

TEAMCENTER

Consumer Packaged Goods on Active Workspace — Usage

Teamcenter 2412

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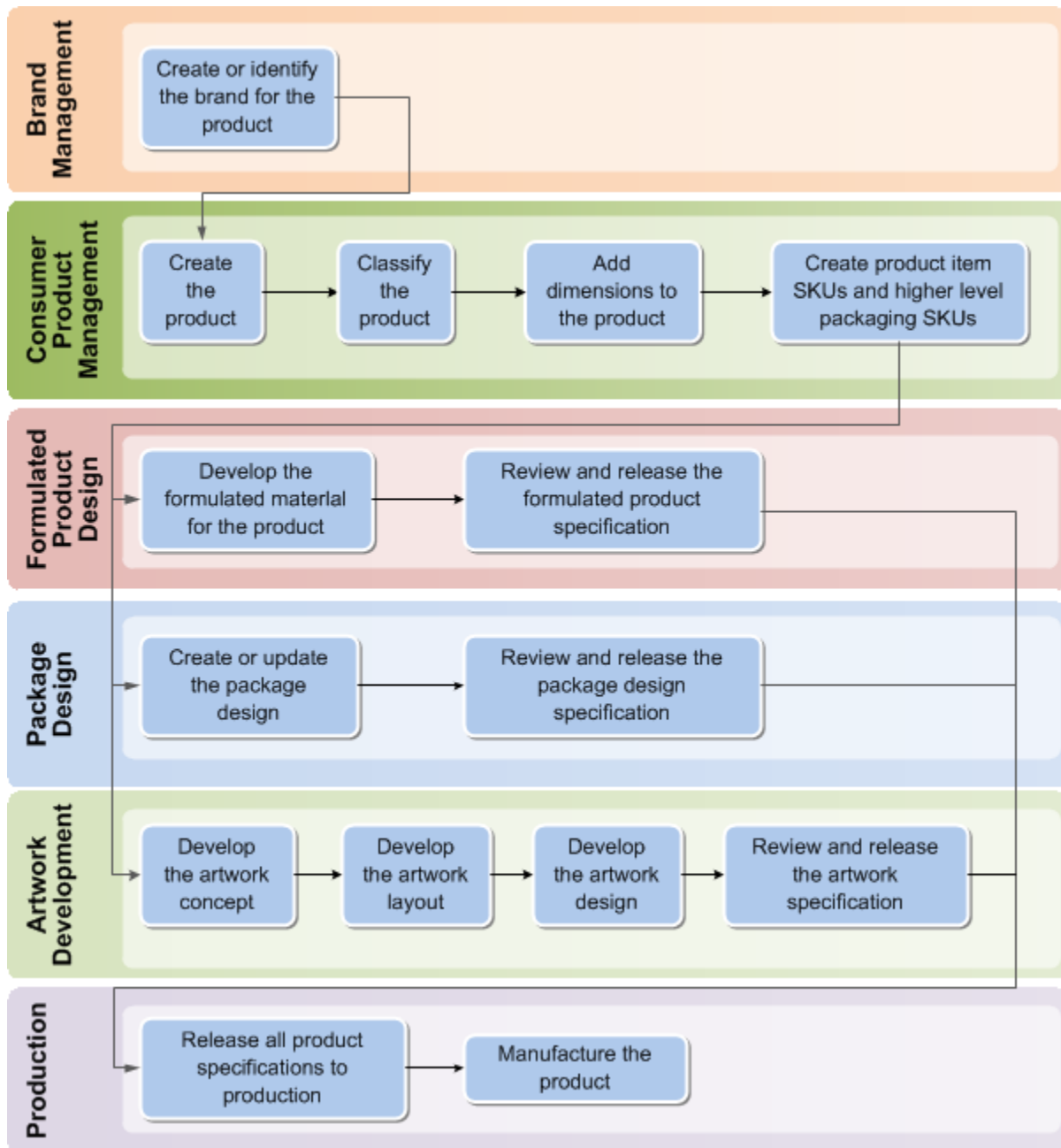


1. Overview of Consumer Packaged Goods

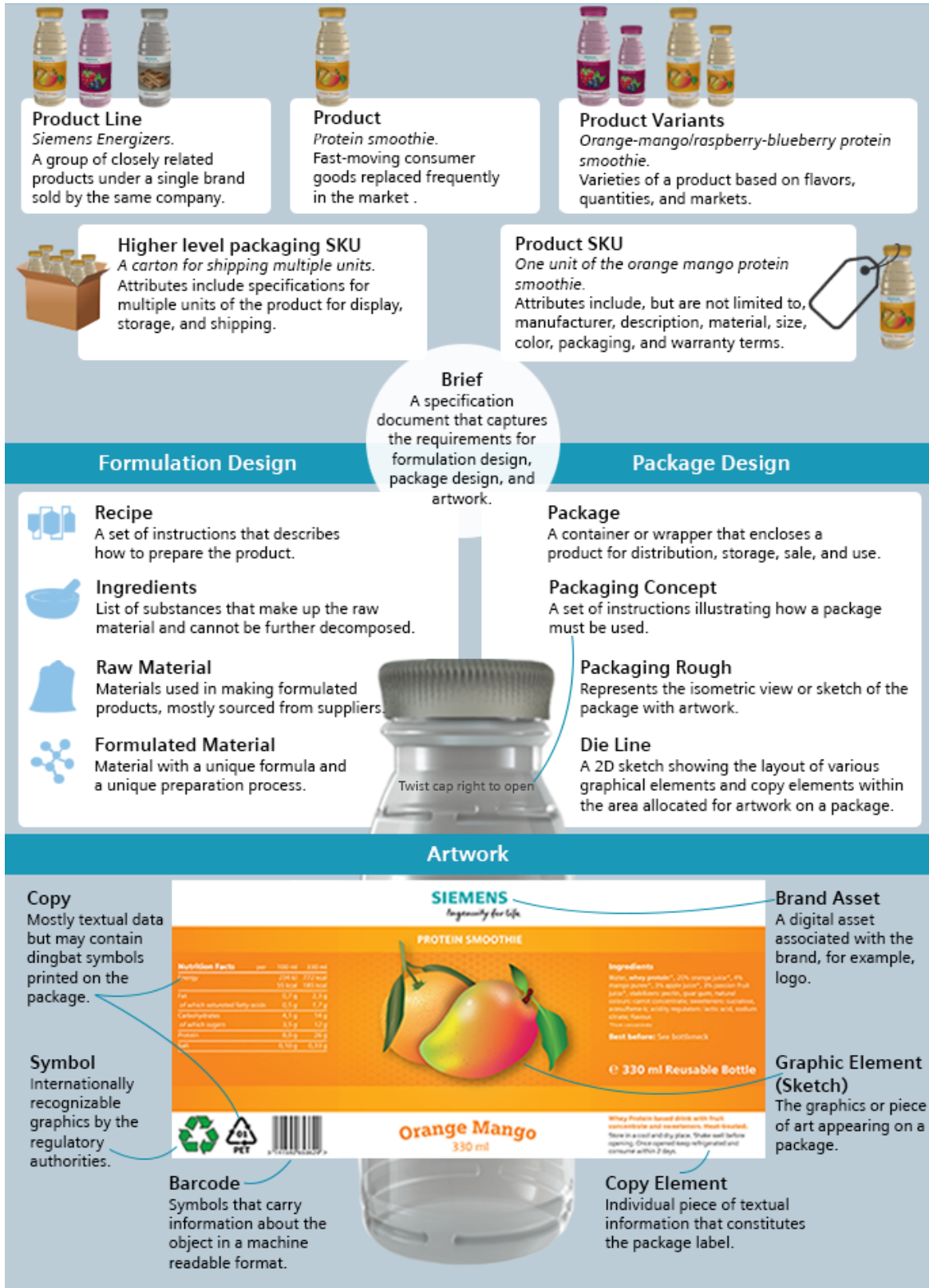
Introduction to Consumer Packaged Goods

Original brand manufacturers and private label manufacturers of consumer packaged goods, such as those in the food and beverage industries or in the cleaning solution, detergent, paper product, cosmetics, baby care, and skin care segments, contend with challenges to keep up with the trends and demands of the ever-changing industry. They need to create new products and update existing products and packaging based on market trends. Additionally, they must develop new products conforming with regulatory compliance and sustainability standards and taking into account supply chain complexity, industrial productivity, rising commodity costs, and changing customer needs.

The Consumer Packaged Goods solution helps you to collaborate on various aspects such as product development, recipe management, artwork, and packaging design of consumer packaged goods.



Terms used in Consumer Packaged Goods



Term	Description
Brand	It represents a set of digital assets, including brand collateral such as marketing briefs and theme board, and brand assets such as the logo and messaging.
Brand asset	It refers to an asset associated with a brand. For example, the logo of a brand.
Product Line	A product line is a group of related products under a single brand sold by the same company, for example, Siemens Energizers.
Product	CPG products are the items used by consumers that need to be replaced frequently, compared to those that are usable for extended periods of time. Some basic examples of CPG products are food and beverages, cosmetics, and household products. For example, Orange Mango protein Smoothie.
Product Variants	Different variations of a product that differ in flavors, quantities, markets, and so on. For example, Raspberry Blueberry Protein Smoothie, Chocolate Protein Smoothie.
Product SKU	A product <i>item SKU</i> defines the various dimensions and the packaging and artwork specifications for each product.
Higher level packaging SKU	Specifies the dimensions and specifications for the package and artwork specifications of multiple products for display, storage, or shipping.
Briefs	A Brief is an equivalent to a requirements specification. The briefs constitutes of <i>Marketing Brief, Theme Board, Design Brief, Technical Brief, Design Studio Brief, and Artwork Agency Brief</i> .
Marketing brief	It provides inputs on how the package should be designed based on market research, competition, and consumer requirements. Based on the marketing brief, the creative team creates sketches of the package (<i>theme boards</i>).
Theme board	It is an artifact that is used to capture an early prototype of the package. A theme board is a collage of an existing package, assorted paper clippings, and other creative prototype materials.
Technical brief	It captures dimensions, material properties, packaging structure technologies, printing technologies, and packaging requirements.
Design brief	The design brief provides a high-level plan for the package design. The design brief includes <i>creative brief</i> and <i>fit-for-use brief</i> . Creative brief has creative information such as branding information, and design objective, and so on. Fit-for-use brief provides the plan for the packaging life cycle, which includes the package characteristics, package design, package functionality, the manufacturing plan.
Formulated material	Represents the final or intermediate formulated material that has a unique formula and unique process to make it

Term	Description
Recipe	A recipe is a set of instructions that describes how to prepare or make something.
Raw material	Represents the raw materials that are used in making formulated products and are most often bought from external suppliers.
Ingredient	Represents a further decomposition of a raw material, typically is a substance that forms part of a mixture.
Package	A package is a container or wrapper that encloses a product for distribution, storage, sale, and use. For example, a shampoo bottle or milk carton.
Package rough	It represents the isometric view or a sketch of the package with the artwork.
Package structure concept	It refers to the product instructions illustrated on the package. For example, a sketch showing how hand soap is dispensed from the bottle.
Die line	A die line serves as a template for the package and ensures an accurate layout for a printed product. It is a 2D sketch that shows all the cut lines and folds of a package in flattened form and the layout of various graphical elements and copy elements within the area allocated for artwork on a package.
Artwork	The copy elements and graphical elements together make up the artwork. In PLM, it represents the assembly of the digital assets (copy elements, graphical elements, symbols).
Copy	This refers to the text (and occasionally symbols) printed on the package.
Copy element	It represents an individual piece of textual information that is a part of the package label, for example, a slogan.
Graphic element (Sketch)	This refers to the graphics or art on a package.
Symbol	A symbol is a graphic element that indicates, signifies or is understood as representing an idea, object, or relationship, usually defined by regulatory authorities or a non-governmental organization.
Barcode	Barcodes are symbols that can be scanned electronically using laser or camera-based systems. They carry information about the object to which it is attached in a machine readable format.

Managing product development in the CPG industry

As an example, consider that you want to design the packaging and artwork for your product, an orange mango protein smoothie. This will be available in the market in packs of 330 ml and in two additional flavors, Chocolate and Raspberry Blueberry. You start by specifying a brand and the product line under which you will create the product.

After you create the product, you classify it, add dimensions, and assign the Global Trade Item Number (GTIN) to the product. The Consumer Packaged Goods solution provides the Global Standard International (GSI) rules for classification, a classification schema based on the Global Product Classification (GPC) standard. Depending on the classification, all the attributes are automatically assigned to the consumer product.

Next, you create the product item stock keeping units (item SKUs) for the consumer product representing *product variants*. For this, you create separate item SKUs for each product variant, *Orange Mango*, *Raspberry Blueberry*, and *Chocolate*. You also create higher level packaging SKUs. For example, you create a six-pack higher level packaging SKU for the orange mango item SKU.

Once the product SKUs are created, you develop the packaging and artwork for the product item SKUs and higher level SKUs.

In formulation management, you specify the formulated material, package, and artwork specifications for the consumer product. Once the formulation specifications are reviewed, they are included in the layout and artwork of the consumer product. The package is tested and then released to production to print the artwork and manufacture the product.

2. Managing brands

What is brand management?

A *brand* is a product that is publicly distinguished from other products for all communication and marketing purposes.

Using brand management, you can organize all your brand information such as brand products, digital assets, brand documents, and other information in one place. Brand management allows you to set up a hierarchy of brands for new or existing products. You can streamline the process of creating a variant of an already existing product, such as creating the packaging for a new fragrance of detergent.

A **Brand Equity** item represents a brand in Teamcenter. You can organize all your brand information such as brand products, digital assets, brand documents, and other information under **Brand Equity**.

Create a brand

A **Brand Equity** item represents a brand in CPG. You can organize all your brand information such as brand products, digital assets, brand documents, and other information under **Brand Equity**.

1. Navigate to and open the folder where you want to create the brand, for example, your **Newstuff** folder.
2. Click **More commands** **...** > **New** **✱** > **Add** **⊕**.
3. In the **Add** panel, select **Brand Equity**.
4. In **PROPERTIES**, accept the default values for **ID** and **Revision**, and specify the **Name** and other details.
5. In **PROJECTS**, click **Add Project** **⊕**.
6. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
7. Click **Add**.

After creating the brand equity, you must **create and add product lines**, products, and marketing briefs to the brand equity revision.

Create sub-brands

A sub-brand is a secondary brand that operates under the umbrella of a primary or parent brand. Sub-brands are designed to target specific market segments or customer needs that differ from those of the main brand.

Procedure

1. Navigate to and open the **Brand Equity**.
2. In the **Brand Equities** section, click **Add** ⊕.
3. In the **Add** panel, select the type as **Brand Equity**, accept the default values for **ID**, and specify the **Name** and the other properties.
4. In **PROJECTS**, click **Add Project** ⊕.
5. Select the required project from the list, or search for the project that you want to add and click **Assign**.
6. Click **Add**.

Create a campaign

A campaign is a series of marketing activities aimed at promoting or launching a product or brand. Campaigns include advertising, promotions, public relations, and online marketing to increase brand awareness and drive sales. Campaigns can be seasonal, product-specific, or targeted at a particular market segment.

Procedure

1. Navigate to and open **Brand Equity**.
2. In the **Campaigns** tab, in **Campaigns** section, click **Add** ⊕.
3. In the **Add** panel, specify the **Name** and other details.
4. Click **Add**.

Add a window of opportunity

In Teamcenter, a window of opportunity captures the details and the time frame in which the company can successfully launch the campaign.

Procedure

1. Navigate to and open the **Campaign**.
2. In the **Window of Opportunity** section, click **Add** ⊕.
3. In the **Add** panel, specify the **Name**, **Start date**, **End date**, and other details.
4. Click **Add**.

The created window of opportunity is displayed under the **Window of Opportunity** section.

In a strategy timeline view, the window of opportunity is displayed at the brand strategy level.

Create a brand strategy and a strategic roadmap

A brand strategy is a plan to develop and manage a brand to ensure the accomplishment of specific windows of opportunities. The strategic roadmap are different ways to accomplish a strategy that includes specific goals.

Procedure

1. Navigate to and open the brand equity.
2. In the **Strategy** tab, click **Add** ⊕.
3. In the **Add** panel, select the type as **Strategy** and accept the default values for **ID**, and specify **Name** and **State** for the strategy.
4. Click **Add**.
5. Select the strategy and click **Add** ⊕.
6. From the options, select **Strategic Roadmap**.
7. In the **Add** panel, select the type as **Strategic Roadmap**, accept the default value for **ID**, and specify **Name** and **State** for the strategic roadmap.
8. To create multiple roadmaps repeat steps 6 and 7.

Create goals for the strategic roadmap

Goals are the deliverables that contribute towards the success of strategic roadmaps.

Procedure

1. Navigate to and open the **Brand Equity > Strategy** tab.
2. Select **Strategic roadmap** and select **Add** ⊕.
3. In the **Add** panel, select the type as **Goal**, accept the default values for **ID**, and specify **Name**, **Start Date**, **End Date**, and **State** for the goal.
4. Click **Add**.

In a strategy timeline view, the created goal is displayed at the selected strategic roadmap level.

Filtering the window of opportunities

You can apply campaign and brand filters to windows of opportunity visible for the strategy. This is helpful when your organization manages a diverse or complex portfolio of brands, each with its own set of strategies, resulting in many campaigns and their respective windows of opportunity.

Procedure

1. Navigate to and open the **Brand Equity**.
2. In the **Strategy** tab, click **Filters**.

In the **Filters** panel, all the campaigns associated with the brand are displayed under the **Campaign** section.

3. Select the brand or the campaign in the **Filters** panel.

Based on selections made, the timeline view refreshes the displayed window of opportunities.

Activate a strategic roadmap

A brand strategy can have multiple strategic roadmaps. After the performance analysis of multiple strategic roadmaps and activate the strategic roadmap that performs the best.

Procedure

1. Navigate to and open the **Brand Equity > Strategy** tab.
2. Select a **Strategic roadmap** and click **Activate Roadmap**.

Every strategy can have only one active roadmap.

The activated strategic roadmap displays a green bar indicator.

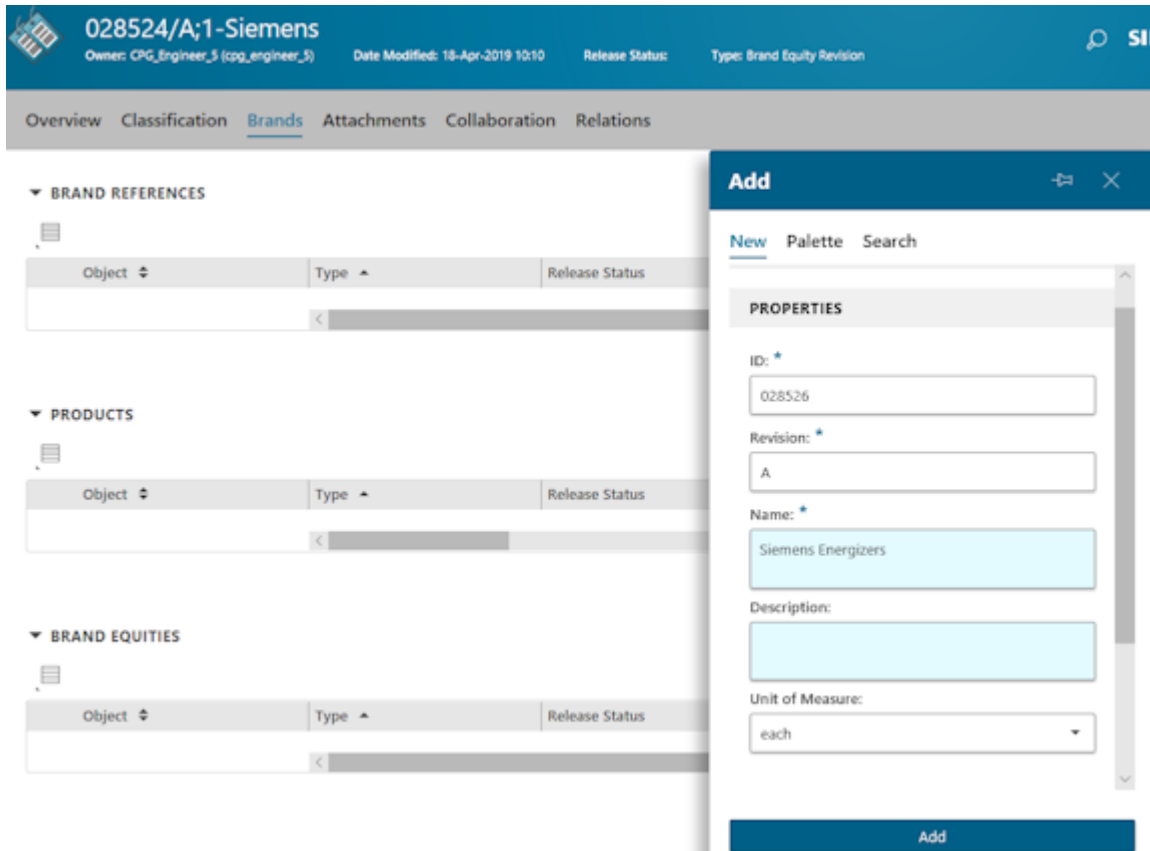
The goals that are associated with the activated strategic roadmap are colored in green.

The goals that are associated with an inactive strategic roadmap are colored in grey.

3. Creating the product

Create a product line

1. Navigate to and open the **Brand Equity** revision that you created for your brand.
2. In the **Brands** tab, under **BRAND EQUITIES**, click **Add** ⊕.

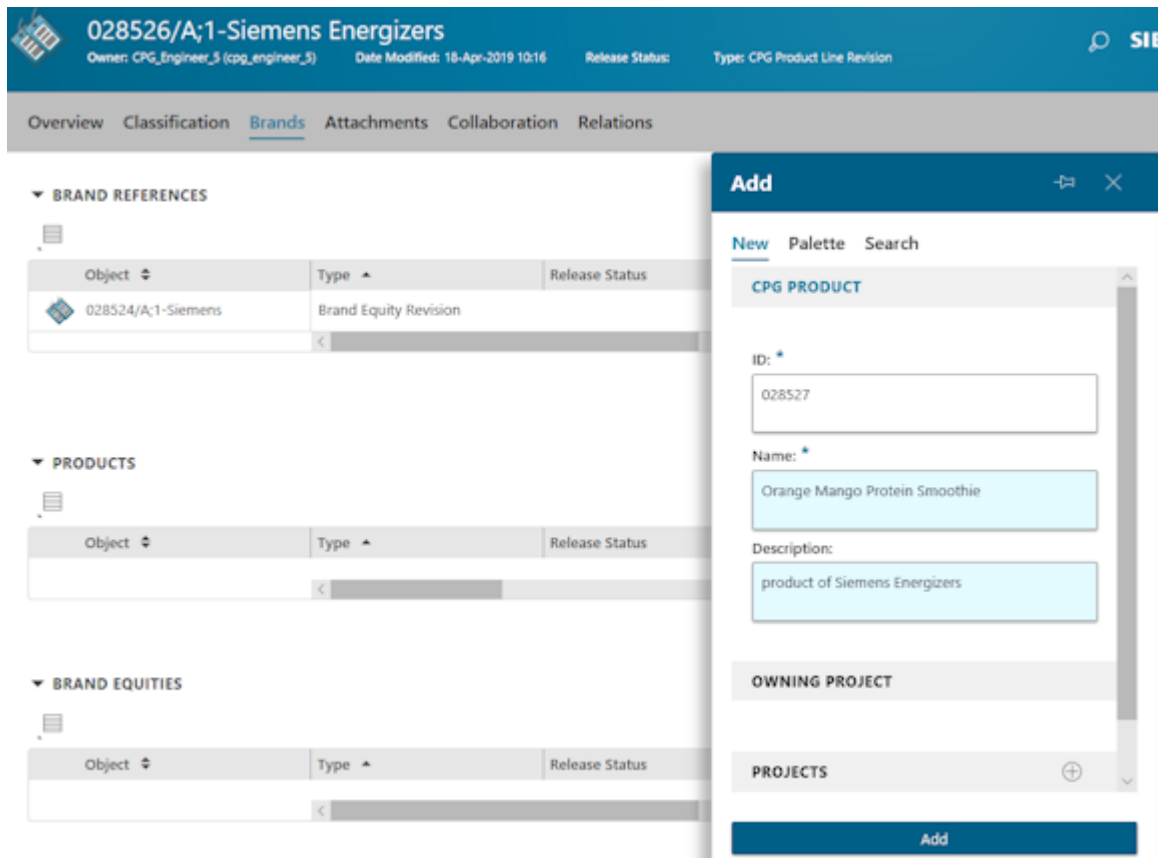


3. In the **Add** panel, select **CPG Product Line**. Specify a name and a description for the product line.
4. Enter the required properties and click **Add**.

After you create a product line for the brand, you can create products under that product line revision.

Create a consumer product for the product line

1. Navigate to and open the **CPG Product Line** revision that you created for your brand.
2. In the **Brands** tab, under **PRODUCTS**, click **Add** ⊕.



3. In the **Add** panel, select **Consumer Product**. Specify a name and a description for the product.
4. In **PROJECTS**, click **Add Project** (+).
5. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
6. Enter the required properties and click **Add**.

Classify the consumer product

1. Open the product that you want to classify. Click **More commands** ... > **Manage** (wrench icon) > **Classify**.
2. In the **Classify** panel, click **Add** (+).
3. In the **Classes** panel, search and select **Global Product Classification**.
4. In **Global Product Classification**, select the required category.

For example, to classify the product as a beverage, select **Food/ Beverage/ Tobacco**.

5. Select the required sub classes.

For example, if you select the class as **Food/Beverage/Tobacco**, you can further categorize a beverage as **Beverages**→**Non Alcoholic Beverages - Ready to Drink**→**Dairy/Dairy Substitute Based Drinks -Ready to Drink (Shelf Stable)**.

6. In **PROPERTIES**, specify the properties for the product.

For this example, specify the **Unit System** as **Metric**, and enter values for the following:

- **Consumer Lifestage**
- **If With Diet/Light Claim**
- **If With Fruit**
- **If With Probiotic Claim**
- **Treatment of Food/Beverage**
- **Type of Dairy/Dairy Substitute Based Drink**

7. Click **Classify**.

Set a thumbnail for a product

1. Open the product to which you want to set a thumbnail.
2. In the **Attachments** tab, under **FILES**, click **Add** ⊕.
3. In the **Add** panel, in **Upload File**, click **Choose File**.
4. Browse to select the image that you want to set as the thumbnail.
5. Click **Add**.

The image is used as a preview image for the product.



028527/A;1-Orange Mango Protein Smoothie

Owner: CPG_Engineer_5 (cpg_engineer_5) Date Modified: 18-Apr-2019 11:06 Release Status: Type: CPG Product Revision

[Overview](#) [Item SKU](#) [Attachments](#) [Relations](#)

▼ PROPERTIES

ID:	028527
Revision:	A
Name:	Orange Mango Protein Smoothie
Description:	product of Siemens Energizers
Type:	CPG Product Revision
Release Status:	
Date Released:	
Effectivity:	
Owner:	CPG_Engineer_5 (cpg_engineer_5)
Group ID:	Engineering
Last Modifying User:	CPG_Engineer_5 (cpg_engineer_5)
Checked-Out:	
Checked-Out By:	

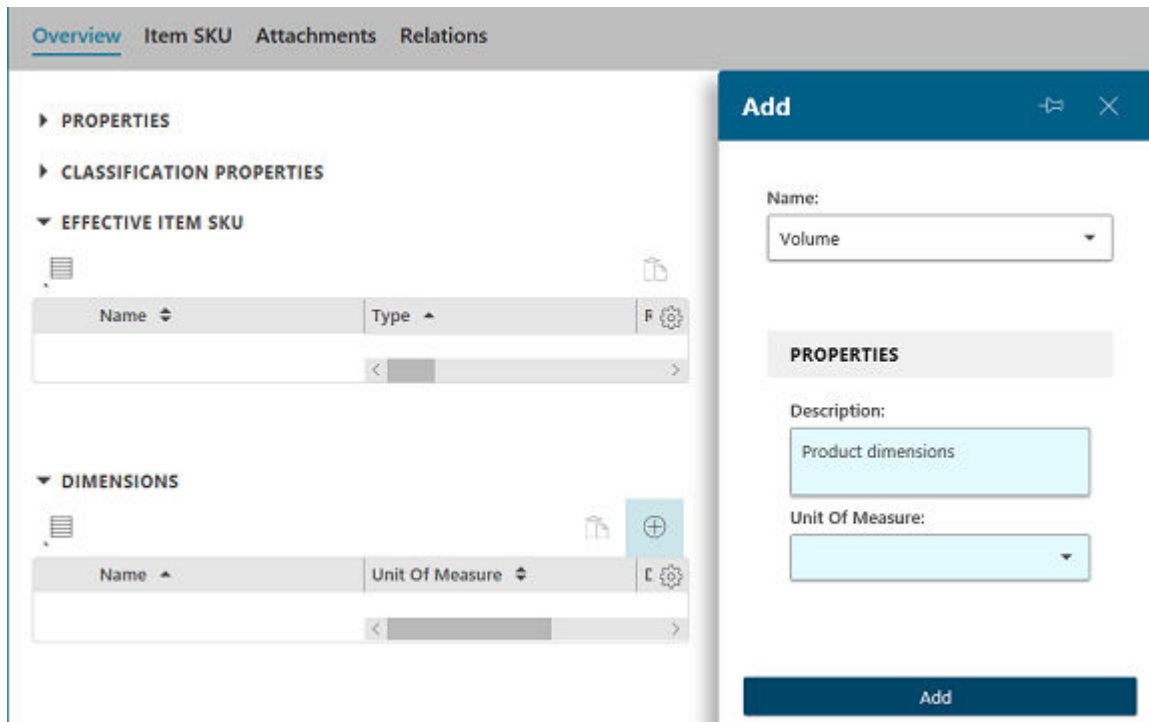
▼ PREVIEW



Add dimensions to the product

After you create the product, you specify its dimensions, such as the volume or the weight of the product and the effectivity dates for the product.

1. Open the product. In the **Overview** tab, under **DIMENSIONS**, Click **Add Dimension** ⊕.



2. In the **Add** panel, select the **Type** as **Dimension**.
3. Under the **Properties** section, select the **Name** for the dimensions you want to define for the product.

In this example, the **Name** list is set to **Volume**.

4. In **PROPERTIES**, enter values for **Description** and **Unit of Measure**.
5. Click **Add**.

Creating SKUs

What are SKUs?

Once you have decided the dimensions for the product, such as the volume, weight, and unit of measure, you must define the variants that the product will be available in. A product *item stock keeping unit (SKU)* defines the various dimensions and the packaging and artwork specifications for each product.

If you create new products or product variants, based on existing products, or item SKUs, you need to create a product item SKU for each product variant.

After creating product SKUs, you can also create **higher level packaging SKUs**, which specify the dimensions and specifications for the package and artwork specifications of multiple products for display, storage, or shipping.

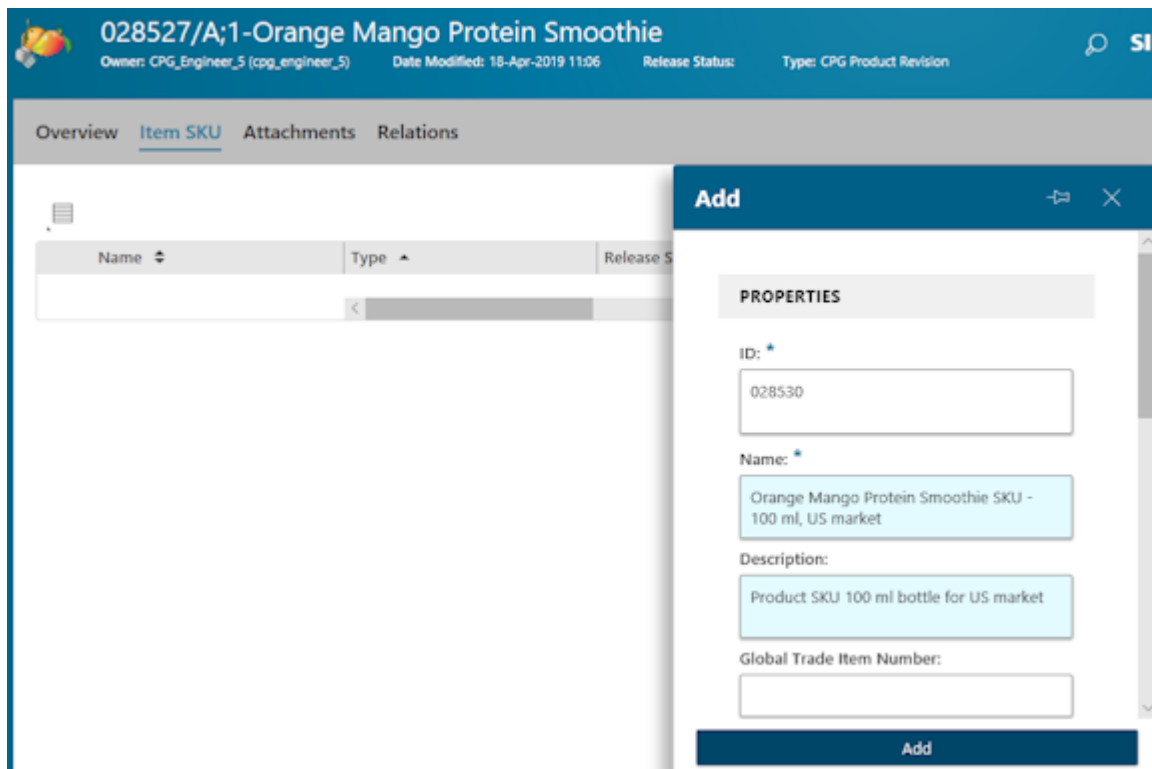
For managing a product with variants, you specify a base SKU. In this case, the base SKU is a unique ID for the product and the product item SKU is the unique ID of the variant. Therefore, all variants have the same base SKU, and each variant has its individual SKU.

Create product SKUs

For a product, you can either create a product SKU or copy an existing one. You can also set a base SKU for your product SKU variants.

Create a product SKU from scratch

1. Open the product to which you want to add a SKU.
2. In the **Item SKU** tab, click **Add Item SKU** ⊕.



3. In the **Add** panel, select the **Type** as **Item SKU**.
4. Under the **PROPERTIES** section, accept the default value for the **ID**, and specify required information.

5. Click **Add**.

Create a SKU for a product variant by copying an existing SKU

You can create a SKU from an existing product SKU for different product variants. For example, to create a US market variant of the orange mango protein smoothie, you can copy the SKU that you created for the EU market.

To create a new product SKU by copying an existing item SKU:

1. Navigate to, or search for the product item SKU that you want to use as a reference.
2. Click **More commands** **...** > **New** > **Save As**.

The screenshot displays the Siemens Teamcenter interface for a product SKU. The title bar shows '034270/A;1-Orange Mango Protein Smoothie SKU -' and the Siemens logo. Below the title bar, there are tabs for 'Overview', 'Content', 'Specifications', 'Viewer', and 'Attachment'. The 'PROPERTIES' section is expanded, showing details for the product. A 'More commands' menu is open, listing various actions such as 'Save As', 'Revise', 'Problem Report', 'Create Test', 'Create Change', 'Create Simulation', 'CAE Package', 'Create Supplier Exchange', 'Create Trace Link', 'Generate Trace Link Matrix', 'Generate Report', 'Create Alias ID', and 'Create Co-Design'.

▼ PROPERTIES	
Name:	Orange Mango Protein Smoothie SKU - 100 ml, US market
Description:	Product SKU 100 ml bottle for US market
Release Status:	
Date Released:	
Global Trade Item Number:	123456
Global Trade Item Number Management Rule:	New product introduction
Effective From:	21-Apr-2023
Effective To:	31-May-2023
Item Description Code:	CU
Regions:	Asia Pacific AMER (Americas)
Markets:	India United States of America Canada

3. Specify the parameters for the new item SKU.
4. In the **SPECIFICATIONS** table, in the **Save As Options**, select one of the following options for attached specifications:
 - **Copy:** Creates a copy of the specification to carry it over from the existing SKU to the copied product SKU. You can also change the name of specification.
 - **Relate:** Relates the specification from the existing SKU to the copied product SKU.
 - **Clear:** Discards the specification from the copied product SKU.

Note:

The **SPECIFICATIONS** section is displayed in the **Save As** panel only if specifications are related to the SKU.

5. To add a new specification, click **Add**⊕.
6. Select the type of specification from the list.
7. Specify the parameters for the new specification.
8. Click **Add**.
9. A new specification is identified as **Create** gets added to **Save As Options** in the **SPECIFICATIONS** table.
10. Click **Save**.

Set the base SKU for a product SKU

After creating different SKUs for product variants, you can specify a base SKU for your product SKU. Once this is done, you can open the base SKU directly from the product variant SKUs.

For example, in the product SKU you created for the US market variant from the existing EU market SKU, you can set the base existing EU market SKU as the base SKU.

1. Navigate to and open the item SKU revision for which you want to set the base SKU.
2. Click **More commands** ⋮ > **Edit** > **Start Edits**.
3. In the **Overview** tab, under **PROPERTIES**, **Base SKU**, click **Add**⊕.
4. In the **Add Base SKU** panel, select the product SKU item revision in the **RECENT** list, or search for an existing product SKU item revision, and click **Add**.


5. Click **More commands** **...** > **Edit** > **Save Edits** .

The base SKU is linked to the product item SKU.

Create a packaging SKU for shipping and storage

For shipping and storage, you can either create a new higher level packaging SKU or copy an existing one. You can also set a base SKU for your higher level packaging SKU variants.


Create a new higher level packaging SKU from scratch

1. Navigate to and open **Consumer Product** > **Item SKU**.
2. In the **Overview** tab, in the **HIGHER LEVEL PACKAGING SKUS** section, click **Add** .

Tip:

In **Content** tab, select the **tree with summary** view.

The **HIGHER LEVEL PACKAGING SKUS** section is be visible in the **Overview** tab on the right side.

3. In the **Add** panel, select the **Type** as **Higher Level Packaging SKU**.
4. Under the **PROPERTIES** section, accept the default value for the **ID**, specify a value for the **Name**, and enter the properties as relevant.
5. Specify the type of higher level packaging that you want to create by selecting one of the following options from the **Type** list:
 - **List of Pallets**
 - **Display Unit**
 - **6 Pack**
 - **Shipping Unit**
6. In **Item/Package SKU**, click **Add**  to associate another product or packaging SKU.
 - a. In the **Add** panel, enter keywords to search for the required product or package SKU, or search for it in the **RECENT** list.
 - b. Select the required item or package SKU, and click **Add**.
7. Click **Add** to create the higher level packaging SKU.

Create a higher level packaging SKU by copying an existing one

Navigate to or search for an existing higher level packaging SKU that you want to use as the basis for creating a new one.

1. To copy the existing SKU, click **More commands** **...** > **New** > **Save As**.
2. Specify the parameters for the higher level packaging SKU.
3. In the **SPECIFICATIONS** table, in the **Save As Options**, select one of the following options for attached specifications:
 - **Copy**: Creates a copy of the specification to carry it over from the existing SKU to the copied higher level packaging SKU. You can also change the name of specification.
 - **Relate**: Relates the specification from the existing SKU to the copied higher level packaging SKU.
 - **Clear**: Discards the specification from the copied higher level packaging SKU.
4. To add new specification, click **Add** ⊕.
5. Select the type of specification from the list.
6. Specify the parameters for the new specification.
7. Click **Add**.
8. A new specification is identified as **Create** gets added to **Save As Options** in the **SPECIFICATIONS** table.
9. Click **Save**.

Set the base SKU for a higher level packaging SKU

1. Navigate to and open the higher level packaging SKU revision for which you want to set the base SKU.
2. Click **More commands** **...** > **Edit** > **Edit** > **Start Edits**.
3. In the **Overview** tab, under **PROPERTIES, Base SKU**, click **Add** ⊕.
4. In the **Add Base SKU** panel, select the product SKU item revision in the **Recent** list or search for an existing higher level packaging SKU item revision, and click **Set**.
5. Click **More commands** **...** > **Edit** > **Save Edits**.

The base SKU is linked to the higher level packaging SKU.

Create a revision of SKU

To access previous versions of the SKU, you can create a revision of SKU.

1. Navigate to, or search for a SKU that you want to use as a reference.
2. Click **More commands ... > New > Revise**.
3. Specify the parameters for the SKU.
4. In **SPECIFICATIONS** table, select **Save As Options** for attached specifications as one of the following:
 - **Copy**: Copies the specification from existing SKU in revised SKU. You can also change the name of specification.
 - **Relate**: Relates the specification from existing SKU with revised SKU.
 - **Clear**: Discards the specification from revised SKU.

Note:

The **SPECIFICATIONS** section is displayed in the **Revise** panel only if specifications are related to the SKU.

5. To add new specification, click **Add**⊕.
6. Select the type of specification from the list.
7. Specify the parameters for the new specification.
8. Click **Add**.
9. A new specification is identified as **Create** gets added to **Save As Options** in the **SPECIFICATIONS** table.
10. Click **Revise** to create a revision.

Associate product SKUs to an existing higher level packaging SKU

You can add or relate existing product item SKUs or higher level packaging SKUs to a higher level packaging SKU after creation.

1. Open a higher level packaging SKU to which you want to associate existing product item SKUs or higher level packaging SKUs.
2. In the **Content** tab, click **Add** ⊕.
3. In the **Add** panel, enter keywords to search for the required item SKU or higher level package SKU, or search for it in the **Recent** list.
4. Select the required item SKU or package SKUs, and click **Add**.
5. Click **Add Copy** to add a copy of the selected SKUs.

All the selected item SKUs and higher level packaging SKUs are added to the packaging SKU.

Specify the components for item SKU

There are several components in an item SKU. These components have different compositions and parameters which must be specified.

Note:

To add parameters, installation of the IMM license in Teamcenter is required.

Procedure

1. Navigate to and open the **Item SKU**.
2. Click and open the **Component Specification** tab.
3. The created component specification is added under the **SPECIFICATIONS** tab and is displayed as material in the **Material** column under the **CONSTITUENTS** section.

To add parameters for the component specifications, select and add the appropriate catalog or **create new material catalog** and add it in **Main Material Catalog Revision** in auto-created component specification.

4. To add substances in the component specification, do the following:
 - a. Open the created component specification.
 - b. In the **SUBSTANCES** section, click **Add to** ⊕.
 - c. Add the **Name**, **CAS** number, and other details.
 - d. In the **RELATION PROPERTIES** specify the **%Composition**.

- e. Click **Add**.

This substance is added to the **SUBSTANCES** section and is displayed in the **Substance** column in **CONSTITUENTS** section.

- 5. To add parameters for the components, do the following:

- a. In the **Component Specification** tab, in the **PARAMETERS** section, click **Add**⊕.

Note:

To add parameters, it is necessary to add parameter descriptors in the material catalog linked to the respective component specification.

- b. In the **Add** panel, in **Specification**, select the relevant specification.
- c. Select the appropriate **Category** based on the component and from the results, select the required parameter.
- d. Click **Add**.


The parameter is added under **PARAMETERS** section for the selected component specification.

- e. In the **Display Value** column, add the appropriate value.

Submit the item SKU to a workflow

An item SKU must pass through a phase gate release workflow process that guides it through various stages of development. Each phase requires specific criteria to be met before the product can move to the next phase. This ensures that the product meets quality standards and regulatory requirements before it is released to the market.

Procedure

1. Navigate to and open the **Consumer Product**.
2. In the **Item SKU** tab, select the item SKU, and click **More commands** ⋮ > **Manage**  > **Submit to Workflow**.
3. In the **Submit to Workflow** panel, search for **Gate Release**, select the suitable phase for the item SKU and add the required details.
4. Click **Submit**.

View key performance indicators for SKUs

Key performance indicators (KPIs) are the charts created based on the maturity phase and released status of the SKUs associated with a brand. The SKUs in the dashboard can be filtered by region, market, category, and release dates. This helps the stakeholders to understand trends, opportunities, and challenges related to brands.

View KPIs based on maturity status SKUs

1. Navigate to and open the brand equity.
2. In **Overview** tab, under the **Key Performance Indicator** section, select **KPI as SKU Pipeline**.
3. Select the appropriate filter values in **Released After date**, **Released Before date**, **Regions**, **Markets**, and **Category**.

A chart is displayed based on the maturity status of all the associated SKUs.

View KPI based on SKUs released


1. Navigate to and open the Brand equity.
2. In the **Overview** tab, under **Key Performance Indicator** section, select **KPI as SKU Released**.
3. Select the appropriate filter values in **Released After date**, **Released Before date**, **Regions**, **Markets**, and **Category**.

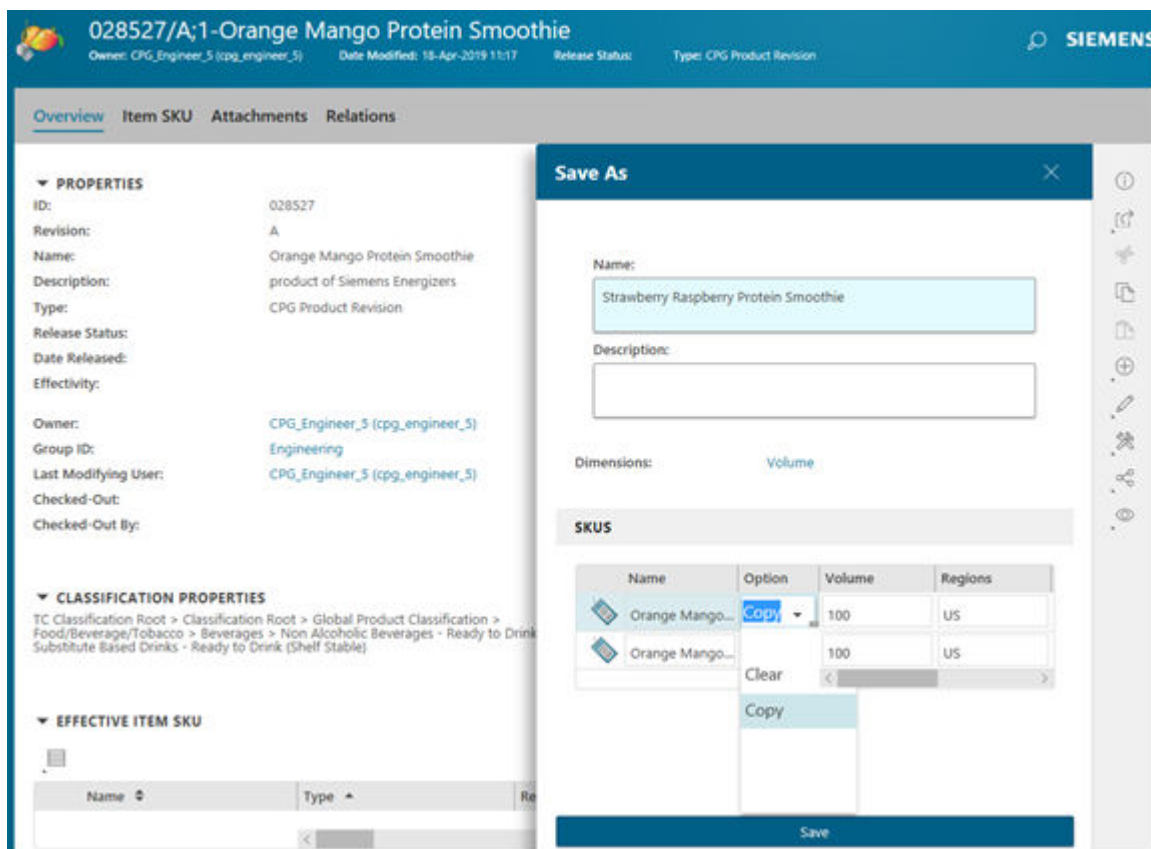
A chart is displayed based on the number of all the associated SKUs launched and its category average.

Create a copy of a product with the associated SKU data

When you create a new product from an existing product, the associated SKU information as well as the related objects such as the artwork, formula material, and the packaging can be carried over to the new product. You can choose to copy, clear, or relate the attributes from the existing product SKU to the new product SKU.

This allows you to maintain complete traceability to identify base and custom elements when you reuse the SKU and other specifications while creating a product variant from an existing product.

1. Open the product you previously created.
2. In the **Overview** tab, click **More commands** **...** > **New**  > **Save As**.



3. In the **Save As** panel, specify a **Name** and a **Description** for the new product.
4. In the **SKUS** panel, all the associated SKUs from the existing product are listed.

From the **Options** list, **Copy**, **Clear**, or **Relate** the properties of the existing product SKUs to the new product SKU.

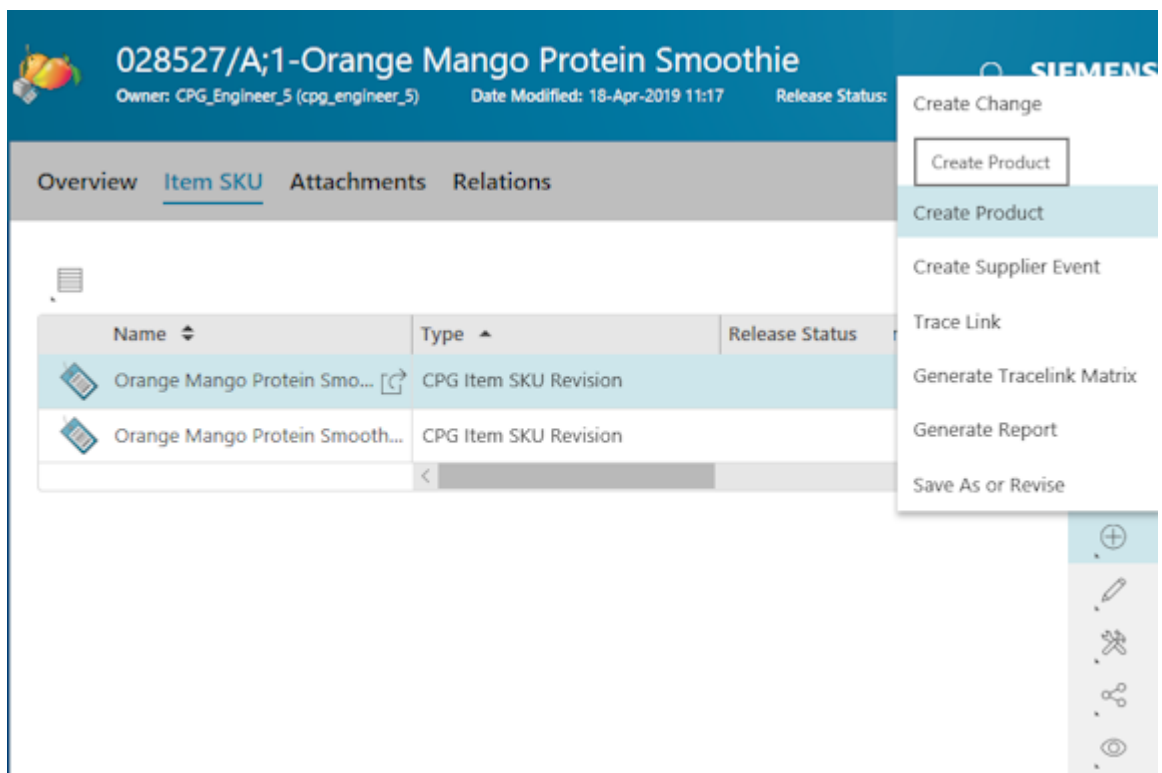
5. Click **Save** to create a copy of the product.

Create a new product from a product SKU

You can create variants of a product from the item SKU of an existing product. Such products capture all relevant attributes for the generic product and allow you to specify different values where required.

Consider that you want to create different flavors of the protein smoothie drink. You can use the item SKU of the orange-mango protein smoothie and use it to create a raspberry-blueberry variant.

1. Open the product you previously created.
2. In the **Item SKU** tab, select an existing item SKU, and click **More commands** **...** > **New** **✳** > **Create Product** **⊕**.



3. In the **Create Product** panel, in **PRODUCT PROPERTIES**, specify the following:

- **ID**
- **Name**
- **Description**

4. In **SKU PROPERTIES**, specify the following:

- **Name**
- **Description**
- **Global Trade Item Number**
- **Global Trade Item Number Management Rule**
- **Effective From** date and time
- **Effective To** date and time
- **Regions**

- **Languages**

- **Markets**

5. In **SKU DIMENSIONS**, select the **Weight** or **Volume** values for the new product.

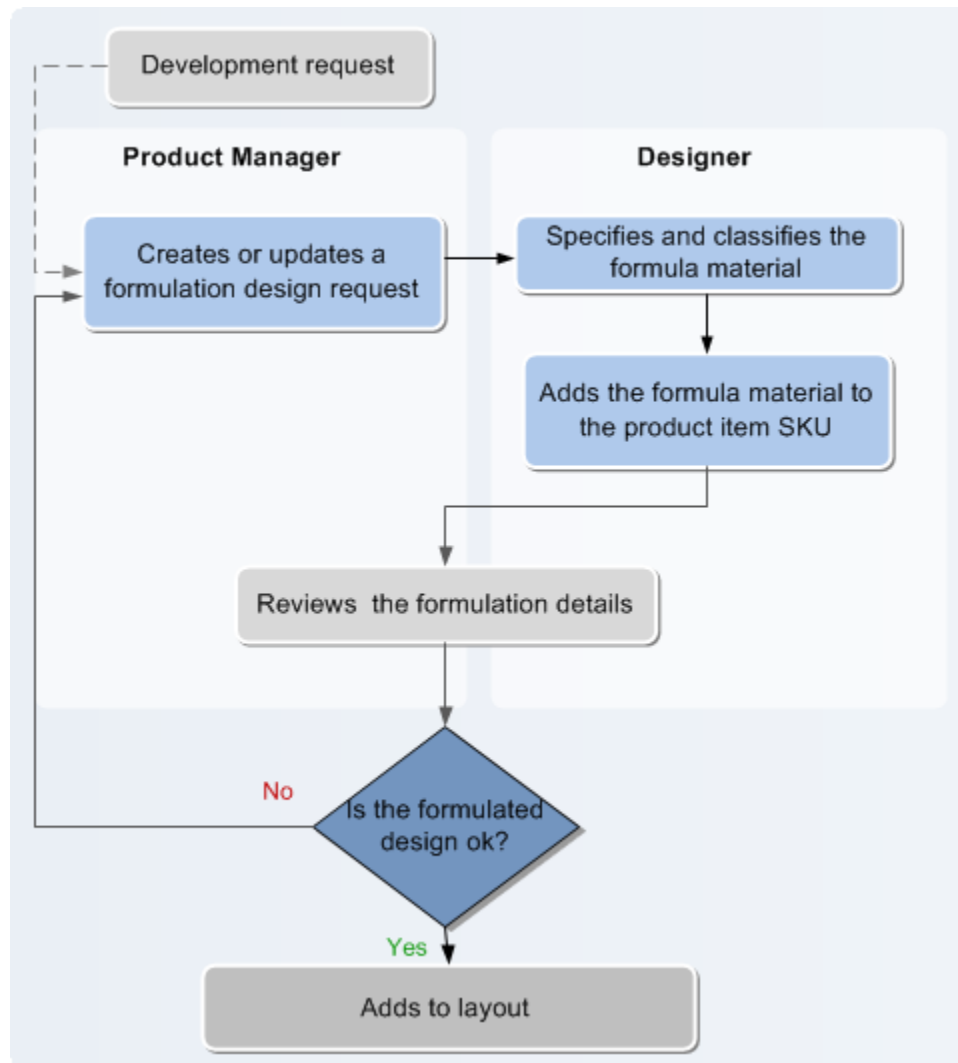
6. Click **Create**.

The new product is created and opened in the edit mode in the **Overview** tab.

7. Modify the properties of the new product and click **More commands ... > Edit > Save Edits**.

4. Specifying the formulation of consumer products



Taskflow for developing the formulation design



Requesting for a formulation design

After you create an item SKU for the product, the product manager sends a request to the formulation design team to specify the formula material and raw material for the product. The designer specifies the ingredients required for the product, other claims, and regulatory standards that need to be included on the label. The formulation design is validated and reviewed. The formulation design is then added to the respective product item SKU.

Add formula material to a product item SKU

1. Open the product and click the **Item SKU** tab.
2. In the **Item SKU** tab, search for the **Item SKU Revision** and click  to open it.
3. Click the **Content** tab to open the BOM view.
4. In the BOM view, select the **Item SKU** and click **Add**  **→ Child**.
5. In the **Add Child** panel, under **Type**, select **Formula Material**.
6. Accept the default value for **ID** and **Revision** and enter the properties as relevant.

Note:

If you select the **Is Fixed** option, the ID and all the values of the formula material will remain same across all the revisions created from it.

7. Click **Add**.

The parent-level formula material is created under the item SKU.

8. To create a child-level formula material, select the parent-level formula material and repeat the process from step four.

Managing the formula BOM

You can manage the formula BOM in Teamcenter by specifying the quantities and calculations necessary for manufacturing your product. For example, in a beverage manufacturing company, your responsibilities as a formulation engineer might include identifying the final quantity of the product, assembling the right ingredients, and identifying the final individual ingredient quantities. Your responsibility as a production engineer is to estimate the process yield.

Note:

In Teamcenter, all the mass values must be specified in grams, and the results are displayed in grams as well.

Procedure

1. Open the item SKU.
2. Click **Content** tab to open the item SKU in the BOM view.

3. To access the necessary columns for managing the formula BOM, specify the **Product Specification Management** column configuration as follows:
 - a. Click the **Table settings** → **Arrange** option.
 - b. In the **Arrange** panel, click **Column Arrangements** and choose **Product Specification Management**.
 - c. Click **Arrange**.
4. **Add the parent-level formula material and the ingredient as child level formula materials** under the item SKU.
5. In **Content** tab, click **Edit** to specify details about the formula material.
6. Only for the parent-level formula material, specify **Mass (Composition)**, **Mass (Composition Minimum)**, **Mass (Composition Maximum)**, and the **Process Yield [%]**.

Mass (Composition) is the expected mass of the consumable product. **Mass (Composition Minimum)** and **Mass (Composition Maximum)** define the range of permissible values for **Mass (Composition)**. An error is displayed if the **Mass (Composition)** value is not within the defined range.

Process Yield [%] refers to the quantity of the actual output in relation to the theoretical output, and it is expressed as a percentage. Typically, in production operations, the amount of actual output is less than the theoretical output.

$$\text{Process Yield [\%]} = \text{Mass (Actual)} / \text{Mass (Theoretical)} \times 100$$

You can specify the **Process Yield [%]** as a value between 0 and 100.

The **Quantity UoM** for the parent-level and all the child-level formula materials is set to **(g)** by default.

7. For the child-level formula material, specify the **Target Mass Fraction [%]**, **Minimum Mass Fraction [%]**, and **Maximum Mass Fraction [%]** values.

Target Mass Fraction [%] is the percentage of **Mass (Composition)** of the consumable product. **Minimum Mass Fraction [%]** and **Maximum Mass Fraction [%]** define the range of permissible values for **Target Mass Fraction [%]**. An error is displayed if the **Target Mass Fraction [%]** value is not within the defined range.

The **Operation** field is automatically updated as **Add** or **Remove** depending on whether you specify a positive or negative value, respectively.

The **100% Match/Delta** column displays **Yes** if the total of the specified **Target Mass Fraction [%]** values of the child-level formula materials is 100%. It displays **No** if the **Target Mass Fraction [%]** values of the child-level formula materials does not add up to 100%.

8. Click **Save Edits**.

- **Mass (Actual) of the parent-level formula material:**

The **Mass (Actual)**, **Mass (Actual Minimum)**, and **Mass (Actual Maximum)** quantities of the parent-level formula material are equal to the **Mass (Composition)**, **Mass (Composition Minimum)**, and **Mass (Composition Maximum)** quantities specified of the parent-level formula material.

- **Mass (Theoretical) of the parent-level formula material:**

The **Mass (Theoretical)**, **Mass (Theoretical Minimum)**, and **Mass (Theoretical Maximum)** quantities of the parent-level formula material are calculated based on all **Mass (Actual)**, **Mass (Actual Minimum)**, and **Mass (Actual Maximum)** quantities of the parent-level and its specified **Process Yield [%]** value.

Mass (Theoretical) (parent-level) = **Mass (Actual)** (parent-level) / **Process Yield [%]** (parent-level)

- **Mass (Composition) of the child-level formula material:**

The **Mass (Composition)**, **Mass (Composition Minimum)**, and **Mass (Composition Maximum)** quantities of the child-level formula material are calculated based on the **Mass (Composition)**, **Mass (Composition Minimum)**, and **Mass (Composition Maximum)** quantities of the parent-level formula material and the **Target Mass Fraction [%]**, **Minimum Mass Fraction [%]**, and **Maximum Mass Fraction [%]** values of the child-level formula material.

Mass (Composition) (child-level) = **Mass (Composition)** (parent-level) * **Target Mass Fraction [%]** (child-level)

- **Mass (Actual) of the child-level formula material:**

The **Mass (Actual)**, **Mass (Actual Minimum)**, and **Mass (Actual Maximum)** quantities of the child-level formula material are calculated based on the **Mass (Theoretical)**, **Mass (Theoretical Minimum)**, and **Mass (Theoretical Maximum)** quantities of the parent-level formula material and the **Target Mass Fraction [%]**, **Minimum Mass Fraction [%]**, and **Maximum Mass Fraction [%]** values of the child-level formula material.

Mass (Actual) (child-level) = **Mass (Theoretical)** (parent-level) * **Target Mass Fraction [%]** (child-level)

- **Mass (Theoretical) of the child-level formula material:**

The **Mass (Theoretical)**, **Mass (Theoretical Minimum)**, and **Mass (Theoretical Maximum)** quantities of the child-level formula material are calculated based on all **Mass (Actual)**, **Mass (Actual**

Minimum), and **Mass (Actual Maximum)** quantities of the child-level and its specified **Process Yield [%]** value.

Mass (Theoretical) (child-level) = **Mass (Actual)** (child-level) / **Process Yield [%]** (child-level)

Specify the components for product formula

There are various materials that are used in the formulation of a product. For example, smoothies contain chemicals, preservatives, core materials, and other flavouring substances. These materials differ in their compositions and parameters, and they must be specified.

Note:

To add parameters, installation of the IMM license in Teamcenter is required.

Procedure

1. Navigate to and open the **Formula Material**.
2. Click and open the **Component Specification** tab.
3. In the **SPECIFICATIONS** section, the component specification for formula material is auto-created.

The auto-created component specification is also shown as material in the **Material** column under the **CONSTITUENTS** section.

To add parameters for the component specifications, select and add the appropriate catalog or **create new material catalog** and specify it in **Main Material Catalog Revision** in auto-created component specification.

4. To add substances in the component specification, do the following:
 - a. Open the created component specification.
 - b. In the **SUBSTANCES**, section click **Add to** ⊕.
 - c. Add the **Name**, **CAS** number, and other details.
 - d. In the **RELATION PROPERTIES** specify the **%Composition**.
 - e. Click **Add**.

A substance is added to the **SUBSTANCES** section and is displayed in the **Substance** column in **CONSTITUENTS** section.

The mass of substance is calculated and is visible under the **Mass (Grams)** column of Substance in **CONSTITUENTS** section.

5. To add parameters for the components do the following:
 - a. In the **Component Specification** tab, in the **PARAMETERS** section, click **Add**⊕.

Note:

To add parameters, it is necessary to add parameter descriptors in the material catalog linked to the respective component specification.


- b. In the **Add** panel, in **Specification**, select the relevant specification.
- c. Select the appropriate **Category** based on the component and from the results, select the required parameter.
- d. Click **Add**.

The parameter is added under **PARAMETERS** section for the selected component specification.

- e. In the **Display Value** column, add the appropriate value.

Review the formulation details

A *workflow* in the technical sense is a series of required tasks performed on your data, such as reviews and approvals. Your administrator can assign default workflows for various content types, such as change requests or problem reports. When data is submitted to a workflow, tasks are automatically sent to the inbox of the responsible participants.

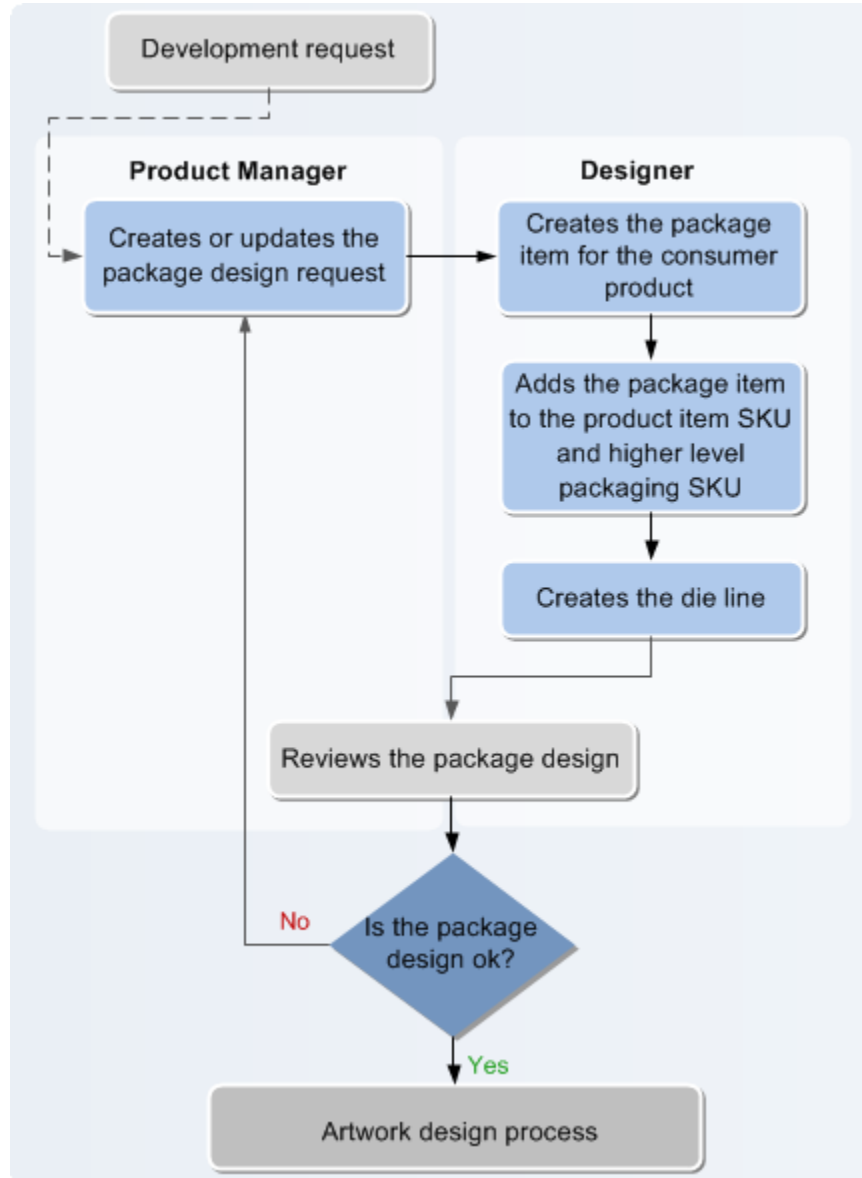
1. Select the data you want to submit to the new workflow, and click **More commands ... > Manage**  **> Submit to Workflow**.
2. From the **TEMPLATE** list, select a template for the new workflow.

If a default workflow exists for the content type, it is automatically specified as the workflow template.

3. Accept the default workflow name or type your own.
4. Enter a description for the new workflow.
5. Click **Submit**.

5. Creating the package design

Taskflow for developing the package design



Requesting for a package design

After the product, the product item SKUs, and higher level packaging SKUs are created, the product manager sends a request to the package design team to develop the packaging for the product. The designer refers to 2D sketches or 3D models of the package and the technical brief that captures dimensions, material properties, packaging structure technologies, printing technologies, and packaging requirements and then designs the packaging for the product.

Create the package item

1. Navigate to and open the folder where you want to create the package item, for example, your **Newstuff** folder.
2. Click **More commands** **...** > **New** ✨ > **Add** ⊕.
3. In the **Add** panel, select **Package Item**.
4. In **PACKAGE ITEM**, accept the default value for **ID** and **Revision**, and enter the properties as relevant.
5. Click **Add**.

Add a package item to a product item SKU

1. Open the product and click the **Item SKU** tab.
2. In the **Item SKU** tab, select an item SKU and click **Open** ↗.
3. In the **Discipline Specifications** tab, click **Add** ⊕.
4. In the **Add** panel, select **Package Item**.
5. Accept the default values for **ID** and **Revision**, and enter the properties as relevant.
6. Click **Add**.

Add a package item to a higher level packaging SKU




1. Open the higher level packaging SKU.
2. In the **Discipline Specifications** tab, click **Add** ⊕.
3. In the **Add** panel, select **Package Item**.
4. In **Package Item**, accept the default values for **ID** and **Revision**, and enter the properties as relevant.
5. In **Projects**, click **Add Project** ⊕ to specify the project.
6. Click **Add**.

Add the design brief and technical brief to the package item

Create and add a design brief to the package item




The *design brief* provides a high-level plan for the package design. The design brief includes a *creative brief* and a *fit-for-use brief*.

The creative brief has creative information such as branding information and the design objective. The fit-for-use brief provides the plan for the packaging life cycle, which includes the package characteristics, package design, package functionality, and the manufacturing plan.

1. Navigate to and open the folder where you want to create the design brief, for example, your **Newstuff** folder.
2. Click **More commands** **...** > **New**  > **Add** .
3. In the **Add** panel, select **Package Design Brief**.
4. In **PROPERTIES**, accept the default values for **ID** and **Revision**, and enter the properties as relevant.
5. In **Projects**, click **Add Project** .
6. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
7. Click **Add**.

Create and add a technical brief to the package item

The *technical brief* is a document that captures dimensions, material properties, packaging structure technologies, printing technologies, and packaging requirements. The design team creates the technical brief based on marketing and other requirements.

1. Navigate to and open the folder where you want to create the technical brief, for example, your **Newstuff** folder.
2. Click **More commands** **...** > **New**  > **Add** .
3. In the **Add** panel, select **Technical Brief**.
4. In **PROPERTIES**, accept the default values for **ID** and **Revision**, and enter the properties as relevant.
5. In **Projects**, click .

6. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
7. Click **Add**.

Specify components for a product package

There are various materials that are used in a product's packaging. For example, smoothies can be packed in cans made of different alloys, in plastic bottles, or in cartons that are composed of paperboard, polyethylene, and aluminum. These materials have different compositions, mass, and parameters that must be specified.

Note:

To add parameters, installation of the IMM license in Teamcenter is required.

Procedure

1. Navigate to and open the **Package Item**.
2. Click and open the **Component Specification** tab.
3. In the **SPECIFICATIONS** section, click **Add**⊕.
 - a. In the **Add** panel, select the **TYPE** as **Component Specification**.
 - b. Add the **ID**, **Name**, select and add the appropriate catalog or **create new material catalog** and add it in **Main Material Catalog Revision**, and add all the relevant details.
 - c. In the **RELATION PROPERTIES**, specify the **Mass** and **Unit of Measure**.
 - d. click **Add**.

The created component specification is added under the **SPECIFICATIONS** tab and is displayed as material in the **Material** column under the **CONSTITUENTS** section.

4. To add substances to the component specification, do the following:
 - a. Open the created component specification.
 - b. In the **SUBSTANCES**, section click **Add to**⊕.
 - c. Add the **Name**, **CAS** number, and other details.
 - d. In the **RELATION PROPERTIES** specify the **%Composition**.

- e. Click **Add**.

This substance is added to the **SUBSTANCES** section and is displayed in the **Substance** column in **CONSTITUENTS** section.

The mass of substance is calculated and is visible under the **Mass (Grams)** column of Substance in **CONSTITUENTS** section.

5. To add parameters for the components, do the following:
 - a. In the **Component Specification** tab, in the **PARAMETERS** section, click **Add**⊕.

Note:

To add parameters, it is necessary to add parameter descriptors in the material catalog linked to the respective component specification.

- b. In the **Add** panel, in **Specification**, select the relevant specification.
- c. Select the appropriate **Category** based on the component and from the results, select the required parameter.
- d. Click **Add**.

The parameter is added under **PARAMETERS** section for the selected component specification.

- e. In the **Display Value** column, add the appropriate value.

Create a material catalog

You need a material catalog in order to add parameters to component specifications.

Note:

To add parameters, installation of the IMM license in Teamcenter is required.

Create a material catalog

1. Navigate to and open the folder where you want to create the catalog,
2. Click **More commands** ⋮ > **New** ✨ > **Add** ⊕.
3. In the **Add** panel, select **Material Catalog**.

4. In the **Add** panel, accept the default value for **ID**, specify the **Revision**, add a **Name**, and specify other details as relevant.
5. Click **Add**.

A material catalog gets created.

Add parameter descriptors to the material catalog

1. Click and open the material catalog.
2. In the **Parameter Descriptors** tab, under the **PARAMETERS DESCRIPTORS** section, click **Add** ⊕.
3. In the **Create** panel, select the following:
 - In **Category**, select the category relevant to the parameter of the component.
 - In **Type**, select **Double** if the parameter needs to be specified with a number, or **String** if the parameter needs to be specified with a word.
 - Add the appropriate **Name** and **Real Name** as relevant.
 - In **Dimension**, select the appropriate value for the parameter you are creating.
4. Click **Create**.

Create the die line

A *die line* is a 2D drawing of the printable area of the package, that is, the area on the package where the artwork is placed. The design team creates the die line based on 2D sketches or 3D models of the package. They also refer to information about how the package works with respect to transport, handling, dispensing, and so on.

The die line is sent to the artwork group to develop the artwork.


1. Navigate to and open the folder where you want to create the die line, for example, your **Newstuff** folder.
2. Click **More commands** ⋮ > **New** ✨ > **Add** ⊕.
3. In the **Add** panel, select **DieLine**.
4. In the **Add** panel, accept the default values for **ID** and **Revision**, and enter the properties as relevant.

5. In **Projects**, click **Add Project** ⊕, select a project from the list, and click **Assign**.
6. Click **Add**.
7. To attach an image of the die line, open the die line object and click the **Attachments** tab.
8. In **FILES**, click **Add** ⊕.
9. In the **Add** panel, browse to select an image that represents the die line, and click **Add**.

You can also edit the die line object to specify the length and width of the of the printable area of the package.

Review the package design

A *workflow* in the technical sense is a series of required tasks performed on your data, such as reviews and approvals. Your administrator can assign default workflows for various content types, such as change requests or problem reports. When data is submitted to a workflow, tasks are automatically sent to the inbox of the responsible participants.

1. Select the data you want to submit to the new workflow, and click **More commands ... > Manage**  **> Submit to Workflow**.
2. From the **Workflow Template** list, select a template for the new workflow.

If a default workflow exists for the content type, it is automatically specified as the workflow template.

3. Accept the default workflow name or type your own.
4. Enter a description for the new workflow.
5. Click **Submit**.

6. Developing the artwork

What is artwork?

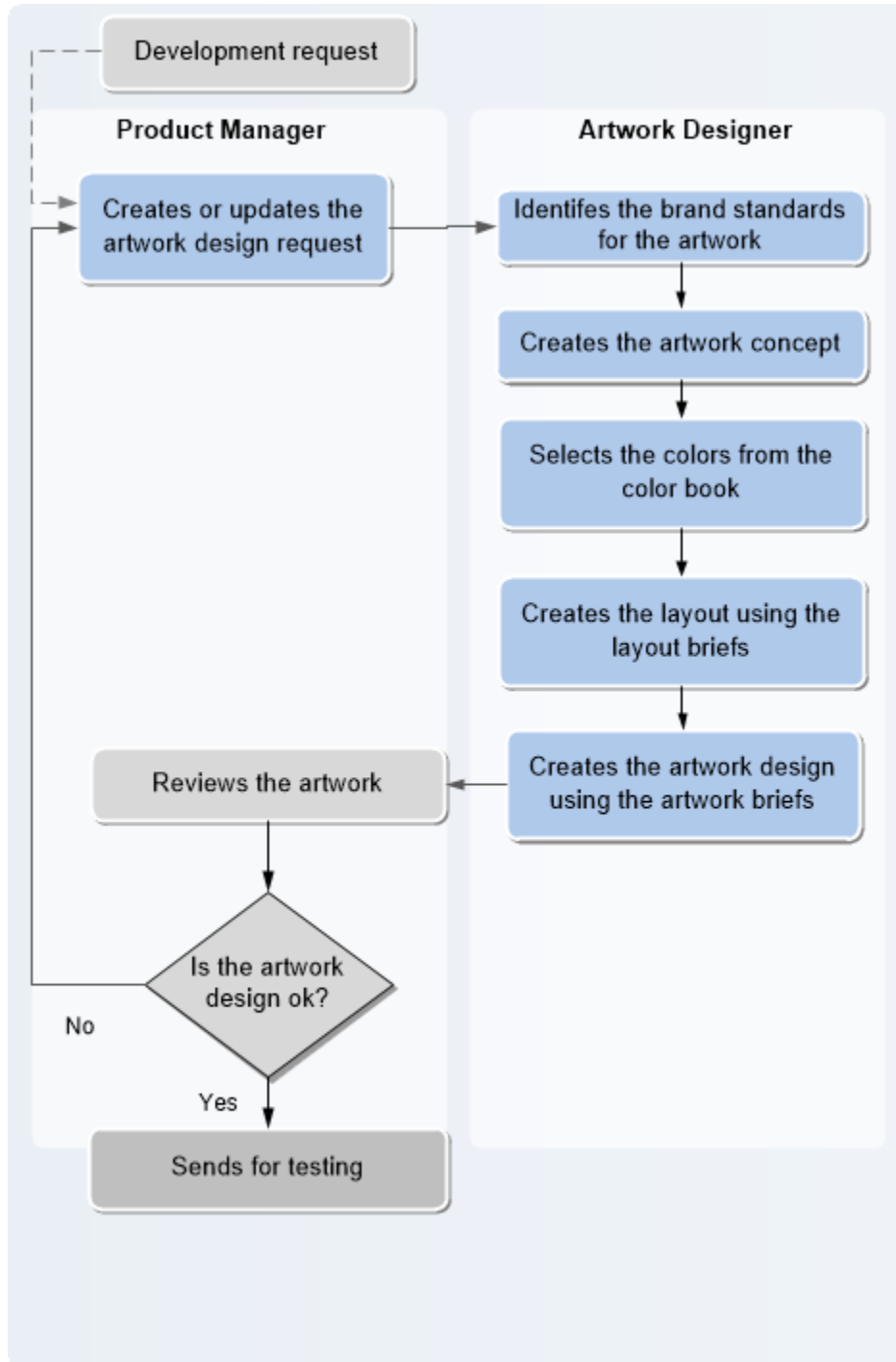
The individual pieces of digital assets such as Copy, Graphics, Panel, Symbol, Logo, and Barcode that constitute the package label are collectively referred to as artwork. That is, various graphical elements, such as the brand logo, and copy elements such as ingredient list and legal information, are composed together to create the artwork. The artwork team creates the artwork in a graphic design tool.

Using the Consumer Packaged Goods solution, you can create layout and design artwork for the packaging of your products. You can also integrate Consumer Packaged Goods with Adobe Creative Cloud applications (such as Photoshop, Illustrator, and InDesign) to:

- Manage and synchronize your artwork files.
- Create and manage the bill of digital assets.

For the packaging and artwork development process that involves external design studios and artwork agencies, the product managers create design studio brief and artwork agency brief for developing the artwork. The design studio brief and the artwork agency brief is sent to the partners for creating the initial artwork design and the printable format of your artwork respectively.

Taskflow for developing the artwork design



Requesting an artwork design

The product manager initiates an artwork design request in Active Workspace by using a workflow. As part of the request, the product manager attaches documents such as the **Design Studio Brief**, **Artwork**

Agency Brief, and **Artwork Brief** to the product and then runs the required workflow to request the artwork designs from the artwork team.

The artwork brief is sent to a workflow that includes step checking claim and regulatory compliance, makes sure translations are executed, and reviews are done.

The design studio brief is an input for the design studio partners who will create the artwork design and the artwork agency brief is the input for the partner artwork agencies who will create the printable format of the artwork. You must create the vendors for these design studios and artwork agencies.

Once the designs are ready by the partners, the designs are send back for review through the workflow. All financial aspects such as, costs are also added as attributes in the design studio brief or the artwork agency brief.

Create the artwork design brief

1. Navigate to and open the folder where you want to create the brief, for example, your **Newstuff** folder.
2. Click **More commands** **...** > **New** **✳** > **Add** **⊕**.
3. In the **Add** panel, select **Package Artwork Design Brief**.
4. In the **Add** panel, in **PROPERTIES**, accept the default value for the **ID**, and enter the properties as relevant.
5. In **PROJECTS**, click **Add Project** **⊕** to assign the brief to a project.
6. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
7. Click **Add**.

Manage partner interaction for creating artwork designs

Manage briefs for digital studios and artwork agencies

You can create and manage briefs to share digital assets and other information for the development process of packaging and artwork that involves external design studios and artwork agencies. The briefs are sent through a workflow to the associated vendors. To do this, you must first **create a vendor for design studio and artwork agency partner**.

Create a vendor for external partners

To support interaction with partners, such as design studios and artwork agencies, for creating package and artwork designs, you must create entries for the partners and vendors in the system. To do this, create a vendor contact and assign this user the role of a design studio or an artwork agency.

Create a vendor

1. Navigate to and open the folder where you want to create the vendor, for example, your **Newstuff** folder.
2. Click **More commands** **...** > **New** ✨ > **Add** ⊕.
3. In the **Add** panel, select **Vendor**.
4. Specify the **ID** and **Revision** for the vendor or accept the default values.
5. Enter the required properties and click **Add**.

Add location details

1. Open the vendor you just created.
2. In the **Overview** tab, under **LOCATIONS**, click **Add**.
3. In the **Add** panel, do one of the following:
 - Select **Company Location** from the **Recent** list.

OR

 - In **Other**, type **Location**, and select **Company Location** from the list.
 - Enter the required properties and click **Add**.

Create a vendor contact

1. Open the **Company location** you just created.
2. Under **CONTACTS**, click **Add**.
3. In the **Add** panel, do one of the following:
 - Select **COMPANY CONTACT** from the **Recent** list.

OR

- In **Other**, type **Contact**, and select **Company Contact** from the list.
- Enter the required properties and click **Add**.

Add a role


1. Open the vendor you created.
2. In the **Overview** tab, under **Revisions**, click **Open** (icon) to open the vendor revision details page.
3. In the **Overview** tab, under **VENDOR ROLE**, click **Add**.
4. In the **Add** panel,
 - Select **Design Studio** or **Artwork Agency** as a **Vendor Role** from the list.
 - Click **Add**.

Assign a Teamcenter user to the vendor contact

1. Open the vendor contact you just created.
2. Click **More commands ...** > **Edit** > **Start Edit**.
3. Under **Properties**, select a **Teamcenter User**.
4. Click **More commands ...** > **Edit** > **Save Edits**.

Assign a project to the vendor

Your administrator must first create a project in Rich Client.

1. Open the vendor to which you want to assign the project.
2. In the **Overview** tab, click **Manage**  > **Projects**.
3. In the **Projects** panel, select the project from the **AVAILABLE** projects list and click **Add Project**.
4. Click **Save** to assign the project to the vendor.

For information on creating a project and assigning the design studio role or the artwork agency role to the vendor, refer the Consumer Packaged Goods — Deployment and Administration help in the Teamcenter collection.

Create a design studio brief

1. Navigate to and open the folder where you want to create the design studio brief, for example, your **Newstuff** folder.
2. Click **More commands** **...** > **New** ✨ > **Add** ⊕.
3. In the **Add** panel, select **Design Studio Brief**.
4. In **PROPERTIES**, specify the **Name** and **Description**.
5. In **PROJECTS**, click **Add Project** ⊕.
6. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
7. Click **Add**.

After creating the design studio brief, you can **associate digital assets** and **assign vendor contacts** to the brief before sending it to the design studio partners through a workflow.

Associate digital assets to the design studio brief


1. Open the design studio brief to which you want to assign a digital asset.
2. In the **Collection** tab, under **ASSET COLLECTION**, click **Add** ⊕.
3. In the **Add** panel, select **CPG Digital Asset**.
4. Accept the default value for **ID** and **Revision**, and enter the properties as relevant.
5. Click **Add**.

Assign design studio vendor to the design studio brief




1. Open the design studio brief to which you want to assign the vendor.
2. In the **Overview** tab, under **CONTACTS**, click **Add** ⊕.
3. In the **Add** panel, select the vendor that you want to assign to the design studio brief and click **Add**.

Send the request to the design studio vendor

1. Open the design studio brief that you want to submit to the workflow.


2. Click **More commands** **...** > **Manage**  > **Submit to Workflow**.
3. In the **Submit to Workflow** panel:
 - a. From the workflow **TEMPLATE** list, select **Send to Design Studio** template for the new workflow.
 - b. Accept the default workflow **Name** or type your own.
 - c. Enter a **Description** for the new workflow.
4. Click **Submit**.

Create an artwork agency brief

1. Navigate to and open the folder where you want to create the artwork agency brief, for example, your **Newstuff** folder.
2. Click **More commands** **...** > **New**  > **Add** .
3. In the **Add** panel, select **Artwork Agency Brief**.
4. In **PROPERTIES**, specify the **Name** and **Description**.
5. In **PROJECTS**, click **Add Project** .
6. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
7. Click **Add**.

After creating the artwork agency brief, you can **associate digital assets** and **assign vendor contacts** to the brief before sending it to the artwork agency partners through a workflow.

Associate digital assets to the artwork agency brief

1. Open the artwork agency brief to which you want to assign a digital asset.
2. In the **Collection** tab, under **ASSET COLLECTION**, click **Add** .
3. In the **Add** panel, select **CPG Digital Asset**.
 - Select **CPG Digital Asset** from the **RECENT** list.

OR

- In **OTHER**, type **Digital Asset**, and from the list.
- Enter the properties as relevant, and click **Add**.

Assign artwork agency vendor to the artwork agency brief

1. Open the artwork agency brief to which you want to assign the vendor.
2. In the **Overview** tab, under **CONTACTS**, click **Add** ⊕.
3. In the **Add** panel, select the vendor that you want to assign to the artwork agency brief and click **Add**.

Send the request to the artwork agency vendor

1. Open the artwork agency brief that you want to submit to the workflow.
2. Click **Manage** ✎ > **Submit to Workflow**.
3. In the **Submit to Workflow** panel:
 - a. From the workflow **TEMPLATE** list, select **Send to Artwork Agency** template for the new workflow.
 - b. Accept the default workflow **Name** or type your own.
 - c. Enter a **Description** for the new workflow.
4. Click **Submit**.

Create the artwork for the package

1. Navigate to and open the folder where you want to create the artwork, for example, your **Newstuff** folder.
2. Click **More commands** ... > **New** ✎ > **Add** ⊕.
3. In the **Add** panel, and select **Package Artwork**.
4. In the **Add** panel, in **PROPERTIES**, accept the default value for the **ID**, and enter the properties and make selections as relevant.
5. In **PROJECTS**, click **Add Project** ⊕ to assign the brief to a project.

6. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
7. Click **Add**.

Create the layout for the package artwork design

1. Navigate to and open the folder where you want to create the layout, for example, your **Newstuff** folder.
2. Click **More commands** **...** > **New** ✨ > **Add** ⊕.
3. In the **Add** panel, select **Package Artwork Design**.
4. In the **Add** panel, in **PROPERTIES**, accept the default value for the **ID**, and enter the properties as relevant.
5. In **Based On**, click **Add** ⊕ to specify the artwork design that is used as a base for the layout that you are creating.
6. In the **Add** panel, select the required artwork design.
7. Click **Add**.

Add a sketch to the layout

While designing the artwork for the consumer product, designers can create sketches that illustrate the artwork that you want to include on the label. These sketches can be initial concept drawings or an artist's representation that can be used to identify the colors and are used as a reference to create the final artwork.

Create a sketch

1. Navigate to and open the folder where you want to create the sketch, for example, your **Newstuff** folder.
2. Click **More commands** **...** > **New** ✨ > **Add** ⊕.
3. In the **Add** panel, select **Sketch**.
4. In the **Add** panel, in **Sketch**, accept the default values for **ID** and **Revision**, and enter the properties as relevant.
5. Click **Add**.

Add the sketch to a layout

1. Open the layout to which you want to add the sketch.
2. In the **Content** tab, click **Add** ⊕.
3. In the **Add** panel, do one of the following:
 - In **New**, click **Barcode**, and then in **Other**, select **Sketch** to create a new sketch. Click **Add** to add it to the layout.
 - In **Search**, enter the keywords to search for an existing sketch, and click **Add**.

You can also click **Add Copy** to add a copy of the sketch to the layout.

Creating and managing digital assets

What are digital assets?

You can create a library of digital assets to manage various types of digital assets such as images, graphical entities, master language and translations, logos, symbols, layouts, sketches, drafts, designs, and artwork and their respective metadata.

Digital assets available in Consumer Packaged Goods					
Copy element	Graphic element	Panel	Symbol	Logo	Barcode

You can manage a digital asset library across departments and partners. To do that, you must assign the digital asset to a project with access permissions for partners (global read access) or for internal users only.

Your administrator must first configure access permissions for projects in Teamcenter Rich Client. You can then **assign these projects to the digital assets** as well as all of the sub types of digital assets (copy element, graphic element, panel, symbol, logo, and barcode).

Create a digital asset

1. Navigate to and open the folder where you want to create the copy asset, for example, your **Newstuff** folder.
2. Click **More commands** ⋮ > **New** ✨ > **Add** ⊕.
3. In the **Add** panel, select **CPG Digital Asset**.

4. In the **Add** panel, in **PROPERTIES**, accept the default value for the **ID**, and enter the properties and make selections as relevant.
5. Select the **Is Fixed** check box to indicate that the digital asset is fixed on the artwork.

When you perform a **Save As** operation on the artwork, the fixed digital assets are copied as a reference. If you make changes to the original digital assets, these changes are reflected in the copies. If this check box is cleared, the digital assets are cloned.

6. To specify the master asset of the digital asset, click **Add** ⊕ next to the **Master Asset** label.
7. In the **Add Master Asset** panel, select the required master asset.

Note:

You can link a master asset only if you are creating a localized asset.

8. Click **Add**
9. In **PROJECTS**, click **Add Project** ⊕ to assign the digital asset to a project.
10. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
11. Click **Add**.
12. To attach an image of the digital asset, open the digital asset and click the **Attachments** tab.
13. In **FILES**, click **Add** ⊕.
14. In the **Add** panel, browse to select an image that represents the digital asset, and click **Add**.

Create a copy asset

Note:

To generate a copy asset, your administrator must first install the Asset Conversion translator.

1. Navigate to and open the SKU to which want to generate and attach the copy asset.
2. In the **Attachments** tab, under **DOCUMENTS**, click **Add** ⊕.
3. In the **Add** panel, select **Copy Asset**.
4. In the **Add** panel, in **PROPERTIES**, accept the default value for the **ID**, and specify the relevant information.

5. Select the **Is Fixed** check box to indicate that the digital asset is affixed to the artwork.

When you perform a **Save As** operation on the artwork, the fixed digital assets are copied as a reference. If you make changes to the original digital assets, these changes are reflected in the copies. If this check box is cleared, the digital assets are cloned.

6. To specify a master asset for the digital asset, click **Add** ⊕ next to the **Master Asset** label.
7. In the **Add Master Asset** panel, select the required master asset.

Note:

You can link a master asset only if you are creating a localized asset.

8. Click **Add**.
9. In **PROJECTS**, click **Add Project** ⊕ to assign the digital asset to a project.
10. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
11. Click **Add**.
12. Open the **Copy asset**.
13. Click the **Documentation** tab.
14. Click **More commands** ⋮ > **Edit** > **Start Edit**.
15. Enter the required text.
16. Click **More commands** ⋮ > **Edit** > **Save Edits**.

The input text is stored in form of HTML file. An RTF file with the same information is also generated subsequently. Both these files can be accessed from the **Files** section in the **Attachments** tab.

Create a graphical asset

1. Navigate to and open the folder where you want to create the graphical asset, for example, your **Newstuff** folder.
2. Click **More commands** ⋮ > **New** ✨ > **Add** ⊕.
3. In the **Add** panel, select **CPG Graphical Asset**.

4. In the **Add** panel, in **PROPERTIES**, accept the default value for the **ID**, and enter the properties and make selections as relevant.
5. Select the **Is Fixed** check box to indicate that the digital asset is fixed on the artwork.

When you perform a **Save As** operation on the artwork, the fixed digital assets are copied as a reference. If you make changes to the original digital assets, these changes are reflected in the copies. If this check box is cleared, the digital assets are cloned.

6. To specify the master asset of the digital asset, click **Add** ⊕ next to the **Master Asset** label.
7. In the **Add Master Asset** panel, select the required master asset.

Note:

You can link a master asset only if you are creating a localized asset.

8. Click **Add**.
9. In **PROJECTS**, click **Add Project** ⊕ to assign the digital asset to a project.
10. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
11. Click **Add**.
12. To attach an image of the digital asset, open the digital asset and click the **Attachments** tab.
13. In **FILES**, click **Add** ⊕.
14. In the **Add** panel, browse to select an image that represents the digital asset, and click **Add**.

Create a panel

Note:

To generate a panel, your administrator must first install the Asset Conversion translator.

1. Navigate to and open the SKU to which want to generate and attach a panel.
2. In the **Attachments** tab, under **DOCUMENTS**, click **Add** ⊕.
3. In the **Add** panel, select **Panel**.
4. In the **Add** panel, in **PROPERTIES**, accept the default value for the **ID**, and enter the properties and make selections as relevant.

5. Select the **Is Fixed** check box to indicate that the digital asset is affixed to the artwork.

When you perform a **Save As** operation on the artwork, the fixed digital assets are copied as a reference. If you make changes to the original digital assets, these changes are reflected in the copies. If this check box is cleared, the digital assets are cloned.

6. Specify a master for the digital asset,
 - a. click **Add** ⊕ next to the **Master Asset** label.
 - b. In the **Add Master Asset** panel, select the required master asset.

Note:

You can link a master asset only if you are creating a localized asset.

- c. Click **Add**.
7. Assign the digital asset panel to a project.
 - a. In **PROJECTS**, click **Add Project** ⊕ to assign the digital asset to a project.
 - b. Select the required project from the list, or search for the project that you want to add, and click **Assign**.

8. Click **Add**.

Digital asset panel is created.

9. Open the **Panel**.
10. In **Panel**, click the **Attachments** tab.
11. In **FILES**, click **Add** ⊕.
12. In the **Add** panel, type and select **Digital Asset Rendering** and open it.
13. In **Digital Asset Rendering**, under **UPLOAD FILE**, click **choose the file** and upload the relevant XSLT file.

Note:

The XSLT file contains the table properties such as the width, height, fonts, and formats specified for the product panel.

14. Click **Add**.

15. Similarly, in **Digital Asset Content**, under **UPLOAD FILE**, click **choose the file** and upload the relevant XML file.

Note:



The XML file contains the content of the panel such as nutrition information of the product.

16. Click **Add**.


The panel is generated in the PDF format. To access the file, go to the the **PREVIEW** section of the **Overview** tab.

To make changes to the information included in the generated panel, edit the content in the XML file.

Create a symbol


1. Navigate to and open the folder where you want to create the symbol, for example, your **Newstuff** folder.
2. Click **More commands** **...** > **New**  > **Add** .
3. In the **Add** panel, select **Symbol**.
4. Accept the default value for the **ID**, and enter the properties and make selections as relevant.
5. Select the **Is Fixed** check box to indicate that the digital asset is fixed on the artwork.

When you perform a **Save As** operation on the artwork, the fixed digital assets are copied as a reference. If you make changes to the original digital assets, these changes are reflected in the copies. If this check box is cleared, the digital assets are cloned.

6. To specify the master asset of the digital asset, click **Add**  next to the **Master Asset** label.
7. In the **Add Master Asset** panel, select the required master asset.

Note:

You can link a master asset only if you are creating a localized asset.

8. Click **Add**.
9. In **PROJECTS**, click **Add Project**  to assign the digital asset to a project.
10. Select the required project from the list, or search for the project that you want to add, and click **Assign**.

11. Click **Add**.
12. To attach an image of the digital asset, open the digital asset and click the **Attachments** tab.
13. In **FILES**, click **Add** ⊕.
14. In the **Add** panel, browse to select an image that represents the digital asset, and click **Add**.

Create a logo

1. Navigate to and open the folder where you want to create the logo, for example, your **Newstuff** folder.
2. Click **More commands** ⋮ > **New** ✨ > **Add** ⊕.
3. In the **Add** panel, select **Logo**.
4. Accept the default value for the **ID**, and enter the properties and make selections as relevant.
5. Select the **Is Fixed** check box to indicate that the digital asset is fixed on the artwork.

When you perform a **Save As** operation on the artwork, the fixed digital assets are copied as a reference. If you make changes to the original digital assets, these changes are reflected in the copies. If this check box is cleared, the digital assets are cloned.

6. To specify the master asset of the digital asset, click **Add** ⊕ next to the **Master Asset** label.
7. In the **Add Master Asset** panel, select the required master asset.

Note:

You can link a master asset only if you are creating a localized asset.

8. Click **Add**.
9. In **PROJECTS**, click **Add Project** ⊕ to assign the digital asset to a project.
10. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
11. Click **Add**.
12. To attach an image of the digital asset, open the digital asset and click the **Attachments** tab.
13. In **FILES**, click **Add** ⊕.

14. In the **Add** panel, browse to select an image that represents the digital asset, and click **Add**.

Create a barcode

You can generate *standard barcodes* and *Electronic Product Codes (EPCs)*, including EPCs in binary format suitable for *Radio Frequency Identification (RFID)*, based on the *GS1 Tag Data Standard (TDS)*. You can then attach this barcode to the SKU.

Note:

To generate a point-of-sale barcode, your administrator must first install the Asset Conversion translator.


1. Navigate to and open the SKU to which want to generate and attach a barcode.
2. In the **Attachments** tab, under **DOCUMENTS**, Click **Add** ⊕.
3. In the **Add** panel, select **Barcode**.
4. In the **Add** panel, in **PROPERTIES**, accept the default value for the **ID**, and specify the required details.
5. Specify the **Barcode Id**.
6. Specify the **Magnification Factor**. The default value is 1. You can specify any value between 0.8 and 2 in this field.
7. Specify the appropriate **Barcode Group**.
8. Specify the appropriate **Barcode Format**.
9. Select the **Generate Barcode** check box.
10. In **PROJECTS**, click **Add Project** ⊕ to assign the digital asset to a project.
11. Click **Add**.

The barcode is generated in the PDF format.

To access the newly generated barcode, go to the **PREVIEW** section in the **Overview** tab.

Generate a barcode with a different Id

1. To generate a barcode with different Barcode Id, open the existing barcode revision.
2. Specify a new barcode ID.



3. In the **Overview** tab, click **More commands ...** > **Manage**  > **Regenerate Barcode**.
4. The barcode is generated in PDF format. To access this file, go to the **PREVIEW** section in the **Overview** tab.

Restrict user access to Digital Assets

You can manage a digital asset library across departments and partners by assigning access rights against the digital assets. You can provide *global read* access to your digital assets so that partners can have a read access permissions as well. Alternatively, you can restrict the permissions to internal users only, as required.

Before assigning your digital assets to a specific project with access permissions, ensure that your administrator has created a user's group with external security, set the user's role, assigned users to this group, and created projects with specific user permissions (global or restricted) in Teamcenter Rich Client.

Assign the digital asset to a project

1. Open a digital asset to which you want to associate a project.
2. Click **More commands ...** > **Manage**  > **Projects**.
3. In **PROJECTS**, select the required project from the **AVAILABLE** projects list, or search for the project that you want to add, and click **Add Project**  to assign the digital asset to a project.


Based on the project selected, the digital asset can be accessed by partners or internal users.

4. Apply selected project(s) to **This Revision** or **All Revisions** of the digital asset.
5. Click **Save**.

Create an artwork brief

Artwork brief helps you manage the digital assets used for artwork development. You can collect assets such as a color book, copy asset, graphic asset, barcode, logo, symbol, and panel.

Create an artwork brief

1. Navigate to and open the artwork revision, where you want to create the artwork brief.
2. In the **Overview** tab, under **ARTWORK BRIEFS**, click **Add** .
3. In the **Add** panel, select **Artwork Brief**.

4. In the **Add** panel, in **PROPERTIES**, accept the default value for the **ID**, and enter the properties as relevant.
5. In **Brief Type**, select the relevant type of brief. Types of briefs are marketing, legal, and technical.
6. In **PROJECTS**, click **Add Project** ⊕ to assign the artwork brief to a project.
7. Click **Add**.

The **Artwork brief** is created.

Edit an artwork brief

1. Open the **Artwork Brief**.
2. Click the **Documentation** tab.
3. Click **More commands** ⋮ > **Edit** > **Start Edit**.
4. Enter the required text.
5. Click **More commands** ⋮ > **Edit** > **Save Edits**.

The text appears in the **PREVIEW** section of the **Overview** tab.

Add the digital assets to an artwork brief

1. Open the **Artwork Brief**.
2. In the **Collection** tab, under **ASSET COLLECTION**, click **Add** ⊕.
3. Attach the digital asset, in one of these ways:

To attach the digital asset	Do this
Create and attach the new digital asset.	<ol style="list-style-type: none"> a. In the Add panel, click New. b. Search for digital asset you wish to create, like Color Book, Copy Asset, Graphic Asset, Barcode, Logo, Symbol, and Panel. c. Enter the relevant information.

To attach the digital asset	Do this
	d. Click Add .
Search and attach the digital asset.	a. In the Add panel, click Search . b. In the search box, type the name of digital asset, you wish to attach. c. From the results, select the digital asset, you wish to attach and click either Add a Copy or Add .

Add digital assets to the artwork designs

1. Open the artwork design to which you want to add digital assets.
2. In the **Content** tab, click **Add** ⊕.
3. In the **Add** panel, do one of the following:
 - In **New**, click **Barcode**, and then in **OTHER**, select the type of digital asset you want to create. Click **Add** to add it to the artwork design.

OR

- In **Search**, enter the keywords to search for an existing digital asset, and click **Add**.

You can also click **Add Copy** to add a copy of the existing digital asset to the artwork design.

Specifying colors for the artwork

What is a color book?

A color book is a library of colors that you create to be used in your artwork. When you *define* the specific colors to be used in a color book, you ensure that your designers and printers use the correct color to create the artwork for your products.

Create a color book

1. Navigate to and open the folder where you want to create the color book, for example, your **Newstuff** folder.
2. Click **More commands** ⋮ > **New** ✨ > **Add** ⊕.
3. In the **Add** panel, select **Color Book**.

4. Accept the default value for the **ID**, and enter the properties as relevant.
5. Select the **Is Fixed** check box to indicate that the digital asset is fixed on the artwork.

When you perform a **Save As** operation on the artwork, the fixed digital assets are copied as a reference. If you make changes to the original digital assets, these changes are reflected in the copies. If this check box is cleared, the digital assets are cloned.

6. In **PROJECTS**, click **Add Project** ⊕ to assign the color book to a project.
7. Select the required project from the list, or search for the project that you want to add, and click **Assign**.
8. Click **Add**.
9. After creating the color book, you can define its colors:
 - a. In your graphic design tool, select the required colors from the available color books, and add the colors to a color swatch.
 - b. Export the color swatch to an *Adobe Swatch Exchange (.ase)* file.
 - c. Upload the *Adobe Swatch Exchange (.ase)* file to Teamcenter and attach the **Adobe Swatch Exchange** dataset to the color book.

Add a color book to an artwork design

1. Open the artwork design to which you want to add a color book.
2. In the **Content** tab, click **Add** ⊕.
3. In the **Add** panel, do one of the following:
 - In **New**, click **Barcode**, and then in **OTHER**, select **Color Book** to create a new color book. Click **Add** to add it to the artwork design.


OR

- In **Search**, enter the keywords to search for an existing color book, and click **Add**.


You can also click **Add Copy** to add a copy of the color book to the artwork design.

Add artwork to an item SKU

1. Open the product and click the **Item SKU** tab.

- In the **Item SKU** tab, select an item SKU and click **Open** .



The item SKU opens in the **Summary** view.

- In the **Discipline Specifications** tab, click **Add** .
- In the **Add** panel, do one of the following:
 - In **Search**, enter keywords to search for an existing artwork revision.

OR



- In **New**, select **Package Artwork** from the list, accept the default value for **ID**, and enter the properties as relevant to create new artwork and add it to the item SKU.
- Click **Add**.

Add artwork to a higher level packaging SKU

- Open the higher level packaging SKU.
- In the **Discipline Specifications** tab, click **Add** .
- In the **Add** panel, select **Package Artwork**.
- In **Package Artwork**, accept the default value for **ID**, and enter the properties and make selections as relevant.
- In **PROJECTS**, click **Add Project**  to specify the project.
- Click **Add**.

Review the package and artwork design

A *workflow* in the technical sense is a series of required tasks performed on your data, such as reviews and approvals. Your administrator can assign default workflows for various content types, such as change requests or problem reports. When data is submitted to a workflow, tasks are automatically sent to the inbox of the responsible participants.

- Select the data you want to submit to the new workflow, click **More commands**  > **Manage**  > **Submit to Workflow**.
- From the **TEMPLATE** list, select a template for the new workflow.

Note:

If a default workflow exists for the content type, it is automatically specified as the workflow template.

3. Accept the default workflow name or type your own.
4. Enter a description for the new workflow.
5. Click **Submit**.