblies.

Available web services can help you execute various actions, including:

- Create, find, and delete a concept
- Add, update, and delete a concept component
- Create a concept or a version from an existing concept

Concept Components

Concept components in a concept structure are placeholders for future production items.

Add a concept component directly in the concept structure, detailing its name, quantity and type. Use the Specifications pane to detail the attributes of the concept component.

Search for an existing concept component in the Items and Components pane to add as a copy, including its attachments and design references.

Embedded Concepts

Use existing concepts in your concept structure as embedded concepts. While you cannot edit or convert it to a PLM assembly directly from your concept structure, the data in embedded concepts is included in metric calculations and scores for your concept.

Linked Items and Assemblies

Search for and link PLM items and item assemblies from external sources to a concept structure. Reuse existing items to arrive at a production-ready concept structure faster.

You cannot directly modify linked objects in your concept structure. You can either edit the item in the PLM application itself, or convert the item to a concept component with modifiable attributes.
Viewing a Concept Structure
You can view a concept structure in its default tabular form, or graphically but you can't edit it.

Search within the tabular form of a concept structure for concepts and components using predefined operators, and combinations of operators. Arrows highlight the search results. Use the Focus option to trace concept components, requirements, and items that are linked together within the concept.

Concept Structure Evolution
Typically, you can make a concept structure evolve along the following path:

1. Create a concept structure, either from start, or as a copy of an existing concept
2. Add item placeholders in the form of concept components
3. Replace concept components with existing or newly released PLM items, as they become available
4. Arrive at an approved concept structure consisting primarily of tangible PLM items and item assemblies
5. In the PLM application, approve the product prototype and process it as an item structure in downstream systems.

At any stage of the concept structure development, you can export the concept structure to an Excel worksheet for offline records.

Related Topics
• Editing Specifications: Points to Consider

Creating a Concept Structure: Video and Procedure

Video

Watch: This video tutorial shows you how to create a concept structure using concepts, concept components, and items. The content of this video is also covered in text topics.

Procedure
To create a concept structure:

1. Use Navigator to go to the Product Management work area. From the list of offerings, click Concepts.
2. To create a concept, click Create Concept from the Tasks panel drawer.
3. In the Create Concept dialog:
   o In the Name field, enter a name for the concept.
   o In the Description field, provide a brief description.
   o Select a Type and Currency from the respective lists.
   o Select a date from the calendar.
   o Click Save and Close.
4. To create a concept component and add it to the concept structure:
   - Click Add Child in the Concept Structure panel.
   - Enter a name for the component.
   - Click Save.

5. To add an existing concept component to the concept structure:
   - Click the Items and Components tab.
   - Select Concept Components in the Search For list.
   - Enter the search criteria and click Search.
   - From the search results, select a concept component and move it to the concept structure.

6. To add an existing concept as a substructure to the component structure:
   - Click the Items and Components tab.
   - Select Concepts in the Search For list.
   - Enter the search criteria and click Search.
   - From the search results, select a concept component and move it to the concept structure.

7. To add an item from Product Development to the component structure:
   - Click the Items and Components tab.
   - Select Items in the Search For list.
   - Enter the search criteria and click Search.
   - From the search results, select an item and move it to the concept structure.

Now we have a structure made up of a concept component, concept structure, and an item.

Managing a Concept Structure: Video and Procedure

**Video**

.watch: This video tutorial shows you how to assign requirements to elements of a concept structure. The content of this video is also covered in text topics.

**Procedure**

To manage a concept structure:

1. Use Navigator to go to the Product Management work area. From the list of offerings, click Concepts.
2. To search for the concept structure:
   - From the Tasks panel drawer, click Search.
In the **Search For** list, select **Concepts**.
- Enter the criteria and click **Search**.

3. From the search results, click the concept structure link.
4. To search for a requirement specification and assign it to the concept structure:
   - In the **Edit Concept** page, click **Select and Add** on the **Requirements** tab.
   - In the **Select and Add** dialog, enter the search criteria and click **Search**.
   - From the search results, select a requirement specification and click **OK**.
   - In the **Edit Concept** page, expand the requirement specification added in a previous step.
   - Select a requirement and move it to the concept structure.
   - Click **Save**.

5. To view the requirement and its priority of the concept structure:
   - In Concept Structure, select the concept and click **Restore Pane**.
   - In the details of the concept, click **Requirements**.
   - If the requirement is fulfilled, select the **Fulfilled** check box and click **Save**.

### Approving a Concept Structure: Video and Procedure

**Video**

**Watch:** This video tutorial shows you how to submit and approve a concept structure. The content of this video is also covered in text topics.

**Procedure**

To approve a concept structure:

1. Use Navigator to go to the Product Management work area. From the list of offerings, select the **Concepts** work area.
2. To search for a concept structure:
   - From the **Tasks** panel drawer, click **Search**.
   - In the **Search For** list, select **Concepts**.
   - Enter the criteria and click **Search**.
3. To submit the concept structure for approval:
   - From the search results, click the concept structure link.
   - From the **Actions** menu in the concept structure, select **Submit for Approval**.
   - In the **Submit for Approval** dialog, click **Select and Add**.
4. To approve the concept structure:
   - Sign in as user who is assigned with approval privileges.
   - Click Notifications or the Bell icon.
   - View the approval notification and click Approve.

Converting a Concept Structure into an Item Structure: Video and Procedure

Video

Watch: This video tutorial shows you how to convert a concept structure to an item structure. The content of this video is also covered in text topics.

Procedure

To convert an Innovation Management concept structure to a Product Development item structure

1. Use Navigator to go to the Product Management work area. From the list of offerings click Concepts.
2. To search for a concept structure, do the following:
   - From the Tasks panel, click Search.
   - In the Search For list, select Concepts.
   - Enter criteria and click Search.
3. To convert a concept structure into an item structure, do the following:
   - From the search results, click the concept structure link.
   - Expand the concept structure.
   - With the concept structure open, click Actions > Convert to Item.
   - In the Convert to Item dialog, select All to convert the entire concept structure. Click OK.
   - In the Concept Structure page, notice that the icons have changed, and the Type has changed to Root Item Class.
   - Click the object link to view it as an item in the Product Development.
   - Click the Structure tab to view the component structure converted as an item structure.
A link back to the original concept structure is available.

Update a Concept Structure Using the Oracle ADF Desktop Integration Tool: Explained

Update a concept structure in an Excel spreadsheet using the Oracle ADF Desktop Integration tool.

✍ Note: Download and install the ADFdi Excel client to exchange data directly between Microsoft Excel and Oracle Innovation Management.

In Oracle Innovation Management, use the Edit in Spreadsheet option in the Actions menu of the Concepts work area to initiate the process of exporting the details of a concept structure to an Excel spreadsheet.

To open the Excel file, sign in with your Oracle Innovation Management credentials. If you have previously signed into an Excel sheet and not signed out, then you are not prompted for your credentials when you open a newer Excel sheet.

You can update concept and components data directly in Excel. The Excel cells that are successfully updated display their status in the Status column.

✍ Note: The data is not imported back into the application if there are any empty rows between the data.

Concepts, Concept Components, and Items: How They Work Together

A concept ties together concept components, linked items, and assigned requirements in its structure, alongside its corresponding proposal.

Concept

A top-level concept root node contains concept components, linked items, and embedded concepts that let you incorporate concepts belonging to other users.

As you develop a product concept structure, you can search for, and link items, designs, and documents as concept structure line items, and as references in the concept and concept components metadata.

The design goal of a concept is a complete conversion to an item structure - Bill of Materials (BOM) - in Oracle Agile PLM.

Concept Component

Concept components in a concept structure are placeholders, and are meant to be replaced with links to existing or newly created items.

You can convert a concept component to an item when the component is ready to be processed further as an item in subsequent downstream applications. During the conversion process, preserve the created document and design
relationships with the concept component as references. The newly created item includes reference metadata that links it to the source business object in Oracle Innovation Management.

When you choose to convert a concept component to an item and click the Convert to Item option in the Actions menu, remember that the change is immediate and automatically committed after successful conversion. You cannot cancel the process. The new item link and other updates on the concept structure are also committed. This prevents accumulation of unused items in PLM and additionally maintains data integrity between Oracle Innovation Management and Oracle Agile PLM (including Agile EDM and Oracle Product Development).

Item

Existing applications that are currently supported by Oracle Innovation Management are Oracle Agile PLM, Agile EDM, and Oracle Product Development.

You can convert an item to a concept component to suggest changes in its design attributes, or to reuse PLM data in your concept. The original item remains unchanged in the PLM application. During conversion, you can preserve the item structure, documents, and file attachments.

Converted Components: How They Are Processed

You can reuse a PLM item with suitable variations in your concepts structure. While you cannot edit the PLM item directly, you can convert it to a concept component and make your required modifications accordingly.

The original PLM item remains unchanged, while the newly-created concept component contains all the specification attributes of the item converted, as well as a reference link to the original item.

Settings That Affect Conversion of an Item to a Concept Component

There are two main factors that decide the scope of item conversion:

- Attachments, Documents, and Designs
  
  If you include attachments during the conversion process, all the file attachments of the item are copied as attachments of the newly created concept component.

  Document relationships are preserved during the conversion process.

  If you include designs, links to the design object residing in the PLM application are copied to the concept component.

- Item structure

  You can convert only the linked item and its first-level of items links during a single conversion process. Second-level of items in an item structure remain item links in the concept structure.

  **Note:** While you can convert second-level item links also to concept components, you must aim for data reuse, and try to avoid creating too many concept components.
How Items Are Converted to Components

To convert an item to a concept component, select the item in your concept structure, and click **Actions > Convert to Concept Component**.

The following table details the levels of conversion of an item assembly and lower-level items in a single conversion step.

<table>
<thead>
<tr>
<th>Item Assembly Structure</th>
<th>Convert to Component?</th>
<th>Content Type Post Conversion</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Assembly</td>
<td>Yes</td>
<td>Concept Component</td>
<td>None</td>
</tr>
<tr>
<td>• Part 1</td>
<td>Yes</td>
<td>Concept Component</td>
<td>None</td>
</tr>
<tr>
<td>• Part 2</td>
<td>No</td>
<td>Item link</td>
<td>Since Part 2 was not selected for conversion, it remains an item link in the item structure</td>
</tr>
<tr>
<td>• Part 3</td>
<td>Yes</td>
<td>Concept Component</td>
<td>Parts 3.1 and 3.2 remain item links</td>
</tr>
<tr>
<td>◦ Part 3.1</td>
<td></td>
<td></td>
<td>Select the item links and click <strong>Convert to Concept Component</strong> to change the lower-level items to concept components.</td>
</tr>
<tr>
<td>◦ Part 3.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Does not apply to the lower-level items

Integration with External Systems: Points to Consider

Oracle Innovation Management integrates with systems such as Agile PLM, Agile EDM, and Oracle Product Development, through business objects like view objects, application modules and web services.

You can perform the following tasks by integrating target systems:

- Associate issues to Ideas
  - Relate issues to Concepts which are improving the product
  - Relate Issues or Ideas to Requirements to drive created or improved designs
- Create Items in Product Development from Concept Components
  - Search and use an existing Item to create a Concept
  - Associate Requirements to Agile Items (map requirements that were used to build the eventual product)
  - Map attributes from Agile PLM Item to Concept Component
  - Associate Agile PLM objects with Oracle PLM objects as version-specific relationships
- Allow Proposals to be related to or drive projects in Agile PPM
  - See status of Projects within Proposal
See key attributes of Project within Proposal

Integrate actual cost and resources from Agile PLM Project into the Proposal

Check how Proposal is progressing against Projected cost and resources

Refer to the Oracle Product Value Chain Cloud Implementing Innovation Management and Product Development Guide for detailed information on the integration processes.

Note: If you are integrating Oracle Innovation Management to Agile PLM (9.3.4 or later), you also require WebLogic Suite or WebLogic Suite for Oracle Applications.

Multiple Systems
You can configure multiple target systems during setup, but you can activate only one system at any time.

Web Services
You can perform the following operations using web services:

- Search for items and designs
- Read attribute values of items and designs
- Read structure and relationships of items and designs

Automatic Authentication
Single Sign-On (SSO) enables automatic sign in to the external system from Oracle Innovation Management.

For information on configuring SSO, contact your system administrator.

Working with Concept Versions: Points to Consider
Create and use versions of a concept to save and track the progress of your concept design.

Note: Concepts and proposals can have versions independent of each other.

Version Numbers
When you create a version of a concept, all the data of the source concept is copied into the newer version, and it is automatically numbered to the respective highest version number available. All previous versions are rendered read-only.

Versions can be made of the latest or older versions of a concept.

Older Versions of a Concept
You can edit only the latest version of a concept.
To reuse and edit an older concept version, create a version from it. If previous concept versions were approved, you can only create a new version from the last approved version or higher. You can also create a separate copy of the concept using Save As. You cannot save versions of a concept or concept component that are converted or which are in the Submitted status as a new version.

**Version History** summarizes all versions of a concept, including version creation dates and version owner information, but you cannot edit any details in it. Use the **Version Selection** tool to switch between versions.

**Related Topics**
- Concept: Explained
- Working with Concepts: Points to Consider

### Working with Structured Data: Explained

To navigate the structured data and view additional information or details about the component in any of the different graphical views, click the component. The following menu items are displayed:

- **Information**: View additional information about the component.
  
  Click the component to view the Information window. If the component is not in focus, two icons - Focus and More Details - are displayed in the Information window. If the component is in focus, only the More Details icon appears in the Information window.

- **Focus**: Brings the component into focus.

  ✏️ **Note**: The components that are not on the same level, and not directly connected to the component in focus are collapsed.

- **More Details**: Shows additional details about the component.

  The More Details icon is also present in the Information window.

Searching for components: To search for the component, enter the text in the Search box. The component is displayed in the Search results. Also, the component is highlighted in the dependency map and the dependency graph. Hover over a component displayed in the Search results box, and activate the context menu in the Search box.

**Related Topics**
- Overview of the Graphical Navigator

### FAQs for Develop Product Concept Structures
How do I manage work items for my projects in Oracle Innovation Management?

If you are a project manager with an appropriate job role, such as product manager, product design manager, or product portfolio manager, you can open and manage work items of assigned projects in Oracle Innovation Management, using the Relationships tab.

Project work items can include items, concepts, proposals, and requirements specifications.

Note: To work with projects in Oracle Innovation Management, it is required that you have functional security to access work items details in Oracle Project Portfolio Management.

How can I update the requirements specification version in my concept structure to the latest version?

The Requirements table has a Refresh icon for you to quickly update the version of the requirements specification you are seeing for the current concept. When you click Refresh and replace the current version of the requirements specification with the newest version of the requirements specification, the mappings of the previous version carry over to the new version if they are not in conflict with the updated version mappings. If there are specific requirements that no longer exist in the new version then those are removed. When there are multiple versions of the same requirements specification for a concept the data mappings remain the same.
9 Develop Component Specifications

Editing Specifications: Points to Consider

Specifications are attributes, including target and actual metric values, of the concept, concept components, and item links in a concept structure. Attributes are grouped into the categories General Information and Additional Information, the latter consisting of Attachments, Designs, and Relationships.

Note: Contact your administrator to edit flexfield attributes.

All attributes are displayed in the Specifications pane of the Edit Concept screen, depending on the structure element you select.

Concept and Component Specifications

Use spider charts for analyzing solution alternatives; ensure that the target cost, target power, and target weight values of the root concept are present.

The specifications of a concept component lets you measure component score and variance in actual and estimated metrics - cost, weight, and power - individually. You can also include Lead Time, Risk, Compliance, and Supplier information for each component.

Item Specifications

You cannot edit the attributes of items in the concept structure that are linked from the Agile PLM, EDM, and PD applications. To do so, convert the item to a concept component, or edit the item attributes in the original application.

Item specifications affect the metric calculations of a concept. The attributes Quantity and Alternative define the usage of an item in a higher-level concept component.

Attachments, Designs, and Relationships

Additional Information in the Specifications pane can include links to concept versions, competing concepts, Agile PLM objects, design files, and URL attachments.

Link references to concepts and concept components, but not Agile PLM items, because they are stored outside the server.

Files are stored in the application server while referenced Agile PLM objects are stored in the Agile PLM server. You cannot edit referenced Agile PLM objects in Oracle Innovation Management directly. View or edit referenced attachments, documents, and designs in their native authoring or design applications.

Relationships are objects that provide additional design inputs, or test results as design feedback, for concepts and concept components.

You can associate an Agile PLM object with an Oracle PLM object as a relationship, which is visible in Agile also. These associations are version-specific; the relationships table in Oracle PLM displays the linked version of an item, irrespective of newer versions that may be available.
If you delete a relationship to an Agile PLM object in Oracle PLM, the association is removed in Agile PLM also.

When you convert a concept component, you may preserve all links to Agile PLM documents, designs, or attachments referenced in the component. You may preserve URL attachments in a document, created in Agile PLM for the URL attachment, during the conversion process.

Attachments are converted to documents of specific document type, while designs remain design links, and both are linked to the converted item.

Most document types can be mapped to Agile PLM attachments upon conversion; other document relationships must remain design links or be consolidated into a single document in the Agile PLM application.

If you are authorized to work with tasks and work items in Oracle Projects as well as in Oracle Innovation Management, you can view Project tasks associated with Oracle PLM objects, in the Relationships panel. Alternatively, you can search for a Project task from the concept design work area, and add it as a Relationship to the active concept or component.

Related Topics

- What are metric attributes?
- Converted Components: How They Are Processed

FAQs for Develop Component Specification

How do I attach files to a concept and its lower-level components?

When you select a concept or its lower-level concept component, you can attach reference data to it as files, URLs, designs, and relationships. Within the Specifications pane in the Edit Concept page, expand the Additional Information panel. Here, the Attachments panel enables you to upload files from your local computer, or add URLs, as references.
**10 Define Solution Alternatives**

**Using Solution Alternatives in a Concept Structure: Procedure**

Solution Alternatives allow you to design multiple alternate solutions using a single product concept structure, for different product requirements or use cases. You can analyze metrics across multiple design variations of the same concept structure, and select the most viable option.

This procedure lists the steps to obtain an optimally-designed concept structure using solution alternatives.

**Defining Alternatives**

To define solution alternatives in a concept:

1. From the concept structure, navigate to the Manage Solution Alternatives dialog and rename at least two solution alternatives as required.

   ✓ **Note:** You can also rename the solution alternative Default as required.

2. Enable the Show check box for each of the solution alternatives you want to use in the concept.

3. Click OK to close the dialog and return to the concept structure.

**Assigning Objects to Alternatives**

To assign concept components and items to solution alternatives:

1. Ensure your concept structure table has the required components, items, and solution alternative columns visible.

2. Select a component or item, and enable the check box in the column Alternative.

   ✓ **Note:** This step is required per object in the concept structure to activate the available solution alternative options for it.

3. For each object row in structure, enable the check box per solution alternative that the object must belong to.

A component that is not marked an Alternative is not assigned to any solution alternative. Such objects are always visible, unless they occupy lower-levels in a filtered component structure.

**Related Topics**

- Analyzing a Product Concept: Explained
- Calculating Metrics in Concepts: Worked Example
Working with Solution Alternatives: Points to Consider

Working with solution alternatives requires you to define alternatives, analyze metrics, and select an optimum solution.

Defining Alternatives

In a concept structure, you must mark an embedded concept, concept component, or an item as an Alternative before you can assign it to one or more solution alternatives.

Note: All components, which are not alternatives, are not assigned to any solution alternative, and are always visible.

You can assign alternatives to active and visible solution alternatives only. Use the Manage Solution Alternatives menu to control the visibility of solution alternatives.

The Solution Alternative Filter controls how a concept structure is displayed, depending on the solution alternative name you select. Only the alternatives assigned to the solution alternative activated by the filter are displayed.

Components which are not alternatives are never filtered out, unless you apply a filter to a higher-level component. Filtering works top-down in concept structures.

Comparing Solution Alternatives

Use solution alternatives to compare and analyze:

- how a concept can evolve in different use-cases
- what combination of components and items can best meet target costs, weight, and power metrics
- which items, components or embedded concepts in the concept structure do not meet compliance standards, and should be replaced
- the quality of PLM items in the concept, by viewing quality incidences associated with each item
- how well a solution alternative fulfills assigned requirements, as applicable per solution alternative

Use the Metrics view to view scores and compliance metrics for solution alternatives in tabular form.

Use the Analysis button to compare solution alternatives in a graphical view (using spider charts).

Selecting an Optimum Solution Alternative

Select a solution alternative that fulfills your requirements and presents the best score.

To complete the design phase of a product, convert your selected solution alternative to an item assembly in PLM for product prototyping.

Related Topics

- Analyzing a Product Concept: Explained
- Convert a Component to an Item or Bill of Materials: Points to Consider
Managing Concept Solution Alternatives: Video and Procedure

Video

Watch: This video tutorial shows you how to manage concept solution alternatives. The content of this video is also covered in the following text topic.

Managing Concept Solution Alternatives: Procedure

To manage solution alternatives

1. Use Navigator to go to the Product Management work area. From the list of offerings, click Concepts.
2. To search for a concept structure, do the following:
   - From the Tasks panel tab, click Search.
   - In the Search For list, select Concepts.
   - In the Search list, select Name.
   - Enter the criteria and click Search.
3. To manage solution alternatives, do the following:
   - From the search results, click the concept structure link.
   - From the Actions menu in the concept structure, select Manage Solution Alternatives.
   - In the Manage Solution Alternatives dialog, name the alternative groups. To enable the group select the corresponding Show check box and click OK.
   - In the Edit Concept page, select a row in the concept and then select the alternative options. Click Save.
   - To view a particular solution alternative, use the Solution Alternative list.

The common concepts appear in the beginning and then the concepts assigned to that solution.

FAQs for Define Solution Alternatives

Why are some components hidden in the concept structure when I use the Solution Alternative Filter?

The Solution Alternative Filter controls how the default concept structure appears, depending on the solution alternative you select.
The **Solution Alternative Filter** uses a top-down filtering sequence, and only the alternatives you have assigned to the selected solution alternative are displayed.

When a parent component is assigned to a solution alternative, and the active **Solution Alternative Filter** hides it, its lower-level components which may belong to different solution alternatives are also filtered out. This filter applies to both, the table and metric attributes views.
11 Analyze Product Concepts

Analyzing a Product Concept: Explained

Analyzing a concept in terms of target costs, compliance, requirements fulfilled or similar parameters enables you to make informed decisions on the future of the concept.

To compare target and actual metrics of the units of a concept structure, you must roll up or recalculate the attributes. The roll up results in the calculation of variance in the actual and target metric attributes, across all units of the concept structure, as applicable. In the Metrics view, a warning icon next to concept structure units indicates unfavorable variance values.

The following metrics are calculated during a roll up:

- Cost, Weight, and Power Consumption
- Compliance
- Status
- Component and Concept Score

Use a spider chart to view aggregated metrics across multiple solution alternatives, in a graphical or tabular form.

Use an item status chart to view concept maturity in terms of item composition of the concept, in a pie chart.

Costs, Weights, and Power Consumption

Cost, weight, and power consumption metrics are calculated by aggregating the total values of linked items, concept components, and embedded concepts, up to the top-level concept.

Total cost calculations are tabulated as follows:

- Total cost of an individual item or concept component = Material Cost + Nonmaterial Cost
- Total cost of a concept component assembly = Nonmaterial Cost + Aggregate of (Total cost of each item or component * Respective Quantities per Assembly)

Total Weight of a concept component assembly = Aggregate of (Actual Weights of each linked item, concept component, and embedded concept * Respective Quantities)

Total Power Consumption of a concept component assembly = Aggregate of (Actual Power Consumption of each linked item, concept component and embedded concept * Respective Quantities)

Compliance

The compliance status of a concept component or a linked item defines the compliance of the next higher-level component.

The compliance statuses of items are read directly from PLM. They are mapped as either compliant or noncompliant items in Oracle Innovation Management, depending on the completeness of information available.

A noncompliant item or component renders its higher-level component noncompliant also.
Fulfilled Requirements

You can analyze the number of assigned and fulfilled requirements per individual components in the concept structure, as applicable. This analysis can aid in fine-tuning the accuracy of a proposed concept design in meeting user needs.

Status

The statuses of individual components and linked items in a concept assembly decide the aggregated status of the higher-level component, up to the top-level concept.

Items in PLM may be linked in the concept structure while they are in conceptual, preliminary, or production stage.

The Item Status Pie Chart displays the composition of a concept structure in terms of items according to their lifecycle phases. Use the item status chart to view how close to maturity a concept is, and identify items in the concept structure that constitute different segments of the pie chart.

Concept Score

Concept scores allow the assessment of the concept structure against design objectives.

Concept-level scores are calculated by adding points earned in the following measures:

- the number of items in the structure, compared to concept components: reuse of items scores extra points
- the number of items with scores higher than the target value 85: a high percentage of high-scoring items in the structure raises the concept score
- the number of items missing data such as compliance status, lead time, number of manufacturers, or preferred status: complete items score high

Other details such as quality incidences and manufacturer parts are also included in a PLM item score rollup when it is included in a concept structure. Concept scores can also be used to evaluate solution alternatives for a concept.

Note: The Concept Score is hidden by default.

Item Score

An item is considered to be complete for score calculation if it contains the following data: Overall Compliance, Lead Time and Number of Manufacturer Parts.

Spider Chart

The Spider Chart enables you to compare metrics across solution alternatives. Metrics are normalized - the relative deviation of each actual value from the target value is calculated and displayed as a positive or negative deviation from the target value.

Note: Correct display of the spider chart is dependent on the concept-level target metrics (cost, power, and weight) having suitable values. If target values are not available, then the graph does not appear.

A Table view summarizes the data of the Spider Chart - calculated variance and metrics per solution alternatives - for quick reference.
Rollups in Concept Design: Explained

Analyze concepts, concept components, and items scores after a roll-up of their target and actual attributes across cost, weight, and power consumption.

You can roll-up values of cost, weight, power, and score attributes, using the Calculate icon in the Edit Concept screen. The roll-up values are best viewed in the Metrics view of the concept structure.

Cost Rollup

The Total Cost of a concept, described in the following table, is calculated as an aggregate of total costs of its individual concept components, items, assemblies, and embedded concepts.

<table>
<thead>
<tr>
<th>Element</th>
<th>Total Cost Calculation</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
<td>(Material Cost + Nonmaterial Cost) * Quantity</td>
<td>None</td>
</tr>
<tr>
<td>Item</td>
<td>(Material Cost + Nonmaterial Cost) * Quantity</td>
<td>If an item has BOM, only the cost of parent item is considered for rollup.</td>
</tr>
<tr>
<td>Assembly Component</td>
<td>(Total cost of each child element) + Nonmaterial Cost at assembly level</td>
<td>Any manually-entered cost value at the assembly level is replaced by the calculated cost value of a rollup.</td>
</tr>
<tr>
<td>Embedded Concept</td>
<td>Rolled-up cost of concept * Quantity</td>
<td>You must roll up the embedded concept by opening the concept separately and performing the roll up there, prior to other roll-ups, else the cost calculation is zero.</td>
</tr>
<tr>
<td>Concept</td>
<td>Aggregate of total cost of each assembly or element in root-node</td>
<td>Element refers to a Component, Item or Embedded Concept.</td>
</tr>
</tbody>
</table>

Weight and Power Roll-Up

The Total Weight and Total Power of a concept, described in the following table, are calculated as aggregates of respective roll-up values of its individual concept components, items, assemblies, and embedded concepts. Weight and power attributes are subject to identical roll-up logic.

<table>
<thead>
<tr>
<th>Element</th>
<th>Total Weight or Total Power Calculation</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
<td>Weight or Power of Component * Quantity</td>
<td>None</td>
</tr>
</tbody>
</table>
### Item Score Roll-Up

An Item is said to have complete data if it has values in the following attributes: Overall Compliance, Lead Time and Number of Manufacturer Parts. The following table describes Item Score Roll-Up.

\[
\text{Item score} = \text{Points for Overall Compliance} + \text{Points for Lead Time} + \text{Points for Number of Manufacturer Parts}
\]

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Attribute Values</th>
<th>Score (%)</th>
<th>Equivalent Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance</td>
<td>Compliant</td>
<td>30%</td>
<td>30</td>
</tr>
<tr>
<td>Compliance</td>
<td>Not Compliant or Blank</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>Lead Time</td>
<td>Less than 6</td>
<td>40%</td>
<td>40</td>
</tr>
<tr>
<td>Lead Time</td>
<td>Less than 11</td>
<td>N/A</td>
<td>30</td>
</tr>
<tr>
<td>Lead Time</td>
<td>Less than 21</td>
<td>N/A</td>
<td>20</td>
</tr>
<tr>
<td>Lead Time</td>
<td>Less than 31</td>
<td>N/A</td>
<td>10</td>
</tr>
<tr>
<td>Lead Time</td>
<td>More than 30</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>Number of Manufacturer Parts</td>
<td>2 or more</td>
<td>30%</td>
<td>30</td>
</tr>
<tr>
<td>Number of Manufacturer Parts</td>
<td>Less than 2</td>
<td>N/A</td>
<td>0</td>
</tr>
</tbody>
</table>

If an item has an assembly structure, the weight or power of only the parent item is considered for roll-up. Weight and power values come from **Mass** and **Power Consumption** attributes of Agile PLM respectively.

No units of measure are assigned to Agile PLM attribute values in Oracle Innovation Management.

Embedded Concept

You must roll-up the embedded concept prior to other roll-ups, else the weight or power calculations will be zero.

Element refers to a **Component**, **Item** or **Embedded Concept**.
Concept Score Roll-Up
The score of a concept or assembly is an aggregation of three item-based score calculations.

Score of a Concept or Assembly Component = A1+A2+A3

- A1 is the % of items in the concept structure at a lower level than the concept or assembly component
  \[ \frac{\text{Number of items}}{\text{Number of elements in the concept or assembly}} \]

- A2 is the number of items with score >= 85
  \[ \frac{\text{Items with score} \geq 85}{\text{Total number of items in the concept or assembly}} \]

- A3 is the number of items with complete data
  \[ \frac{\text{Items with complete data}}{\text{Total number of items in the concept or assembly}} \]

**Note:** Embedded concepts are treated as components during concept score roll-ups.

The following table describes concept score roll-ups.

<table>
<thead>
<tr>
<th>Score Name</th>
<th>Value</th>
<th>Score</th>
<th>Equivalent Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>% of items &gt;= 90%</td>
<td>100%</td>
<td>20</td>
</tr>
<tr>
<td>A1</td>
<td>% of items = 80-89%</td>
<td>80%</td>
<td>16</td>
</tr>
<tr>
<td>A1</td>
<td>% of items = 70-79%</td>
<td>70%</td>
<td>14</td>
</tr>
<tr>
<td>A1</td>
<td>% of items &lt;70%</td>
<td>10%</td>
<td>10</td>
</tr>
<tr>
<td>A1</td>
<td>% of items = 0</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>A2</td>
<td>% of items with score =&gt;85 &gt;=90%</td>
<td>100%</td>
<td>60</td>
</tr>
<tr>
<td>A2</td>
<td>% of items with score =&gt;85 = 80-89%</td>
<td>80%</td>
<td>48</td>
</tr>
<tr>
<td>A2</td>
<td>% of items with score =&gt;85 = 70-79%</td>
<td>70%</td>
<td>42</td>
</tr>
<tr>
<td>A2</td>
<td>% of items with score =&gt;85 &lt;70%</td>
<td>50%</td>
<td>30</td>
</tr>
<tr>
<td>A2</td>
<td>% of items with score =&gt;85 = 0</td>
<td>N/A</td>
<td>0</td>
</tr>
</tbody>
</table>
Calculating Metrics in Concepts: Worked Example

Your team has been asked to modify the existing model of a mountain bike to meet certain requirements received as feedback from users. The mountain bike and its components exist in a PLM application as an item structure and items respectively.

The primary requirements are:

- Reduce cost from 680 to 470
- Decrease power consumption from 40hz to 35hz

The detailed requirement specifications include:

- Reduce the size of the air box to improve efficiency and decrease power consumed
- Improve the exhaust system to optimize the power consumed
- Implement high flow rates and outstanding oil filtration for efficient power consumption

The following table summarizes key decisions for this scenario:

<table>
<thead>
<tr>
<th>Decisions to Consider</th>
<th>In This Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>How can the existing PLM items be used in the concept design?</td>
<td>Convert existing items to concept components</td>
</tr>
<tr>
<td>How are requirements and metrics correlated?</td>
<td>Map requirements to components in the concept structure</td>
</tr>
<tr>
<td>How do I consider different design approaches based on the same concept structure?</td>
<td>Assign components to solution alternatives</td>
</tr>
<tr>
<td>How do I ascertain the most suitable concept design?</td>
<td>Modify component specifications</td>
</tr>
</tbody>
</table>

Score Name | Value | Score | Equivalent Points |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A3</td>
<td>% of items with complete data = 100%</td>
<td>100%</td>
<td>20</td>
</tr>
<tr>
<td>A3</td>
<td>% of items with complete data = 95-99%</td>
<td>80%</td>
<td>16</td>
</tr>
<tr>
<td>A3</td>
<td>% of items with complete data = 90-94%</td>
<td>70%</td>
<td>14</td>
</tr>
<tr>
<td>A3</td>
<td>% of items with complete data &gt;90%</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Prerequisites

Complete the following actions before proceeding to the next task:

- Convert existing items to components in the concept
- Assign components to solution alternatives

The structure and component specifications of the newly-created concept Mountain Bike in this example are tabulated in the following table. The units Air Box, Exhaust System, and Oil Filter are PLM items that have been converted to components.

<table>
<thead>
<tr>
<th>Concept Component</th>
<th>Default</th>
<th>Solution Alternative 2</th>
<th>Solution Alternative 3</th>
<th>Cost</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATV Air Box</td>
<td>Yes</td>
<td>None</td>
<td>None</td>
<td>330</td>
<td>17</td>
</tr>
<tr>
<td>Air Box</td>
<td>None</td>
<td>Yes</td>
<td>Yes</td>
<td>200</td>
<td>10</td>
</tr>
<tr>
<td>Exhaust System</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>190</td>
<td>15</td>
</tr>
<tr>
<td>Oil Filter</td>
<td>None</td>
<td>None</td>
<td>Yes</td>
<td>80</td>
<td>10</td>
</tr>
<tr>
<td>Cartridge Oil Filter</td>
<td>None</td>
<td>Yes</td>
<td>None</td>
<td>140</td>
<td>14</td>
</tr>
<tr>
<td>Wrench Off Oil Filter</td>
<td>Yes</td>
<td>None</td>
<td>None</td>
<td>145</td>
<td>13</td>
</tr>
</tbody>
</table>

1. Enhance specifications of the converted components Air Box, Exhaust System, and Oil Filter.

   Reuse existing PLM items by converting them to concept components in the structure, and modifying specifications according to the requirements. The changes in component specifications can be translated into item enhancement requests in the PLM application.

2. Map requirements to components in the concept structure.

Calculating Metrics

1. On the Edit Concept page, click the concept root node Mountain Bike and assign the following specifications to it: Target Cost 470 and Target Power 40.

2. Click the Metrics link to view assigned metrics.

3. Click the Recalculate icon to roll up and view calculated metrics.

Comparing and Selecting a Solution Alternative

1. On the Edit Concept page in Metrics view, locate the Solution Alternative menu to view and analyze the metric calculations of each solution alternative.
2. From the Solution Alternative menu options, select Default. The calculated power exceeds the target power as indicated by the Warning icon.

3. View the calculated metrics for Solution Alternative 2 and Solution Alternative 3 also.

   The cost and power metrics of each solution alternative are tabulated in the following table.

<table>
<thead>
<tr>
<th>Solution Alternative</th>
<th>Default</th>
<th>Solution Alternative 2</th>
<th>Solution Alternative 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>665</td>
<td>530</td>
<td>470</td>
</tr>
<tr>
<td>Power</td>
<td>45</td>
<td>39</td>
<td>35</td>
</tr>
</tbody>
</table>

   Solution Alternative 3 offers an optimum solution to the primary requirements. You can convert the concept structure of this solution alternative to a PLM item structure, or request approval for the concept Mountain Bike itself.

Related Topics

- Working with Solution Alternatives: Points to Consider

Analyzing Concept Status: Points to Consider

Use item status pie charts to view and analyze maturity of a concept and its components, based on the percentage and number of newly created and existing items in the concept structure.

Lifecycle Phase Maturity and Concept Risk

Enable the Metrics view of the concept structure to access the item status pie chart. Use the item status pie chart to determine lifecycle phase maturity at:

- aggregate level
- individual item level

Item lifecycle phases in Oracle Innovation Management are mirrored from the PLM application the item belongs to. Hover over an item status pie chart to view the number of items in each indicated lifecycle phase. Click the different segments in the item status pie chart to view the corresponding items highlighted within the concept structure.

A concept is considered to be at lower risk if items in the concept structure are in the released or production phase of their life cycles. The percentage of items in the concept structure also affects overall concept score.

Related Topics

- Concepts, Concept Components, and Items: How They Work Together
Concept Approvals: Points to Consider

Approving a concept is not required. You can opt to approve a concept to confirm the completeness of a concept design, or to lock a concept from further updates.

*Note:* While a concept and its corresponding proposal belong together, they do not have to share the same approval workflow, and each may be approved independent of the other.

Approvers and Observers

As a concept owner, you can request users within Oracle Innovation Management for concept approval. Select the reviewers, and assign them either Approver or Observer roles.

Approvers are required to explicitly approve or reject the concept for a change in concept status.

Observers can view and comment on the aspects of a submitted concept, but are not required to approve or reject it during review.

Submitting a Concept for Approval

You cannot edit a submitted or approved concept.

The concept status changes from Submitted to Approved only when all assigned approvers have agreed on the concept. A rejected concept reverts to the Draft status, and can be edited again.

Related Topics

- Concept: Explained

FAQs for Analyze Product Concept

What are metric attributes?

Metric attributes are quantitative characteristics of individual units in a concept structure. They allow you to rate and score product concepts.

You can add, calculate and compare actual and target values of concept metrics like cost, weight, and compliance, to decide on product concepts suitable to your company’s product strategy and requirements.

To view these predefined attributes in the Metrics attribute group view of the concept structure, you must first roll up or recalculate the metrics.

Target attributes are product design goals broken down from concept-level to component-level metrics, that allow design engineers to plan design goals in specific categories.

You must manually assign target attributes on each level as required.
Related Topics

- Working with Solution Alternatives: Points to Consider
12 Convert Product Concept to Bill of Materials

Convert a Component to an Item or Bill of Materials: Points to Consider

When the concept structure for a newly created or redesigned product is complete, or you have a solution alternative that meets all the assigned requirements, transform the concept structure into an Agile PLM item assembly for further cost, sourcing, and compliance checks, and finally, for product manufacture.

Converting Concept Components

When you convert a concept component to an Agile PLM item, the component becomes a read-only link to the item and replaces the concept component in the concept structure. The converted concept component and all its related data cease to exist.

If the concept component you converted had its own structure comprising lower-level components and item links, it appears as an item assembly link in Concept Design afterward. Remember, you can convert approved concepts and concept components to Agile PLM items.

Converting References

When you convert a concept component to an Agile PLM item, you can copy its reference data, including links, to design files and other attachments.

Upon conversion, component attachments appear as file attachments of the item, while designs appear as design relationships in the item metadata within the Agile PLM application.

If you convert a concept component that references more than one Innovation Management file to an Agile EDM item, the newly created item contains only a single document that includes all the Innovation Management files.

Any references that you do not convert along with the concept component are deleted from Oracle Innovation Management permanently.

Converting Requirements

When you convert a concept component with requirements assigned to it, or to its lower-level components, the requirements links point to the newly created item.

Converting the Concept Structure of Solution Alternatives

You can convert the structure of only one solution alternative per concept to an Agile PLM item assembly, including its designs and attachments.
Use the **Solution Alternative Filter** to select a solution alternative for conversion. If successfully converted, the newly created item assembly replaces the concept.

### Converting Data Fields

When you convert a concept component containing administrator-defined fields to an Agile PLM item, only the Text fields are currently copied to the Agile PLM item.

Trying to convert a concept component that includes administrator-defined data types other than text fields may result in an error.

**Related Topics**

- Working with Solution Alternatives: Points to Consider

### FAQs for Convert Product Concept to Bill of Materials

**How do I use an ECO while converting a component to an item?**

When converting a solution alternative or concept component to a PLM application, assign the newly created item to an exclusive engineering change order (ECO) created in the PLM application, or to an existing ECO, or to no ECO at all.

Using an ECO enables tracking of product changes, and implementation or modification of production processes within the PLM application.

- Create an exclusive ECO to track a proposed solution alternative in its entirety as it moves through the product life cycle
- Select an existing ECO to track product redesigns

**Note:** Selecting an existing ECO that is already in the Released state stops the conversion operation and results in an application error.
13 Define Product Portfolio Strategy

Product Lifecycle Portfolio Management: Overview

Product Lifecycle Portfolio Management is an analytic application that:

- Identifies the optimal product mix
- Evaluates portfolio performance
- Performs What-If analysis
- Optimizes resources across the portfolio
- Creates road maps in parallel with portfolio

A product portfolio is managed through the Portfolio Worklist and the Edit Portfolio areas. Whereas, product proposals are created and managed in the Concepts work area.

**Portfolio Worklist**

Use the Portfolio Worklist to view the tasks assigned to you or tasks that you started. You can view the details and you can either approve, reject, request more information, reassign, or escalate.

**Edit Portfolio**

Use the Edit Portfolio page to do the following:

- Modify portfolio details
- Define portfolio metrics
- Modify resources
- Compare scenarios
- Submit scenarios for approval

The Edit Portfolio page is separated into two sections of Scenario Elements and Analytics.

Use the Scenario Elements section to add product proposals, edit product proposals in a spreadsheet, include product proposals on a scenario, and publish products or elements back to the product proposal.

✏️ **Note:** The portfolio scenario must be approved before you can publish changes back to the proposal.

In the Analytics section, you can view charts to analyze and determine product profitability in terms of the final portfolio mix.

**Related Topics**

- Overview of Develop Product Portfolio
- Develop Product Road Map: Overview
Product Portfolio Strategy: Overview

In the Define Product Portfolio Strategy activity, the product portfolio manager creates a portfolio to analyze how to execute the product strategy while meeting budget and resource constraints to achieve intended revenue and other goals. Product portfolio strategy tasks are described in the following table.

<table>
<thead>
<tr>
<th>Task</th>
<th>What you can do</th>
</tr>
</thead>
</table>
| Create Product Portfolio    | • Create a new portfolio, create a portfolio from a template or from an existing portfolio and retain most of the information of the existing portfolio along with predefined standard metrics, targets and analyses.  
                             | • Edit portfolio attributes and delete unfeasible portfolio or that which contains incorrect data. |
| Define Product Portfolio Metrics | • Add product and portfolio metrics for evaluation.   
                                       | • Provide resource capacity information.               |
| Define Product Portfolio Goals | • Set product portfolio goals by assigning target value ranges for product and portfolio metrics.  
                                         | • Evaluate product metrics for each product, and portfolio metrics for each What-if scenario of the portfolio. |

Creating a Portfolio: Video and Procedure

Video

Watch: This video tutorial shows you how to create a portfolio. The content of this video is also covered in text topics.

Procedure

You can create a portfolio from the Portfolios work area.

Here are the steps to create a portfolio.

1. Use Navigator to go to the Product Management work area. From the list of offerings, click Portfolios.
2. On the Overview tab, click the Add icon.
3. In the Create Portfolio dialog:
   o Select New - to create a portfolio from scratch.
   o From Template - to create a portfolio from an existing template.
   o From Portfolio - to create from an existing portfolio.
   o The planning period and currency values are defined by the administrator.
   o To save this portfolio as a template, select Save As Template.
   o Click Save and Close.
The Edit Portfolio page of the new portfolio appears.

4. Rename the default scenario:
   - On the Analysis tab, click the Edit icon.
   - In the Edit Scenario dialog, enter a new name for the default scenario.
   - Select a baseline date to keep track of when you created the scenario.
   - Click OK.

   The Edit Portfolio page of the new portfolio appears.

5. Add proposals as scenario elements:
   - In the Elements section, click Select and Add.
   - In the dialog, enter the search criteria to search for a proposal and click Search.
   - Select a proposal and click OK.

6. To update the analysis charts, click Refresh Analysis.

   The analysis charts appear on the tabs based on the data in the proposals assigned as elements.

Modifying a Portfolio: Video and Procedure

Video

Watch: This video tutorial shows you how to modify a portfolio. The content of this video is also covered in text topics.

Modifying a Portfolio: Procedure

You can modify the proposal data in a portfolio.

The following procedure lists steps to modify the portfolio:

1. Use Navigator to go to the Product Management work area. From the list of offerings, click Portfolios.
2. On the Overview tab, perform a keyword search for the portfolio you want to modify.
3. In the search results, click the portfolio you want to modify.

   The Edit Portfolio page appears.

4. Click the Analysis tab and click the element you want to modify.

   The Edit Element page appears.

   Although the data on this page originated from the proposal that was assigned as an element, the data is not linked with the proposal. Hence modifying this data does not affect the proposal.

5. Click any of the tabs in the Edit Element page to modify the data, and then click OK.
6. On the Edit Portfolio page, click Refresh to view changes in the analysis charts.
Defining Portfolio Metrics and Resource Capacity: Video and Procedure

Video

Watch: This video tutorial shows you how to define portfolio metrics and resource capacity. The content of this video is also covered in text topics.

Procedure

Select the metrics you want to display in your portfolio for analysis and adjust resource capacity directly from the portfolio. The following procedure lists the steps to define portfolio metrics and resource capacity.

1. Use Navigator to open the Portfolios work area.
2. On the Overview tab, search for a portfolio. Click the portfolio name to open the page.
3. In the Actions list, select Define Metrics. The Define Metrics dialog opens, with tabs for Portfolio or Product.
4. Predefined metrics are displayed. Select any metric for your analysis, and click OK, then Save and Close.

You will see the metric now heads its own column in the portfolio or product that you chose.

5. Adjust the resource capacity by selecting Actions > Define Resource Capacity.
6. In the Define Resource Capacity dialog, you see the capacity of each Resource Pool assigned to each Planning Period Unit. Edit these values as appropriate.
7. Click Save and Close. Click Refresh Resource to see the updated changes in the analysis charts.

For instance, if you raised the resource capacity values, you will see the Capacity line is now raised.

Product Portfolio Save As: Which Values Are Copied

This topic explains different scenarios and the values that are copied when you perform a Save As operation on a product portfolio.

Settings That Affect Product Portfolio

You can save an existing product portfolio as a portfolio type of either Regular or Template.

The latest scenario is copied over with the Save As operation by default, but you are able to select any or all the available scenarios instead of accepting the default latest scenario.
Which Values Are Copied

Depending on the type of source and target portfolio, the values, listed in the following table, are copied:

<table>
<thead>
<tr>
<th>Source portfolio type</th>
<th>Target portfolio type</th>
<th>Which are copied</th>
</tr>
</thead>
</table>
| Regular               | Regular               | • General information  
|                       |                       | • Metrics  
|                       |                       | • Attachments  
|                       |                       | • Resource Capacity  
|                       |                       | • Scenarios (from the default latest version or the selected versions)  
|                       |                       | • Products  |
| Regular               | Template              | • General information  
|                       |                       | • Metrics  
|                       |                       | • Attachments  |
| Template              | Template              | • General information  
|                       |                       | • Metrics  
|                       |                       | • Attachments  |
| Template              | Regular               | • General information  
|                       |                       | • Metrics  
|                       |                       | • Attachments  |

*Note:* When you perform a Save As operation, irrespective of the type of portfolio, the planning period is not copied.
14 Develop Product Portfolios

Overview of Develop Product Portfolios

A product portfolio consists of a set of products and product proposals (concepts). In the Develop Product Portfolio activity, the portfolio manager can evaluate products and product concepts to determine the best ones to develop. Product portfolio development involves the tasks listed in the following table.

<table>
<thead>
<tr>
<th>Task</th>
<th>What you can do</th>
</tr>
</thead>
</table>
| Develop Product Portfolio Structure | • Add products and product proposals to a portfolio.  
• Update financial information for product and product proposals. |
| Note: When a product proposal is added to a portfolio the product proposal currency adjusts to the portfolio currency. The conversion happens automatically. |
| Analyze Product Portfolio  | • Edit a scenario based on the analyses displayed in terms of value, balance, strategy analysis, resource consumption, product maturity, and product road map.  
• Compare different scenarios in terms of portfolio metrics.  
• Generate What-if scenarios to adjust each product portfolio scenario using various types of analyses. |

Working with the Road Map Tab: Points to Consider

The Road Map tab helps you to visualize the Schedule, and Resources and the possible impact to the Requirement Specification. Road maps are generated after selecting approved scenarios for a chosen product portfolio.

The Road Map Tab

The Analysis side tab of a portfolio displays several vertical tabs. The Road Map tab or the View Schedule Versus Resource tab displays the Gantt chart by default. The Resource Utilization tab displays the Resource Pool list. By switching resources from the list, you can see charts of different updated tables and move schedules back and forth. The Requirement Specification tab displays a table of specifications of elements you have selected from the Product Development Schedule tab. Update Launch and Update Resource available for Road map and Resource tabs.

Scenario Approval Process: Explained

When you create a new portfolio, a default scenario with a default Revision is created. You can add product proposals to the default scenario and edit the details.
A scenario workflow consists of:

- Draft
- Submitted
- Approved
- Current

<table>
<thead>
<tr>
<th>Status</th>
<th>Implication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft</td>
<td>Initial default status when a scenario is created.</td>
</tr>
<tr>
<td>Submitted</td>
<td>The Product Portfolio Manager submits a scenario. The submitted scenario is</td>
</tr>
<tr>
<td></td>
<td>read only, but the other scenarios in the same revision are editable.</td>
</tr>
<tr>
<td>Approved</td>
<td>Scenario is reviewed and approved. All approvers must approve the scenario</td>
</tr>
<tr>
<td></td>
<td>for the status to change to Approved. If the scenario is rejected even by a</td>
</tr>
<tr>
<td></td>
<td>single approver, the status changes to Draft.</td>
</tr>
<tr>
<td>Current</td>
<td>The approved scenario moves to a new Revision and the status changes to</td>
</tr>
<tr>
<td></td>
<td>Current. The scenario in current status is not editable. When the scenario</td>
</tr>
<tr>
<td></td>
<td>status changes to Current, the portfolio status changes to Released.</td>
</tr>
</tbody>
</table>

Approving Scenarios: Video and Procedure

Video

Watch: This video tutorial shows you how to submit a scenario for approval. The content of this video is also covered in text topics.

Approving Scenarios: Procedure

You can submit a scenario for approval from the Analysis tab of a portfolio.

The following procedure lists the steps to submit and approve the scenario.

1. Use Navigator to go to the Product Management work area. From the list of offerings, click Portfolios.
2. Enter the search criteria to search for a portfolio in which you want to approve a scenario and click Search.
3. Click the portfolio in which you want to approve a scenario.
The Edit Portfolio page appears.

4. Click the Analysis tab, and expand the Scenarios menu.
5. From the Actions menu, select Submit for Approval.
6. In the Submit for Approval dialog, click Select and Add.
7. In the Select and Add dialog:
   - Enter the criteria to search for users or user groups and add them as approvers. Click Search.
   - Select an approver and click OK.
8. In the Submit for Approval dialog, click Submit.

A notification is sent to the reviewer.

9. Click Save and Close.

The reviewer can approve or reject the scenario directly from the notification. After approval, the status of the portfolio changes to Released.

---

**Compare Scenarios: Explained**

Portfolio metrics, product metrics and charts are used for comparison of scenarios. You can select the best scenario and send it for approval. Once approved, a new Revision is created and the approved scenario is moved to the new Revision. The status of the scenario is changed to Current.

**Note:** Portfolios are not submitted for approval, only the scenarios.

You can also view the deviations in product costs, revenues and resources in the Overview section after you save the portfolio.

The criteria that determine the best scenario are:

- Value
- Balance
- Strategy
- Resources
- Product Mix

**Value**

You can determine the value or commercial worth of each scenario with the help of visual representations displayed in terms of Cost vs. Revenue vs. Resource Headcount, Product Maturity, and Revenue, Cost and Margin.

**Balance**

To check the balance of each scenario, you can view charts that are displayed in terms of Technical Risk vs. Reward vs. Resources, and Market Risk vs. Reward vs. Cost.
Strategy
For business strategy analysis, you can view charts that are displayed in terms of Strategic Fit, and Market vs. Strategic Fit. You can determine the scenario that aligns with the product innovation strategy.

Resources
You can identify the shortage of resources allocated to projects during each quarter with the help of charts that are displayed in terms of Resource Allocation Consumption.

Product Mix
For the global product mix across the planning period, you can view details such as the schedule, cash flow, resources, and the products included in each scenario.

Comparing Scenarios: Video and Procedure

Video

Watch: This video tutorial shows you how to compare scenarios to analyze which scenario is the best for your product portfolio. The content of this video is also covered in text topics.

Procedure

The following procedure shows how to use the compare scenario capability.

Compare a Scenario
Here are the steps to compare a scenario.

1. Use Navigator to go to the Product Management work area. From the list of offerings, click Portfolios.
2. Enter the search criteria to search for a portfolio and click Search.
3. Click the portfolio in which you want to compare scenarios.

The Edit Portfolio page appears.
4. On the Analysis tab click Scenarios and then click Navigate to Compare Scenarios.
5. Select the scenarios that you want to compare and click Refresh Analysis.

The application displays a comparative analysis of the selected scenarios in charts.

Click Refresh Analysis to view the changes in the charts. The Value, Balance, Strategy, Resources, and Product Mix refreshes with the comparative data displayed in graphs and tables.
6. If you want to export the comparison charts, click Export to Excel. You can then open or save the file.
Net Present Value: How It Is Calculated

The Net Present Value is calculated as the difference between present value of cash inflows and the present value of cash outflows.

Settings That Affect Net Present Value

Three factors affect the net present value:

- Cash flow
- Discount factor
- Number of years
- Baseline date

How Net Present Value Is Calculated

In the application, NPV is calculated using the Newton-Rhapson algorithm. The net present value is derived from the equation:

\[
NPV = C(0) + C(1)/(1+d) + C(2)/(1+d)^2 + \text{and so forth} + C(n)/(1+d)^n
\]

The variables in the equation are described as:

- \(c\) - cash flows for the product wherein Revenue is considered positive and Cost is considered negative
- \(d\) - discount factor
- \(n\) - number of years in future

The value \(n\) is calculated based on the trend defined for it. Since we are considering the trend to be Point trend, the trend date is the same as start date. The following explanation is how to calculate the value of \(n\).

\[
 n = (\text{Start Date} - \text{Baseline Date})/365
\]

\[\text{Note:}\] The Baseline Date value defaults to the same date as the creation of the proposal.

If the Start Date of the Cost or Revenue is less than the Baseline Date, the rows are ignored so that any cash flow that occurred before the established baseline date is not included. If the Start Date of the Cost or Revenue is less than or equal to one year after the Baseline Date, then the value of \(n\) is equal to 0 (it is the first year). One day beyond the first year increments \(n\) to 1. If the Start Date of Cost or Revenue is less than or equal to two years after the Baseline Date, then the value of \(n\) increments to 2 and so on and so forth. One day beyond the second year increments \(n\) to 2 and so on and so forth. Total the rows that have the same \(n\) value and apply the formula.

Example

1. Calculating number of years
Consider the scenario described in the following tables with a fixed baseline date as January 01, 2012. For varying start dates, the value of n is determined as:

<table>
<thead>
<tr>
<th>Start Date</th>
<th>Cost</th>
<th>Number of Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 01, 2012</td>
<td>140</td>
<td>0</td>
</tr>
<tr>
<td>April 03, 2010</td>
<td>300</td>
<td>-2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Start Date</th>
<th>Revenue</th>
<th>Number of Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 01, 2015</td>
<td>200</td>
<td>3</td>
</tr>
<tr>
<td>April 03, 2010</td>
<td>300</td>
<td>-2</td>
</tr>
</tbody>
</table>

**Note:** If the number of years is negative, the corresponding values of cost and revenue are not considered for NPV calculation.

2. Calculating cash flow
   All the costs and revenue for the same number of years is grouped to determine the cash flow. Using the value n obtained in the previous step, the cash flow is calculated as described in the following table:

<table>
<thead>
<tr>
<th>Number of Years</th>
<th>Cash Flow (Revenue - Cost)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-140</td>
</tr>
<tr>
<td>3</td>
<td>200</td>
</tr>
</tbody>
</table>

3. Calculating NPV
   After you determine the values for cash flow, and assuming the discount rate to be 0.1, calculate NPV using the given equation and arrive at a value of 10.26.

### Internal Rate of Return: How It Is Calculated

The Internal Rate of Return is the rate at which the Net Present Value is equal to zero. The IRR is also defined as the discount rate at which present value of all future cash flow is equal to the initial investment.

### Settings That Affect Internal Rate of Return

Three input variables affect the internal rate of return:
- Cash flow
How Internal Rate of Return Is Calculated

The internal rate of return is derived with the same equation that is used to calculate the net present value. The NPV is derived from the equation:

\[ \text{NPV} = C(0) + \frac{C(1)}{(1+r)} + \frac{C(2)}{(1+r)^2} + \text{and so forth} + \frac{C(n)}{(1+r)^n} \]

The variables in the equation are described as:

- **c** - cash flows for the product wherein Revenue is considered positive and cost is considered negative
- **r** - internal rate of return
- **n** - number of years in future

You can determine the internal rate of return by setting NPV to 0. The application uses the Divide-and-Conquer guess method where an assumption is made on the discount rate to arrive at zero net present value. The adjustment factor, or the guess factor, that results in zero NPV is considered to be the internal rate of return.

**Example**

Consider a scenario where the guess factor or the discount rate is 0. By setting this, if the resulting NPV is negative, the discount rate is increased to 10 and the NPV is recalculated. With the discount rate as 10, if the NPV turns out to be positive, you can determine that the range where NPV tends to 0 is between 0 and 10.

Now that you have determined the probable range, the discount rate is further adjusted to determine a closer range where NPV tends to 0. Consider the discount rate to be 1. With this value replaced as the discount rate, consider that the resulting NPV is negative. It implies that the discount rate can be further increased to 2 to obtain a positive NPV. If the resulting NPV is 0, the discount rate is considered to be 2.

Consider another scenario where NPV is negative when you give incremental discount rates as 0, 10, and 20. With the discount rate as 30, if the NPV results in a positive value, you can determine the range of the discount rate to be between 20 and 30. Let us consider the discount rate to be 21 for which the NPV turns out positive. The possibility of finding the value of the discount rate resulting in NPV to be 0 is now between 20 and 21. Incremental values of 20.1, 20.2 and 20.3 are now given as the discount rate and NPV is recalculated. If the NPV is 0 with discount rate 20.3, the value of IRR is considered to be 20.3.

**Scenario Baseline Date: How It Determines Metric Values**

The baseline date that you select while editing a scenario is used in scenario analysis to calculate product and portfolio metrics such as Net Present Value.

**Settings That Affect Baseline Date**

The creation date of a product proposal is considered as baseline date for the product proposal. When you add a product proposal to a scenario, the product proposal baseline date is overwritten with the baseline date that you provided for the
scenario. This initiates the product proposal metrics in the Elements table to be recalculated. Changing the scenario’s baseline date updates the baseline date for all of its elements. The scenario metrics also update accordingly.

\[ \textbf{Note:} \] Changing the product baseline date recalculates the metrics associated with that product once you save the product portfolio.

How the Baseline Date Determines Metric Values

Baseline date is an important factor to calculate various portfolio and product metrics. The baseline date is used to calculate Net Present Value, Internal Rate of Return, and Break Even Time for product proposals and products in the Elements table.

Break Even Time: How It Is Calculated

Break even time is the period when the running addition of calculated value of revenues becomes equal to the total development projected costs.

Settings That Affect Break Even Time

Consider four factors while calculating the break even time:

- Development Projected Costs for product
- Revenue
- Discount rate
- Baseline date

How Break Even Time Is Calculated

The break even time is calculated by adding the calculated values of all revenues over time using discount rate and the number of years to the total development projected costs provided for the product.

Example

Consider a scenario with discount rate as 0.1. To determine the Break Even Time, calculate the number of years as shown in the previous scenario. After determining the value of n, use the following steps:

1. Using the following table, determine the calculated revenue using the equation:
   \[ \text{Calculated Revenue} = \frac{1}{(1 + d)^n} \]

   With the discount rate as 0.1, determine the calculated revenue and the running revenue.

<table>
<thead>
<tr>
<th>Number of Years</th>
<th>Calculated Revenue</th>
<th>Running Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>200</td>
<td>200</td>
</tr>
</tbody>
</table>
2. Calculate the linear factor

The values that are closer to the development projected cost are 472.73 and 803.31. Consider these values as the lower value and the higher value respectively and determine the linear factor using the equation:

$$\text{Linear Factor} = \left(\frac{\text{Development Projected Cost} - \text{Lower Value}}{\text{Higher Value} - \text{Lower Value}}\right) \times 365$$

In this example, the resulting linear factor is 30.10.

3. Calculate linear date

The linear date is calculated using the equation:

$$\text{Linear Date} = Y + \text{Linear Factor}$$

Here $Y$ is the start date of the lower value.

In this example, the linear date is January 31, 2013.

4. Calculate the Break Even Time using the equation:

$$\text{Break Even Time} = \frac{\text{Linear Date} - \text{Baseline Date}}{365}$$

In this example the Break Even Time is determined as 1.09 years.

Payback Period: How It Is Calculated

Payback period is the period when the running addition of revenues becomes equal to the total development projected costs.

Settings That Affect Payback Period

Two factors that affect the payback period:

- Development projected costs
- Revenues

How Payback Period Is Calculated

Payback period is calculated by adding the revenues in time to the total development projected costs for product or portfolio.
Example

Consider the following scenario where January 01, 2012 is the fixed baseline date. If the projected development cost is 500, the running revenue is calculated in the following table:

<table>
<thead>
<tr>
<th>Start Date</th>
<th>Revenue</th>
<th>Running Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 01, 2012</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>January 01, 2013</td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td>January 01, 2014</td>
<td>400</td>
<td>900</td>
</tr>
</tbody>
</table>

The period during which the running revenue is equal to the projected development cost is January 01, 2013. Considering this date and the baseline date, the payback period is calculated as:

Payback Period = X - Baseline Date

Where X is the period where the running revenue is equal to projected development cost

With X as January 01, 2013 and baseline date as January 01, 2012, the payback period is calculated to be 1 year.

Updating a product record using the Oracle ADF Desktop Integration tool: Worked Example

You can modify records in the Elements table using the Oracle ADF Desktop Integration spreadsheet. The metrics that are editable in the application user interface can all be updated in the spreadsheet as well, except for the Score metric. You can insert, delete and update cost, revenue and resource information.

Using the Oracle ADF Desktop Integration tool you are able to update the metrics data of a product proposal or product portfolio. From the spreadsheet you make your changes and then import those changes to the data back into the application. The following is an example of this process started from the Edit in Spreadsheet option of the Actions menu on the Resources tab of a product proposal object.

Exporting and Importing Data Using the Oracle ADF Desktop Integration Tool

1. Click Edit in Spreadsheet from the Actions menu.
2. Enter your login credentials information.
   If you already provided your login credentials to use the Oracle ADF Desktop Integration tool for another open Excel spreadsheet, then you do not have to provide them again.
3. In the open Excel file, you can update data.
   There must not be any empty rows between, otherwise the data does not import back into the application.
4. From the tab where the exported data is displayed in the Excel spreadsheet, click the **Upload** option.
5. When the upload finishes importing the data back into the application successfully then the modified data displays its updated status in the **Status** column.

After uploading changes from the Excel spreadsheet, the object must be opened again. Changes do not display even if the object is saved.

If you perform this export and import from the **Elements** table, you must save the portfolio in the application before changed data is accurately displayed in the locally viewed Excel spreadsheet.

**FAQs for Analyze Product Portfolio**

What's an Annual Discount Rate?

Annual discount rate is the discount rate given to future cash flows to convert them to present cash flows.

Can I create ad-hoc reports for business objects?

Yes. You can create ad-hoc reports to obtain the counts, cycle times, and aging of concepts, proposals, and portfolios.

How can I add an attachment to a portfolio?

From the **Actions** menu of the portfolio select Edit Portfolio Details and click the **Manage Attachments** button.

Can I modify all information related to product and portfolio to view the changes in the analytic charts?

No. For a portfolio you can provide business-related information, select the time period, include target revenues, and target costs. For a product proposal you can include projected and actual costs, resources, and revenues.

How do I access the Oracle ADF Desktop Integration tool to edit an object?

There is an **Actions** menu option of Edit in Spreadsheet. This is available from a product proposal's **Cash Flow** tab, **Cost** table, or **Revenue** table and the **Resources** tab. It is also available from a portfolio's **Elements** table. In the open Excel file, you then can add, remove, or update data, depending on the source of the Edit in Spreadsheet action. If you started from the **Cash Flow** or **Resources** tab, then you can add, remove, or update content in the Excel spreadsheet. If you started from the **Elements** table, then you can only update content for the metrics that are already editable in the user interface of the application.
How can I compare planned resources pool data to actual resources pool data?

Using the Refresh button brings actual resource pool utilization from the associated project to the Proposal tab. A time stamp is included capturing the last refresh. This enables a comparison of the planned resource pool use in the proposal to the actual resource pool use in the project.
Overview of the Road Map

In the Define Product Road Map activity, the portfolio manager can generate road maps for each local product portfolio when the corporate product portfolio is approved and published. Defining a product portfolio road map involves the tasks described in the following table:

<table>
<thead>
<tr>
<th>Task</th>
<th>What you can do</th>
</tr>
</thead>
</table>
| Submit Product Portfolio Elements | • Identify the specific product portfolio version.  
                                  • Submit the product portfolio scenarios for approval.  |
| Approve Product Portfolio Elements | • Review product portfolio scenarios sent for approval.  
                                  • Approve or reject product portfolio scenarios. You can comment on reasons for approval or rejection.  |
| Generate Road Map           | • View road map generated according to the product mix for the selected scenario. |

How do I share my opinion with development teams on terminating a product?

If the Edit Portfolio page has a Social link, you can invite others to a conversation to discuss the ideas.

For example, as a portfolio manager, you carefully weigh the market share research, revenue, and future portfolio plans, and suspect that it may be time to end support for one of the products in your portfolio. You want to make sure you have agreement from the people closest to the product, the product development manager, and the product manager.

From the Edit Portfolio page:

1. Click the Social link to open Oracle Social Network (OSN).
2. Click New Conversation.
3. Invite your product manager and product development manager to the conversation.

The details of your conversation and key aspects of the portfolio are visible on the portfolio wall in OSN for everyone to view.

After a joint online discussion about the pros and cons of terminating the product, questions are asked and answered, and supporting documents are uploaded and reviewed. When you click the Social link from a business object, all the social networking features provided by OSN are instantly available. This makes it easy to bring in the people you require to make an informed decision.

Depending on your job role and permissions, you can use social networking features for the following Oracle Innovation Management business objects:

- Ideas
- Requirements Specifications
• Concepts
• Proposals
• Portfolios

Related Topics
• Managing Oracle Social Network Objects: Explained
Glossary

concept
A possible solution based on limited data, usually with only the key components, materials and assemblies defined, and often relying on the knowledge and imagination of the concept creator.

concept structure
A conceptual, nonproduction structure of product (concept) components and PLM (production) items. Also called a concept assembly at lower levels.

embedded concept
An existing concept reused as a whole within another concept structure. Embedded concept data contributes to the metrics calculations in a concept. Concept ownership decides if an embedded concept can be modified by an Oracle Fusion Innovation Management user at any point.

PLM
Acronym for Product Lifecycle Management.

product portfolio
A product portfolio is a collection of scenarios, each of which is composed of various product mixes.

product proposal
A product proposal represents the business plan for a proposed new concept, new product, sustaining product or a product to be phased out. The proposal contains financial information such as cost and revenue of the product. It also contains milestone and resource data that represents execution details.

relationships
Oracle Fusion Innovation Management and PLM objects associated with a given concept or concept component as links