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Preface

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

Oracle Applications Help

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

Using Applications Help

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

Additional Resources

- **Community:** Use Oracle Applications Customer Connect to get information from experts at Oracle, the partner community, and other users.
- **Guides and Videos:** Go to the Oracle Help Center to find guides and videos.
- **Training:** Take courses on Oracle Cloud from Oracle University.

Documentation Accessibility

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

Comments and Suggestions

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

Innovation Management: Overview

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

- Collect ideas from different sources, collaborate on them, identify the right 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 a buy-in from stakeholders; and
- Develop concepts supporting those proposals to ensure that the product goals are met.

The elements listed above 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”, below.

INNOVATION MANAGEMENT SOLUTIONS

The Innovation Management suite includes these three solutions:

- **Product Requirements and Ideation Management** supports and simplifies the innovation process with ideas, requirements specifications, and requirements. This user guide describes the creation and management of these 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.
- **Product Lifecycle 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

The Innovation Management solutions are accessed from the Navigator and divided into three work areas. Access to the work areas is based on roles assigned to a user. 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 **Concepts** work area, which is open to design managers, design engineers, and product managers.
3. Activities related to portfolios are done in **Portfolios** work area, which is open to portfolio managers and other financial and resource managers.

BRIEF OF INNOVATION PROCESS

The innovation process begins with ideas being entered into the Ideas work area. As ideas are enriched, grouped, and matured, they can be attached to a new or existing product proposal in the more restricted Concepts work area. Or, ideas can be converted 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 can be delivered to Oracle Fusion Product Development or Oracle 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: Overview

The Innovation Management Dashboard consists of Overview, 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 Dashboard enables you to view and analyze your company’s performance on factors that drive innovation to bring clarity for decision making.

Each dashboard 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 system. 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 top ten requirements we must 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 Portfolios 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 and dashboards, see these guides:

- Oracle SCM Cloud Using Analytics and Reports
• Oracle SCM Cloud Creating and Editing Analytics and Reports

Use the **Navigator** to access the **Innovation Management Dashboard**.

### Graphical Navigator: Overview

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.

The different ways in which structured data are displayed are as follows:

- **Dependency Map:** The dependency map allows you to map the data to visualization and configure possible interaction and visual properties.

  The dependency map appears in the right corner of the Graphical Navigator window. The connector lines 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.

  The dependency graph appears in the center of the Graphical Navigator window. 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**

- View a Concept Graphically: Explained
- Working with Structured Data: Explained
Oracle Social Network Objects in Oracle Innovation Management: Overview

This topic details the Oracle Innovation Management business objects that you can transform to Oracle Social Network objects in Oracle SCM Cloud.

Use the Manage Oracle Social Network Objects task to locate the following Oracle Innovation Management business objects that you can enable for Oracle Social Network integration.

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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 Create and Manage Ideas

Post an Idea: Explained

You must be assigned the Employee role by your administrator to access the Ideas application.

When you have signed in to the Oracle Cloud application, on the splash page click the Product Management icon. Then click the Ideas icon. The Ideas Overview page appears.

When you want to create an idea, click the Post Idea button on the upper right of both the Overview page and the Manage Ideas page. In the Post Idea dialog, give your idea a name (required) and a short description (optional). From the drop-down Type menu, 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. When an idea is created, the type can no longer be changed.

The attributes that define your idea can be added and modified on the Edit Idea page.

Ideas Overview Page: Overview

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 TopContributors, and Tags.

Filter By

Select a Type from the drop-down 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 discussed above.

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: Overview
You can edit the name, description, and status of an idea. You can add a tag or tags to an idea.

When an idea is created, the Edit Idea page appears with the idea enabled for editing. The left pane displays details and the Relationships table. Although no relationships have been established, they can be added immediately.

The right pane displays the Vote Summary and Comments areas. Again, there are no votes or comments in the new idea, but the originator can add and publish a comment right away.

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 an idea and click the Edit button in the right pane, which displays the details of the idea and its Relationships table in editable mode.

The Actions menu options on an Edit Idea page are:

- **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.

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

With an idea selected and open in the right pane, 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 that can be seen 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

The Relationships table lets you add more information to the idea. Links to other objects in Innovation Management or in Agile Product Lifecycle Management can be added.

You can also add File, Text, and URL attachments to enrich the idea with supporting information. Files are uploaded to the Fusion Content Server. If a graphic is available, it is the basis to generate a thumbnail picture on that idea’s page.

Comment on Ideas: Explained

Comments can be added to an idea by anyone who is permitted to create and search ideas. 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. Comments can be added to an idea by clicking the Comments link on Manage Ideas page. You can also 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 as to whether he likes a specific idea or dislikes it. This provides another means that helps product managers to assess the usefulness and acceptability of the idea. The Like icon or Dislike icon to register your opinion and keep a tally of votes on each idea. Votes can be added to an idea by clicking the Like or Dislike link in the Your Vote area on Manage Ideas page. 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. The idea’s status is displayed on Manage Ideas page. You can search ideas based on their status.
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 drop down menu 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 Excel.
3 Requirements Specifications and Requirement Structures

Requirements Specifications: Overview

In Innovation Management, 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.

All requirements specifications have common characteristics such as name or title, description, approvers, and so forth. A requirements specification in Innovation Management contains and organizes a hierarchical set of requirements (and sometimes other requirements specifications are in the hierarchy), each entry in the hierarchy containing details about what is planned and expected of the product that is being built.

A requirements specification can be of any purpose, for example, business-specific requirements, functional requirements, or test case requirements. In Product Requirements and Ideation Management, two ready-to-use types of business objects are called Requirements Specification and Test Case Specification.

Create a Requirements Specification: Explained

When you have signed in to the Oracle Cloud application, on the splash page click the Product Management icon. Then click the Concepts icon. The Concepts Overview page appears.

On the right side of the Overview page, click the Tasks icon 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. (These two tasks are referenced at the end of this topic.)

Create Requirements Specification

In the Requirements category of the Tasks list, click the Create Requirements Specification link to bring up the Create dialog. A name must be entered, and a type must be selected. Entering text into the Description field is optional but useful, as content in the Description field is searchable. From the Actions menu of the specification select Create to create new 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. New attributes can be defined 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 icon next to the name is for the default view, called Standard view. Click the grid icon for the Table view, which presents the structure’s items in an editable table format.

The Actions menu contains another viewing option, the Graphical Navigator. With a requirements specification or requirement selected, open the Actions drop down menu and select Launch Graphical Navigator. This opens a graphic display of the requirements specification or requirement, including its structure, relationships, and dependencies. The graphical navigator is quite dynamic: click on any object to see its associated objects, as well as on many visual controls. For more information, click the related link below.

Manage Requirements Specifications

In the Requirements category of the Tasks list, click the Manage Requirements Specifications link. The Manage Requirements Specifications page appears.

A requirement is always part of a structure under a requirements specification. So creating, naming and enriching requirements is done in the context of building a structure of requirements under a top-level requirements specification.

Related Topics

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

Requirement Structures: Overview

Under a requirements specification, one, several, or many requirements and (other) requirements specifications can be added and ordered into a hierarchy; this is a 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

Requirements are created as needed, and are added to the structure. Requirements can be created just by typing-in, or by searching requirements from another requirements specification. A user can also search for a requirements specification to add to the structure.

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

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 drop down menu. If a movement command or icon is grayed out, that movement cannot be performed on the selected
requirement. Simply move the selected requirement away from its parent, and you quickly learn the internal rules of movement in the structure.

You can also drag and drop 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.

Related Topics
- Edit a Structure of Requirements: Explained

### Find Requirements Specifications and Requirements: Explained

On the right side of the Concepts Overview page, click the Search icon to open the search dialog. From the Search For drop-down list, select Requirements Specifications, Concepts, or Proposals. The Search field lets you select a single attribute to be the focus of the search, and the selections are particular to the object you are searching; when you select Requirements Specification in the Search For field, the default attributes in the Search field are Requirements Specification and Description. There is an additional field that you may enter text; so, you may select Description and type "bicycle", the system returns all requirements specifications whose description includes a reference to bicycle.

When you are ready, click the Search icon. Results are returned in the Manage Requirements Specifications page, and each row is an active link.

The Manage Requirements Specifications page also displays similar search controls. Now let us look at Advanced Searches.

> **Note:** Under the tab "Manage Requirements Specifications", the heading "Requirements Specifications" appears, indicating that is what the system searched for. Next to this heading is a drop-down arrow, by which you can select "Requirements". When you change to Requirements, the default attributes for both basic and advanced searches are Requirements and Requirements Specifications.

### Advanced Searches

The Advanced search capability is launched by clicking the Advanced link in the Search dialog, and also with the Advanced toggle button on the Manage Requirements Specifications page. The Advanced search fields appear, and the toggle button changes to Basic.

The Advanced search setup lets you select operators, such as Starts With or Contains, to be much more precise in the Requirements Specification and Description fields.

### Add Fields in Advanced Searches

When you click Advanced, the Add Fields drop-down menu is inserted to the right of the Search, Reset, and Save... buttons. In general, the selections on the menu let you filter your search by the settings of fields or attributes found on requirements specifications and requirements.

When you add a field to your search, it is available for you to select one of the settings found on that field by drop-down selection. If you decide you do not want that field in your search, you can click the X to remove it.
ADD FIELDS TO REFINE YOUR SEARCH OF REQUIREMENTS SPECIFICATIONS

The fields that you can add to refine your advanced search of requirements specifications are **Description**, **Product**, **Status** and **Type**. You can also add a **Requirements Specification**.

ADD FIELDS TO REFINE YOUR SEARCH OF REQUIREMENTS

The fields that you can add to refine your advanced search of requirements are **Content**, **Estimates**, **Fulfilled**, **In Scope**, and **Priority**. You can also add **Requirements Specification** and **Requirement**.

The Content field allows text with Rich Text characteristics (RTE), so pasting a text block from a formatted document into the Content field does not confuse the system, that is, does not produce garbled characters. The operators are **Contains** and **Does not contain**, so you can search for specific text in requirements that interests you, or exclude descriptive text that you do not want returned.

Search for Requirements in Requirements Specifications

There is a field-based search in each requirements specification. With a requirements specification opened in Standard view, in the left pane, click the **Find** icon, a graphic of binoculars, in the menu bar. The dialog that opens lets you type in keywords, that try to match Requirement file names as well as text in requirement Content. You can also select criteria, by drop-down menus, for the requirement attributes Fulfilled, Priority, and In Scope. When you are ready, click **Search** in the dialog.

Any requirement in the tree that matches the criteria is indicated with the appearance of an icon next to it. If there are matches, you see in the menu bar a Results Navigator, for example, the information "1 of 5" with both a backward and forward pointer. You can click the pointers to step through the matching requirements in the tree.

Additionally, you may switch to Table view and return to Standard view without losing the results of your Find search.

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 right-click the mouse in a structure and 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.

### 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 wish 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, in the left 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 below 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 drag and drop objects from one part of the structure to another.

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

Related Topics

• Requirement Structures: Overview

Tabs on Requirements Specifications and Requirements: Explained

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

Details Tab

Details tab provides basic information about all requirements specifications and requirements. It has a Content field for a full description of the requirement, which can be enhanced by the Rich Text Editor capability. The Content field also accepts graphics, attachments, and URLs; even programming code can be inserted and formatted as it supports the description and creation of the new item or product.

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

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

Additional Information Tab

The Additional Information tab provides the Relationships and Attachments tables.

An attachment is a file or a URL that is linked to the requirement to provide more detailed information about the requirement.
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.

Details of the User Interface in Requirements: Explained

On an **Edit Requirements Specification** page, as you select on object in the tree structure within the **Requirements** pane on the left, the heading and contents of the right pane changes.

For example:

- If the top-level requirements specification is selected, the right pane’s heading is **Requirements Specification: [named object]**. The right pane’s content is the **Details** tab of the requirements specification. When you click the **Save As** option under **Save and Close** button, a new requirements specification is created with structure.

- If a requirement is selected, the right pane’s heading is **Requirement: [named object]**. The right pane’s content is the **Details** 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 on the **Additional Information** tab are 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**

Above the right pane are the **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. Even a requirement’s description in the Content field is viewable and editable 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**

Further to the right are **Save**, **Save and Close**, and **Cancel** buttons. Save and Close has a drop-down 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
Actions Menu on Requirements Specifications and Requirements: Explained

On requirements specifications and requirements, the **Actions** drop down menu items offer ways to modify the business object or gather more information about the object. Both the Graphical Navigator and Traceability Report are useful tools to understand details about large requirements structures, and these are detailed in topics referenced below.

The Actions menu options are:

- **Launch Graphical Navigator**: opens a graphical display of the business object and its related objects.
- **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.
- **Generate Traceability Report**: on requirements specifications and concepts, launches a report that lists custom attributes.
- **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.) The View Approvals action displays only when the requirements specification moves beyond the Draft state.

**Related Topics**

- Graphical Navigator: Overview

Traceability Report: Overview

The Traceability Report is generated by an Action on requirements specifications and concepts. It displays custom attributes that have been defined for requirements by the administrator (that is, attributes 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 have been met. It can demonstrate that, for instance, elements of equipment have been fully tested, or meets regulations as described by requirements.

Traceability reports can be generated in these formats:

- **XML**: the report can be exported in this format.
- **CSV**: the report can be exported in this format.
- **HTML**: the report can be exported in this format. The HTML format highlights unfulfilled requirements and test cases.
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

Relationships are collected on the Relationships table, which is found on the Additional Information tab of requirements specifications and requirements. Relationships may also be established with other Innovation Management objects, such as Concepts, Proposals, and Ideas. For instance, on the Details pane of the Manage Ideas tab, the Relationships table appears.

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. Furthermore, 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 above information, this list indicates the appearance of the "Has Changed" icon - a blue circle that appears on a row in the Relationships table - 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 blue 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 workspaces);
- 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).

**Link Requirements: Explained**

On the right side of the Concepts Overview page, click the **Tasks** icon to open the list of available tasks. Under 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 the left pane, select one or more requirement (or test case) in the right 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 the right pane being populated with test cases for the requirements in the left pane. Whenever two requirements specifications are open in the panes, requirements in the left pane display a relationship icon if they have any relationships with test cases in the right pane. Select one in the left, and the requirements that are related to it now display the same icon.

Also, hover over a relationship icon in the left pane, 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 Details 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 at the top of requirements specifications and requirements can always be clicked to show certain values quickly. Also, the pie charts can be clicked to go right to Table view. In Table view, the pie charts are visible to the right 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. See the example below. The yellow “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, above.

- **Fulfilled** can be set to Yes or No. If it’s left 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.

**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, to the far right 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?

From a requirements specification or requirement, navigate to the **Relationships table** under the **Additional Information** tab. Click the **Select and Add** icon to, first, search 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** at the bottom of the page. Then click the **Save** button at the top of the page.

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

With a requirements specification or requirement open and selected, open the **Additional Information** tab. In the **Attachments** area, select **Add** 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 **Details** 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 the **Additional Information** tab of a requirements specification or a proposal. Click the **Select and Add** icon. Add the objects you want to associate with the **Relationships** table to create the relationship.
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.
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 drop down menu 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 right side of the Concepts Overview page, click the Tasks icon to open the list of available tasks. Under 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 Fusion 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 mandatory, 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. 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.

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 an Actions menu and icon to Select and Add. The Select and Add: Reviewers dialog opens, and you can search to find approvers and observers. 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.

Why did a blue dot appear next to a requirement or requirements specification?

A blue dot icon appears next to a requirement in the Depends on Requirements table of a requirements specification if that requirement has been modified in a later version.

A blue dot appears next to a requirements specification in a structure if a new version of the requirements specification is available.

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 machine and enter a File name.
6 Develop Product Concepts

Overview

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. Approved concepts can then be transferred 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 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>
</tbody>
</table>
Workflow Status | Workflow Stage
--- | ---
Note: This is not a concept status. It is a workflow transition. | A concept that has been rejected in the Review stage reverts to the Draft status and is available for modifications.

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, for prototypes and products in the future

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 Fusion environment.

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 and subrequirements, and items
• Solution alternatives
• Concept team
• All concept versions

Related Topics
• Working with Concept Versions: Points to Consider

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.

<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 Product Innovation.

For more information on job roles and data security, refer to the Oracle Supply Chain Management Cloud Using 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 orange 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.

A blue 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

- Analyzing a Product Concept: Explained

FAQs for Create Product Concept
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.
7 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 the following objects:

- 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. You can manually edit the numbered sequence 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 contains PLM items and item assemblies primarily, if not entirely.

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.

You can also 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 are not allowed to 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 and link PLM items and item assemblies from external sources to a concept structure, to reuse existing items, and arrive at a production-ready concept structure faster.

While you cannot directly modify linked objects in your concept structure, you can either edit the item in the PLM system itself, or you can 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.

You cannot edit a concept in the graphical mode. However, you can search within the concept, and use the Focus option to trace concept components, requirements, and items that are linked together within the concept.

You can search within the tabular form of a concept structure for concepts and components using predefined operators, and combinations of operators. Search results are highlighted by colored arrows. Use the Previous and Next icons to step through the search results sequentially.

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 system, 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

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

Edit and modify a concept structure in an Excel spreadsheet using the Oracle ADF Desktop Integration tool.

⚠️ Note: Download and install the ADF-di 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 add, remove, and update concept and components data directly in Excel.

To add a row, select the last row and insert a row in Excel. This results in a blank row with an automated value in the Key field. Add the required data in this row and click Upload. There must not be any empty rows between, else the data is not imported back into the application.

To remove a row, flag the wanted row and click Upload. Deleting a row in Excel and uploading the file does not delete the row from the application.
Excel cells that are successfully added, removed, or updated display their status in the Status column.

**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 allow you to 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 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 you decide the component is ready to be processed further as an item in subsequent downstream systems. During the conversion process, you can preserve document and design relationships that you may have created 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.

**Item**

Existing systems 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 when you want to suggest changes in its design attributes, or simply reuse PLM data in your concept. The original item remains unchanged in the PLM system. 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 system 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></td>
</tr>
<tr>
<td>• Part 1</td>
<td>Yes</td>
<td>Concept Component</td>
<td></td>
</tr>
<tr>
<td>• Part 2</td>
<td>No</td>
<td>Item link</td>
<td></td>
</tr>
<tr>
<td>• Part 3</td>
<td>Yes</td>
<td>Concept Component</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 3.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Part 3.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Note:</strong> Does not apply to the lower-level items</td>
</tr>
</tbody>
</table>

Select the item links and click **Convert to Concept Component** to change the lower-level items to concept components.
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 above), 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.

Related Topics

- Setting up Product Lifecycle Management: Roadmap

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.

This image details how concept versions are numbered. 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. Versions of a concept or concept component that are converted or are in the Submitted status cannot be saved 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, right-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 at the bottom of the Information window. If the component is in focus, only the More Details icon appears at the bottom of the Information window.

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

  ![Note:](image) 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 right-click to see the context menu in the Search box.

**Related Topics**

- View a Concept Graphically: Explained
- Graphical Navigator: Overview

FAQs for Develop Product Concept Structure

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:](image) To work with projects in Oracle Innovation Management, it is mandatory that you have functional security to access work items details in Oracle Project Portfolio Management.
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 flex 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 allow you to 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 PLM system. To do so, convert the item to a concept component, or edit the item attributes in the PLM system.

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, PLM objects, design files, and URL attachments.

You can link references to concepts and concept components, but not PLM items, as they are stored outside Fusion.

Files are stored in the Fusion Content server while referenced PLM objects are stored in the PLM system. You cannot edit referenced 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 PLM documents, designs, or attachments referenced in the component. You may preserve URL attachments in a custom document, created in 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 PLM attachments upon conversion; other document relationships must remain design links or be consolidated into a single document in the PLM system.

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 concepts 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.
9 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
- Converting a Component to an Item or Bill of Materials: Points to Consider
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.
10 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.

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.

Related Topics
- Working with Solution Alternatives: Points to Consider
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 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></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 under 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 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></td>
</tr>
<tr>
<td>Item</td>
<td>Weight or Power of Item * Quantity</td>
<td>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</td>
</tr>
</tbody>
</table>

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Oracle SCM Cloud
Using Innovation Management

Chapter 10
Analyze Product Concepts

49
**Element** | **Total Weight or Total Power Calculation** | **Notes**
--- | --- | ---
Assembly | Aggregate of Total Weight or Total Power of each child element | Manually-entered weight or power value at the assembly level will be replaced by the calculated weight or power value after roll-up
Embedded Concept | Rolled-up Weight or Power of the Concept * Quantity | You must roll-up the embedded concept prior to other roll-ups, else the weight or power calculations will be zero.
Concept | Aggregate of total weight or power of each assembly or element under root-node | Element refers to a Component, Item or Embedded Concept

### 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.

*Item score = Points for Overall Compliance + Points for Lead Time + 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></td>
<td>Not Compliant or Blank</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Lead Time</td>
<td>Less than 6</td>
<td>40%</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Less than 11</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Less than 21</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Less than 31</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Above 30</td>
<td></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></td>
<td>Less than 2</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>
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 below 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
  
  \[
  \frac{\text{Number of items with score } \geq 85}{\text{Total number of items in the concept or assembly}}
  \]

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

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

<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></td>
<td>% of items = 80-89%</td>
<td>80%</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>% of items = 70-79%</td>
<td>70%</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>% of items &lt;70%</td>
<td>10%</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>% of items = 0</td>
<td>0</td>
<td></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></td>
<td>% of items with score =&gt;85 = 80-89%</td>
<td>80%</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>% of items with score =&gt;85 = 70-79%</td>
<td>70%</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>% of items with score =&gt;85 &lt;70%</td>
<td>50%</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>% of items with score =&gt;85 = 0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>% of items with complete data = 100%</td>
<td>100%</td>
<td>20</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>
<tr>
<td></td>
<td>Calculate metrics and compare solution alternatives</td>
</tr>
<tr>
<td></td>
<td>Determine the concept design that fulfills requirements</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 here. 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></td>
<td></td>
<td>330</td>
<td>17</td>
</tr>
<tr>
<td>Air Box</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>200</td>
<td>10</td>
</tr>
<tr>
<td>Exhaust System</td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td>190</td>
<td>15</td>
</tr>
<tr>
<td>Oil Filter</td>
<td></td>
<td></td>
<td>Yes</td>
<td>80</td>
<td>10</td>
</tr>
<tr>
<td>Cartridge Oil Filter</td>
<td>Yes</td>
<td></td>
<td></td>
<td>140</td>
<td>14</td>
</tr>
<tr>
<td>Wrench Off Oil Filter</td>
<td>Yes</td>
<td></td>
<td></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 above the concept structure region 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 below.

<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 system 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 mandatory. 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
11 Convert Product Concept to Bill of Materials

Converting 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 a 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 a PLM item, the component becomes a read-only PLM 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. Approved concepts and concept components can be converted to a PLM item.

Converting References

When you convert a concept component to a 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 PLM system.

If you convert a concept component that references more than one Fusion file to an Agile EDM item, the newly created item contains only a single document that includes all the Fusion 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 a 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 Custom Data Fields

When you convert a concept component containing custom fields to a PLM item, only the Text fields are currently copied to the PLM item.

Trying to convert a concept component that includes custom 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 system, assign the newly created item to an exclusive engineering change order (ECO) created in the PLM system, 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 system.

- 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
12 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**

- Develop Product Portfolio: Overview
- 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 involves:

<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. |

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:

- Regular
- 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 following values are copied:

<table>
<thead>
<tr>
<th>Source portfolio type</th>
<th>Target portfolio type</th>
<th>Which are copied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>Regular</td>
<td>• General information</td>
</tr>
</tbody>
</table>
### Define Product Portfolio Strategy

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

- **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.
Product Proposal Versioning: Explained

Versioning a product proposal enables you to store and track all changes that take place during the review and approval process. It helps in capturing and retrieving the evolution of information for a product proposal. You can view previous versions of the product proposal irrespective of the product proposal version you are currently on. When you look at the concept version, only the latest version of the concept is displayed. You can add only the latest version of the product proposal to a scenario and you can save an older version of a product proposal into the latest version. If a proposal is already submitted for approval, the latest version is approved or rejected, then you cannot edit the proposal.

Points to remember on product proposal versioning:

Product Proposal and Product Concept
A product proposal and a product concept work in unison, but they can follow independent versioning.

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.

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 latest version of the product proposal is displayed in the search results.

Submitting a Proposal for Approval: Points to Consider

Submitting a Proposal for Approval You cannot edit a submitted or approved proposal. The proposal 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 can be edited again. When the latest version of a proposal is already submitted for approval, but not yet approved you cannot submit the proposal again.

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.
FAQs Develop Product Business Proposal Versions

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.

> **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/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.
# Develop Product Portfolios

## Overview

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:

<table>
<thead>
<tr>
<th>Task</th>
<th>What you can do</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop Product Portfolio Structure</td>
<td>• Add products and product proposals to a portfolio.</td>
</tr>
<tr>
<td></td>
<td>• Update financial information for product and product proposals.</td>
</tr>
<tr>
<td></td>
<td>• Define resource capacity for a portfolio.</td>
</tr>
<tr>
<td>Analyze Product Portfolio</td>
<td>• Edit a scenario based on the analyses displayed for the scenario in terms of value, balance, strategy analysis, resource consumption, product maturity, and product road map.</td>
</tr>
<tr>
<td></td>
<td>• Compare different scenarios in terms of portfolio metrics.</td>
</tr>
<tr>
<td></td>
<td>• Generate What-if scenarios to adjust each product portfolio scenario using various types of analyses.</td>
</tr>
</tbody>
</table>

**Note:** When a product proposal is added to a portfolio the product proposal currency adjusts to the portfolio currency. The conversion happens automatically.

## Related Topics

- Editing Product Record using Oracle ADF Desktop Integration spreadsheet: Explained

## 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
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.

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:

\[ \text{NPV} = C(0) + \frac{C(1)}{1+d} + \frac{C(2)}{(1+d)^2} + \ldots + \frac{C(n)}{(1+d)^n} \]

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 \( n \).

\[
 n = \frac{\text{Start Date} - \text{Baseline Date}}{365}
\]

**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 following scenario 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 above, the cash flow is calculated as:

<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 equation above 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
- Number of years
- Net Present Value

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:

\[ NPV = C(0) + C(1)/(1+r) + C(2)/(1+r)^2 + \ldots + C(n)/(1+r)^n \]

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.

*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 above scenario. After determining the value of n, follow the steps below:

1. 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>
<tr>
<td>1</td>
<td>272.73</td>
<td>472.73</td>
</tr>
<tr>
<td>2</td>
<td>330.58</td>
<td>803.31</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:

   \[ \text{Linear Factor} = \left( \frac{(\text{Development Projected Cost} - \text{Lower Value})}{(\text{Higher Value} - \text{Lower Value})} \right) * 365 \]
In this example, the resulting linear factor is 30.10.

3. Calculate linear date

The linear date is calculated using the equation:

Linear Date = Y + 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:

Break Even Time = (Linear Date - 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 as:

<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:

\[ \text{Payback Period} = X - \text{Baseline Date} \]

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.

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

Using the Oracle ADF Desktop Integration tool you are able to add, remove, and update the metrics data of a product proposal or product portfolio object by exporting the data into an Excel spreadsheet. 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 add, remove, or update data.
   
   To remove a row you must mark the wanted row. To add a row you must select the last row and then insert a new row and the wanted content. 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.
15 Define Product Road Map

Overview

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:

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

Related Topics

• Scenario Approval Process: Explained

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