



SOLUTION ENABLEMENT

PIM for Retail

Release 10.1-MP4 (April 20, 2021)

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PIM for Retail

'PIM for Retail' is starter packs or 'modules' that allow you to bootstrap your PIM project. These are ready-to-use solutions, based on the most commonly observed features in the market, and they can be customized to meet your requirements.

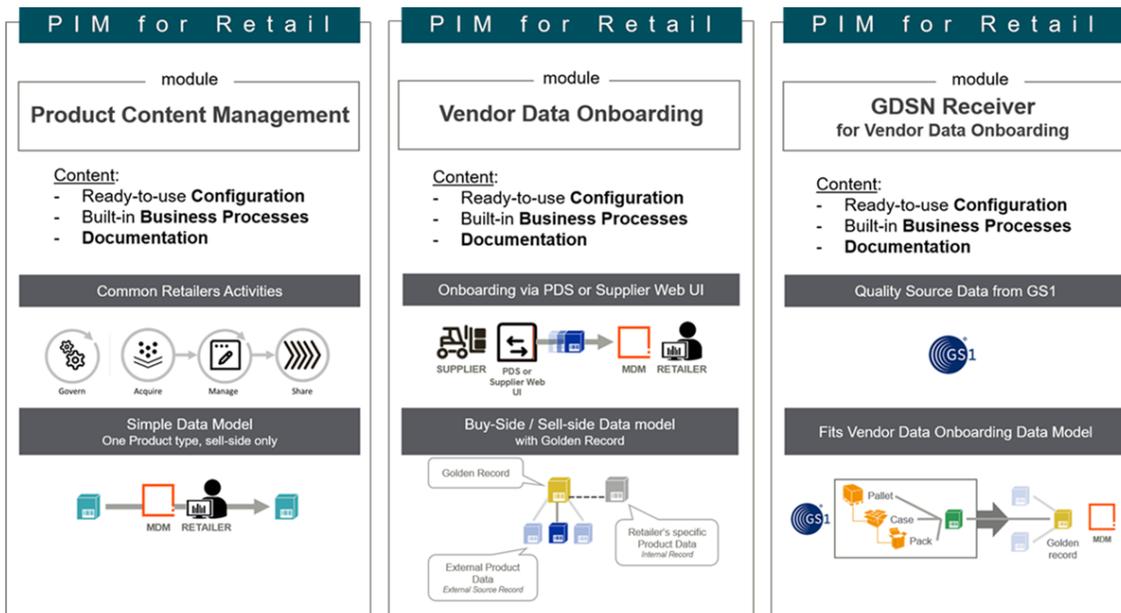
This functionality described in this section is accessible on systems with the PIM for Retail commercial license activated.

Each pack contains:

- A workable configuration (data model, Web UI, workflows, business rules, IEP, etc.)
- Documentation

There are several packs (or 'modules') and each covers different use cases:

- Product Content Management (PCM) module
- Vendor Data Onboarding (VDO) module
- GDSN module, working in conjunction with VDO module



Each business is different — your processes, your products, your organization. Implementing a MDM (Stibo Systems' Product Master Data Management solution) raises a lot of questions and can seem challenging.

As multi-domain MDM specialists, Stibo Systems has studied customers' business processes and configurations and has identified patterns that frequently occur in the retail industry.

PIM for Retail Getting Started

The following topics are the first that you should read to understand the basics of PIM for Retail:

- Product MDM Modules
- PIM for Retail Key Concepts
- PIM for Retail Products and Product Data
- Product Data Lifecycle

Modules

Start with the following topics for information about the available modules:

- Module - Product Content Management
- Module - Vendor Data Onboarding
- Module - GDSN Receiver for PIM for Retail

Product MDM Modules

The following modules are available in PIM for Retail:

- **Product Content Management** is a 1:1 product data flow where the purchased product is exactly the same as the sold product. There are no separate objects and no supplier data onboarding.
- **Vendor Data Management** is an n:1 product data flow where there can be multiple supplier-side products for one retailer-side product (buy-side / sell-side).

	Product Content Management	Vendor Data Onboarding
Product data model	<p>1:1</p> <p>Sell-side only, what you buy is what you sell.</p>	<p>n:1</p> <p>Multiple supplier-side products for 1 retailer-side product.</p>
Onboarding workflow - pre-defined tasks and logic for product data creation	<p style="text-align: center;">✓</p> <p>Product Data is onboarded by the Retailer</p>	<p style="text-align: center;">✓</p> <p>Product Data is onboarded by the Suppliers</p>
Collaboration workflow - pre-defined tasks and logic for collaboration inside the retailer's team	<p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p>
Product data	<p style="text-align: center;">✓</p>	<p style="text-align: center;">✗</p>

	Product Content Management	Vendor Data Onboarding
onboarding via Smartsheet - using Smartsheet to create / update product data	The Retailer can use Smartsheets to onboard product data	The Supplier uses the Supplier Web UI and Smartsheets to manage their product and propose the product to the Retailer
Product data onboarding via Supplier Web UI - the Supplier uses the Supplier Web UI to manage its products and syndicates them to a dedicated retailer's channel	✘	✔
Product data onboarding via PDS - the Supplier uses PDS to manage its products and syndicates them to a dedicated retailer's channel	✘	✔
Product data onboarding via GDSN - get quality product data from GS1 standard, GDSN. GS1 is not a supplier, therefore there is no pricing information	✘	✔
Variant handling	✔	✘

PIM for Retail Key Concepts

PIM for Retail is a solution that manages product data across your company. But who creates, enriches, and classifies this product data? Even if the answer varies for each organization, the following standard actors are typically involved in Master Data Management.

	User	Role
	Retailer	Buys products from suppliers and sells them to customers.
	Supplier / Vendor	Sells products to retailers.
	Data Provider	Produces product data as a service.
	Customer	Buys products from the retailer.

The retail's actors are discussed below.

Retailer's Actors

From the retailer's perspective, the following tables show the users and roles involved in the PIM for Retail solution.

Some actors are valid for both modules (PCM and VDO), while some are specific to VDO only.

	User	Role	In module
	Buyer	Negotiates and buys products from the supplier.	<div style="background-color: black; color: white; padding: 2px; display: inline-block; margin-bottom: 5px;">PCM</div> <div style="background-color: black; color: white; padding: 2px; display: inline-block;">VDO</div>

	User	Role	In module
	Quality Assurance Expert	Ensures the quality of the data.	<div style="background-color: black; color: white; padding: 2px; display: inline-block;">PCM</div> <div style="background-color: black; color: white; padding: 2px; display: inline-block;">VDO</div>
	Marketing Specialist	Writes copy and manages the product's marketing data.	<div style="background-color: black; color: white; padding: 2px; display: inline-block;">PCM</div> <div style="background-color: black; color: white; padding: 2px; display: inline-block;">VDO</div>
	Image Specialist	Maintains the images and assets of the product.	<div style="background-color: black; color: white; padding: 2px; display: inline-block;">PCM</div> <div style="background-color: black; color: white; padding: 2px; display: inline-block;">VDO</div>
	Warehouse Specialist	Manages warehouse-specific product data.	<div style="background-color: black; color: white; padding: 2px; display: inline-block;">PCM</div> <div style="background-color: black; color: white; padding: 2px; display: inline-block;">VDO</div>
	Enrichment Specialist	<p>In smaller organizations, the Enrichment Specialist can cumulate the work of the Marketing Specialist, the Image Specialist, the Warehouse Specialist.</p> <div style="text-align: center; margin-top: 10px;"> <p>Enrichment specialist = Marketing Specialist + Image Specialist + Warehouse Specialist</p> </div>	<div style="background-color: black; color: white; padding: 2px; display: inline-block;">PCM</div> <div style="background-color: black; color: white; padding: 2px; display: inline-block;">VDO</div>
	Data Steward	Manages category-specific attributes, LOVs, primary product hierarchy, and classifications.	<div style="background-color: black; color: white; padding: 2px; display: inline-block;">PCM</div> <div style="background-color: black; color: white; padding: 2px; display: inline-block;">VDO</div>

Technically, MDM also involves machine-to-machine (M2M), where exchange and automation happen between the systems. This means the external systems must also be considered as actors.

	System	Role	In module
	ERP	Optionally sends data to STEP, including a unique SKU ID, and a value used to classify the product automatically (the 'ERP line' attribute).	<div style="background-color: black; color: white; padding: 2px; text-align: center;">PCM</div> <div style="background-color: black; color: white; padding: 2px; text-align: center;">VDO</div>
	STEP	Master Data Management	<div style="background-color: black; color: white; padding: 2px; text-align: center;">PCM</div> <div style="background-color: black; color: white; padding: 2px; text-align: center;">VDO</div>
	E-commerce platform	Receives the MDM product data to be used on E-commerce channels.	<div style="background-color: black; color: white; padding: 2px; text-align: center;">PCM</div> <div style="background-color: black; color: white; padding: 2px; text-align: center;">VDO</div>
	PDS	Product Data Syndication is a simple, fast, cost-effective way for manufacturers and brands to share and update product data with retailers, data pools and content service providers. The suppliers and manufacturers use PDS to publish their products to PIM for Retail.	<div style="background-color: black; color: white; padding: 2px; text-align: center;">VDO only</div>
	Supplier Web UI	The purpose of the Supplier Web UI is to enable Suppliers to initiate product data, propose them to the retailer, and maintain the product data in a dedicated web user interface. The solution is a part of STEP and therefore uses the same data and logic as the Web UI.	<div style="background-color: black; color: white; padding: 2px; text-align: center;">VDO only</div>

PIM for Retail Products and Product Data

A product is an item that you, the retailer, buys from a supplier, and that you sell to a customer. In PIM terminology, it can be called a 'sell side product' or 'sell side item.'



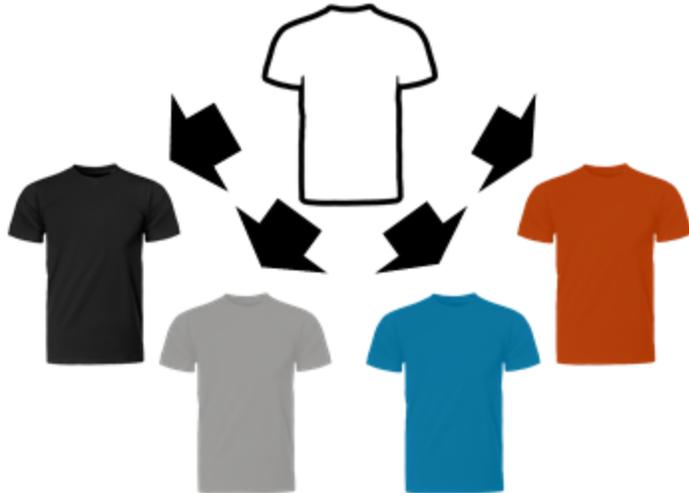
Note: The Product Content Management module of the PIM for Retail module only deals with the sell side products.

Various types of products should be considered:

- **Products** are any of the items that you sell.



- **Variant products** are versions of a single product, such as a shirt that is available in a variety of sizes and colors (PCM only).



- Other product types depend upon your data model as defined during your STEP implementation. For example:
 - Samples: items that are not sold but are distributed.
 - Kits: a repair kit that links to other products.
 - Packs: a group that contains a selection of other items.
 - Bundles: a set of products plus the installation service delivered by a specialist.

Buy Side and Sell Side

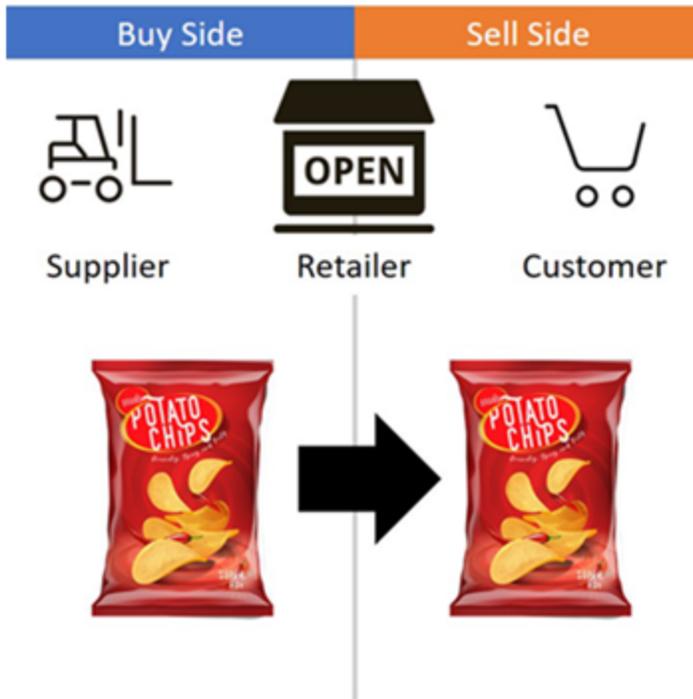
It is common practice to make a distinction between products being bought and products being sold as follows:

- The 'buy side' product is what you, the retailer, buys from a supplier.
- The 'sell side' product is what you, the retailer, sells to your customer.

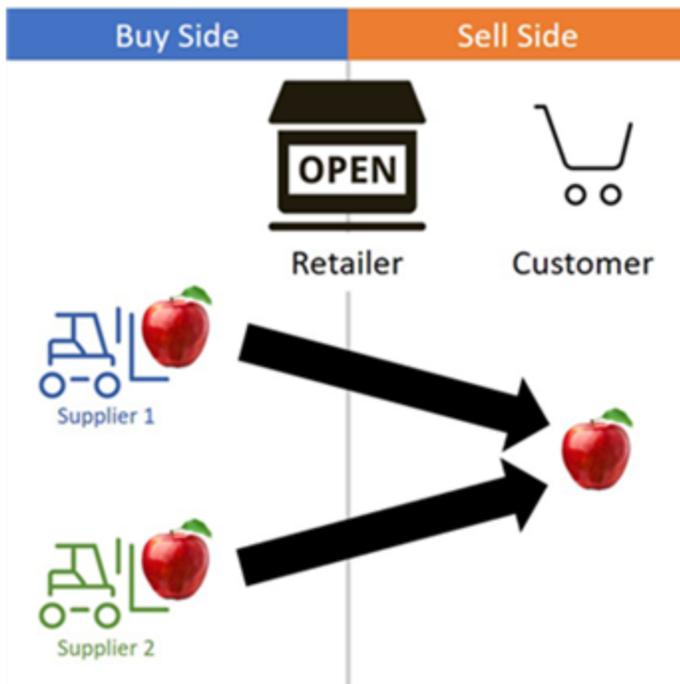


Consider the following scenarios:

- **The same product is bought and sold** - You buy a product and you sell the same product (PCM only).



- **Multiple products are sold as the same product** - You buy equivalent products from several suppliers and you sell them as the same product (VDO only).



- **Single product is sold as different products** - You buy one product from a supplier and you sell it as different products.



Product Data

Often the terms 'product' and 'product data' are used interchangeably. In PIM, 'product' refers to the item being bought and sold, while 'product data' is the supporting information about the item being bought and sold.

Product data is any data that describes it: its name, identifiers (GTIN, EAN, SKU id), product description (such as GPC attributes, marketing texts), pictures, links to other products, link to a classification, etc.

Data for a product is held by the following elements:

- **Attributes** hold characteristics about the product. For more information, see the **Attributes** topic in the **System Setup / Super User Guide** documentation.
- **References** hold links to other products, such as cross sell items, up-sell items, packs, etc. For more information, see the **Reference and Link Types** topic in the **System Setup / Super User Guide** documentation.
- **Assets** are digital items such as images, specifications, instruction manuals, etc. For more information, see the **Digital Assets** documentation.

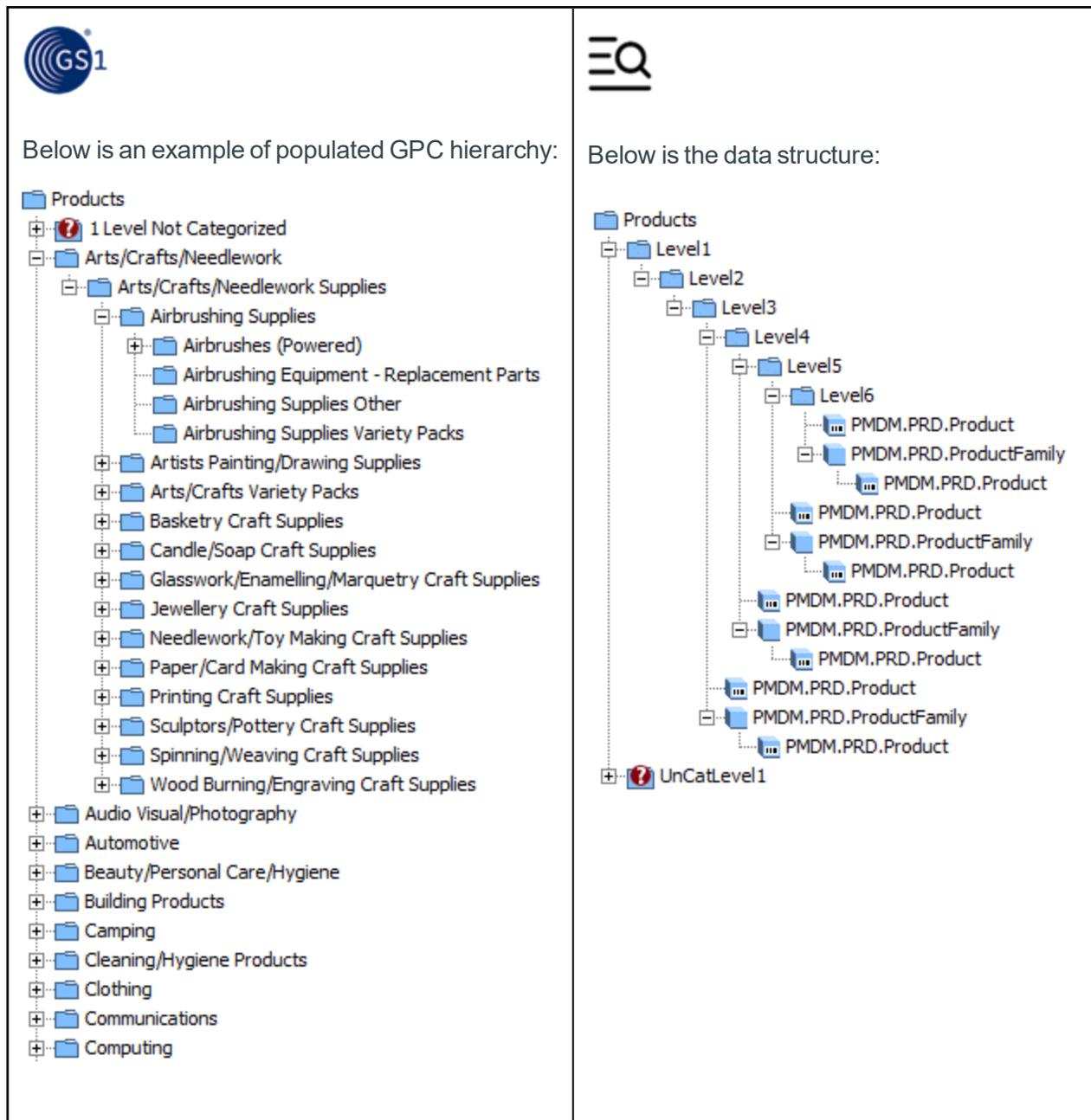
Product Hierarchy and Classification

The primary product hierarchy is a type of classification used to manage products and identify product families. For more information, see the **Product Hierarchy** section of the **Products** topic in the **Getting Started / User Guide** documentation.

The product is classified in a unique location in the Primary Product Hierarchy. GPC classification and Open classification are two types of classification 'content' that can be used, as defined below.

- **GPC classification** allows the standard GPC attributes to be automatically attached to each relevant 'level'.
- **Open classification** allows you to manually define the attributes needed for each node of the classification.

The two possibilities of Product Hierarchy as implemented in Product Content Management:



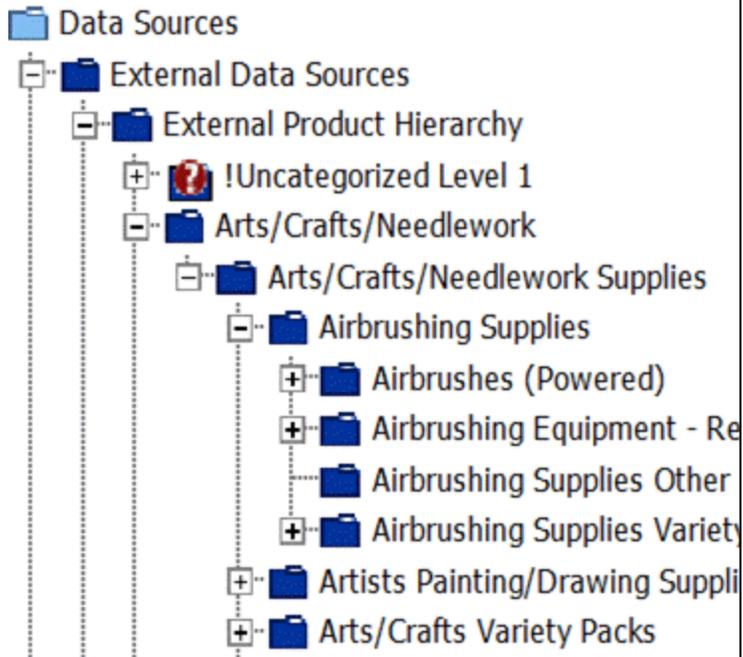
The two possibilities of Product Hierarchy as implemented in Vendor Data Onboarding.

In the Vendor Data Onboarding Module, there is a primary product hierarchy for the purchased products (referred to as 'External Data Source') and sold products (referred to as 'Internal Data Source'). The logic is the same, but there are two hierarchies instead of one.



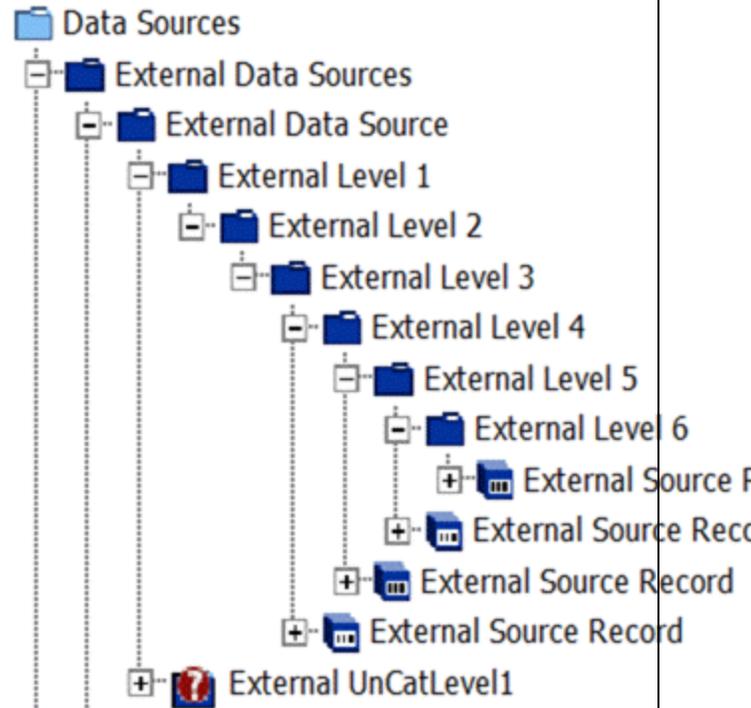
Below is an example of populated GPC hierarchy.

The 'External Data Source' hierarchy:

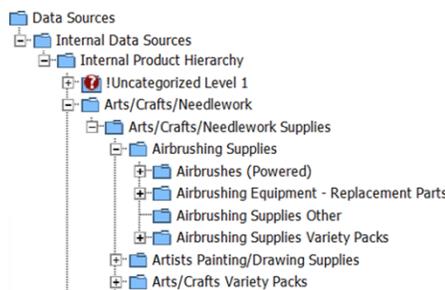


Below is the overarching data structure.

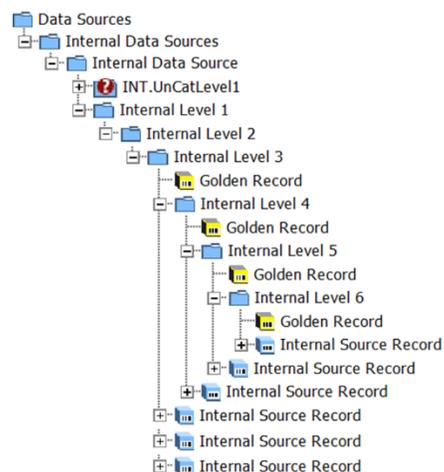
For External Data Sources:



The 'Internal Data Source' hierarchy:

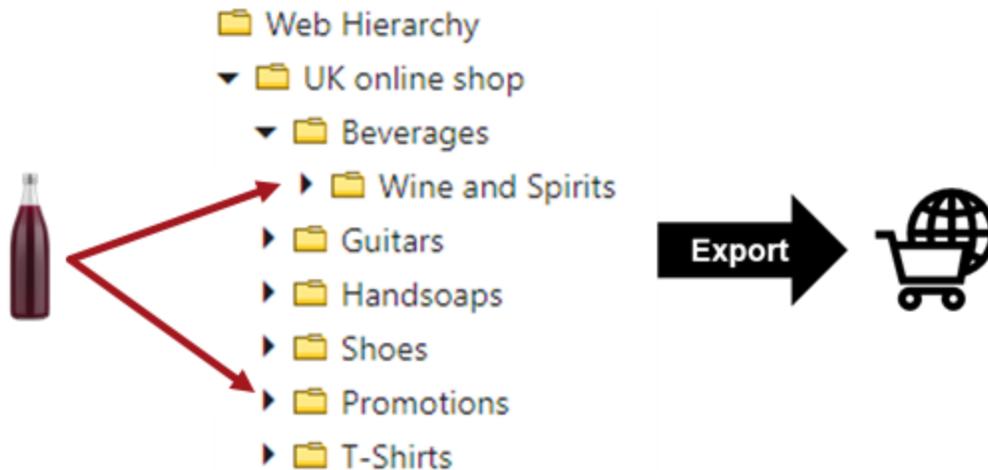


For Internal Data Sources:



Another classification type is the web classification, as illustrated in the 'Web Hierarchy' classification shown below. A common practice is to use an 'alternate' classification to export data to the E-commerce platform.

In the example web classification, the bottle of wine product can be placed at several locations, for instance, in the 'Wine and Spirits' folder, as well as in the 'Promotions' folder.



Product Distribution Channels

The retailer can distribute its products in different ways:

- **Directly** through its own shops (physical stores), online channels (site, app), distance selling (phone and mail, paper catalogs, TV shopping as showcases).
- **Indirectly** through marketplaces such as Amazon, eBay, Walmart, Wayfair, BOL.com, CDiscount, PriceMinister, Google Shopping, Etsy, Facebook, etc.
- **White label** for another brand. The retailer sells its own products, but with a different brand, operating this brand's channel.

Each of these 'channels' can have different assortments. For example, stores in one area will not have the same assortment as stores in another area. The products available in a physical store may not be available online (for instance, because home delivery is not possible), and vice versa. There can also be online-only products.

Multichannel or omnichannel scenarios are common practice in retail. The idea is to have a continuity of purchase experience through the different channels. The most common example is 'click and collect' where you buy a product online and pick it up in a shop. Another scenario is the other way around where you buy a product in a store and it is delivered at home. This requires the capacity to manage product data across these channels.

To cover these distribution needs, a common practice is to use one 'alternate classification' per channel, such as the 'Web Hierarchy' classification mentioned above. The retailer creates dedicated alternate classifications for each of its channels.

Product Data Lifecycle

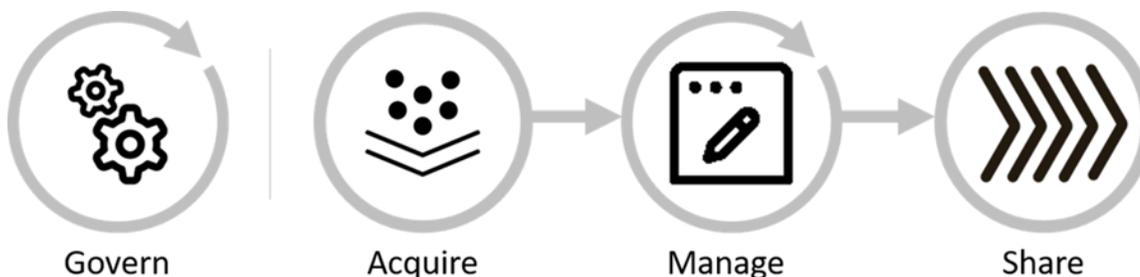
Product data is crucial for your business. To sell efficiently, product data needs to be accurate. To sell fast, product data must be available, centralized, and controlled. With the **Product Content Management** module, the retailer can add, enrich, maintain, and publish product data directly into Stibo Systems' MDM.

With the **Vendor Data Onboarding** module, the suppliers will submit their product data directly to the retailer using Product Data Syndication (PDS).

Siloed, duplicated, and inaccurate product information has a strong competitive business impact on any retail business: impersonal experiences, higher product return rate, low up-sell / cross-sell conversion. Agile and fast decisions are key to support customer-centric brand experiences.

Managing accurate, up-to-date product information enables you to increase up-sell / cross-sell and to reduce the returns rate. You also gain the insight to manage products with complex hierarchies and attributes, and to fuel customers' engagement with products, create customer retention, and drive more sales.

PIM for Retail allows organizations to acquire, manage, and share product data from a variety of internal and external systems with their customers and value chain partners. The Product Content Management module implements this logic using a typical business process which covers the scenarios frequently encountered.



Both the Product Content Management (PCM) module and the Vendor Data Onboarding (VDO) modules include these activities:

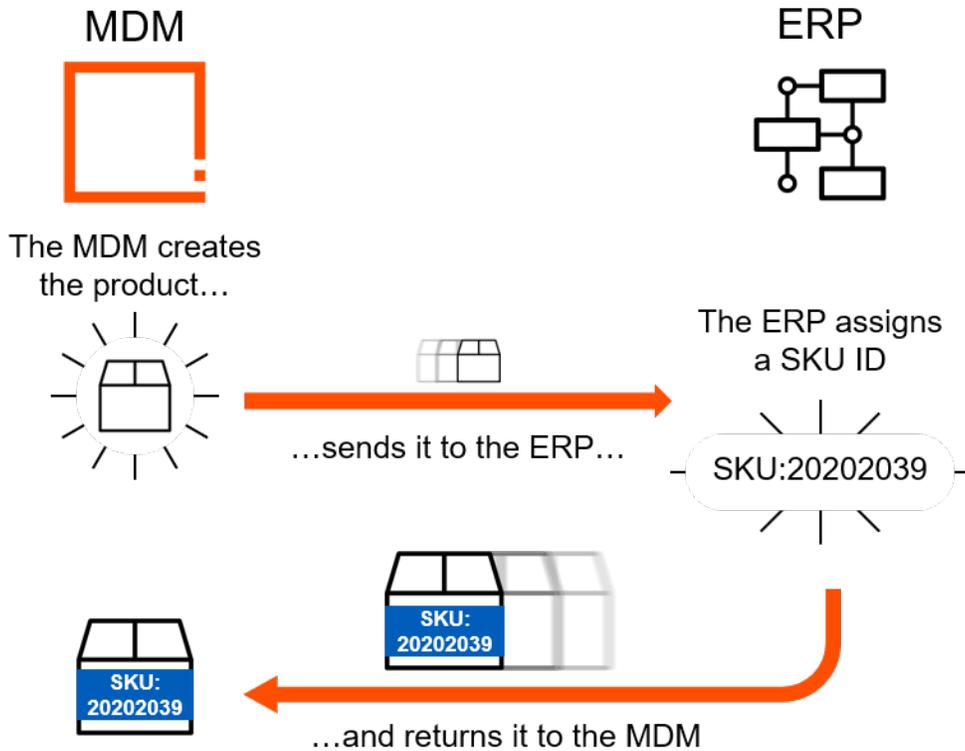
- **Govern** - maintain key elements of the data model like attributes, LOVs, and mappings
- **Acquire** - add or import product data into the MDM
- **Manage** - enrich the product data: copyright, digital assets, and warehouse data
- **Share** - export product data for users or external systems

The Data Lifecycle for PCM and VDO will be presented in their own sections.

PIM and an ERP

Frequently, STEP and an ERP (enterprise resource planning) software communicate to manage:

Attribution of a unique identifier by the ERP - The ERP holds the product identifier, also called 'SKU ID.' When a product is created in STEP directly, STEP requires an ID from the ERP.



Mapping of the ERP classification with the one of the PMDM classifications - PMDM and the ERP have specific product classifications that can differ from one another. A 'mapping' describes the classifications in PIM that are equivalent to the ones in the ERP. This mapping is maintained by the data steward, during the 'govern' activity.

From	To
> ERPCat01	L4-10001686
> ERPCat02	L4-10001680

ERP Product Classification

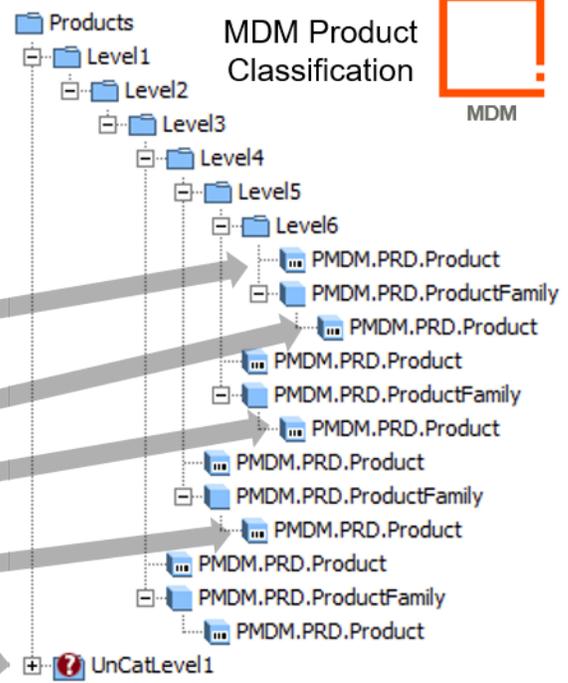


MDM Product Classification



Hierarchy tree

Material hierarchy	Hierarchy	Text
▼ Hierarchy		
▼ 00001	00001	Tools
▼ 0000100002	0000100002	Compre
• 000010000200000001	000010000200000001	Nail gu
• 000010000200000003	000010000200000003	Cleanin
• 000010000200000002	000010000200000002	Spray guns
▼ 0000200001	0000200001	Alcohol
• 000020000100000001	000020000100000001	Beer
• 000020000100000002	000020000100000002	Wine
▼ 0000100001	0000100001	Electric
• 000010000100000002	000010000100000002	Drilling
• 000010000100000001	000010000100000001	Screw
▼ 00002	00002	Drinks
▼ 0000200002	0000200002	Non-alk
• 000020000200000002	000020000200000002	Water
• 000020000200000001	000020000200000001	Juice
▼ 0000200003	0000200003	Accesso
• 000020000300000001	000020000300000001	Glasses
• 000020000300000002	000020000300000002	Barrels



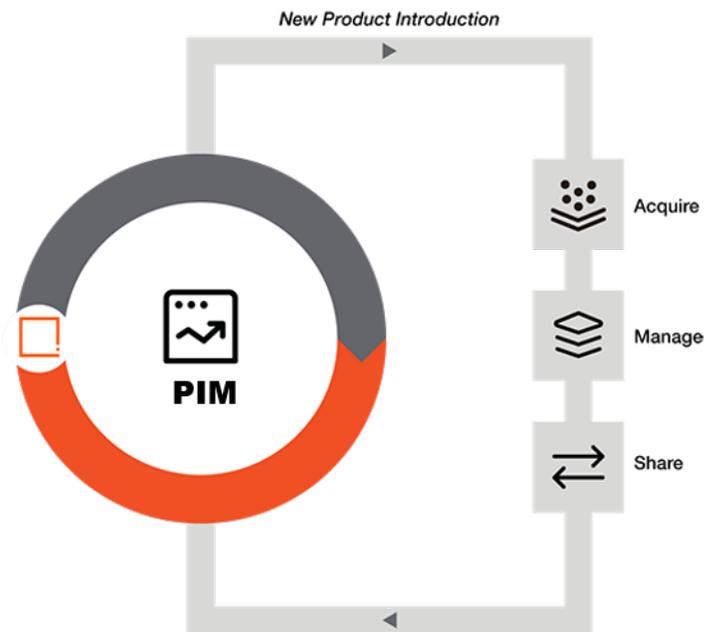
A mapping identifies a relationship between the following two attributes:

- 'ERP Product Classification (PMDM.AT.ERPLine)' attribute sent by the ERP.
- 'ExternalIdentifier (ExternalIdentifier)' attribute on the primary product hierarchy node to which the product must be attached.

This mapping is maintained in the 'ERP To PMDM Mapping (PMDM.LUT.ERPToPMDMMapping)' lookup table.

Module - Product Content Management

As multi-domain MDM specialists, Stibo Systems has studied customers' business processes and configurations and has identified patterns that frequently occur in the retail industry.

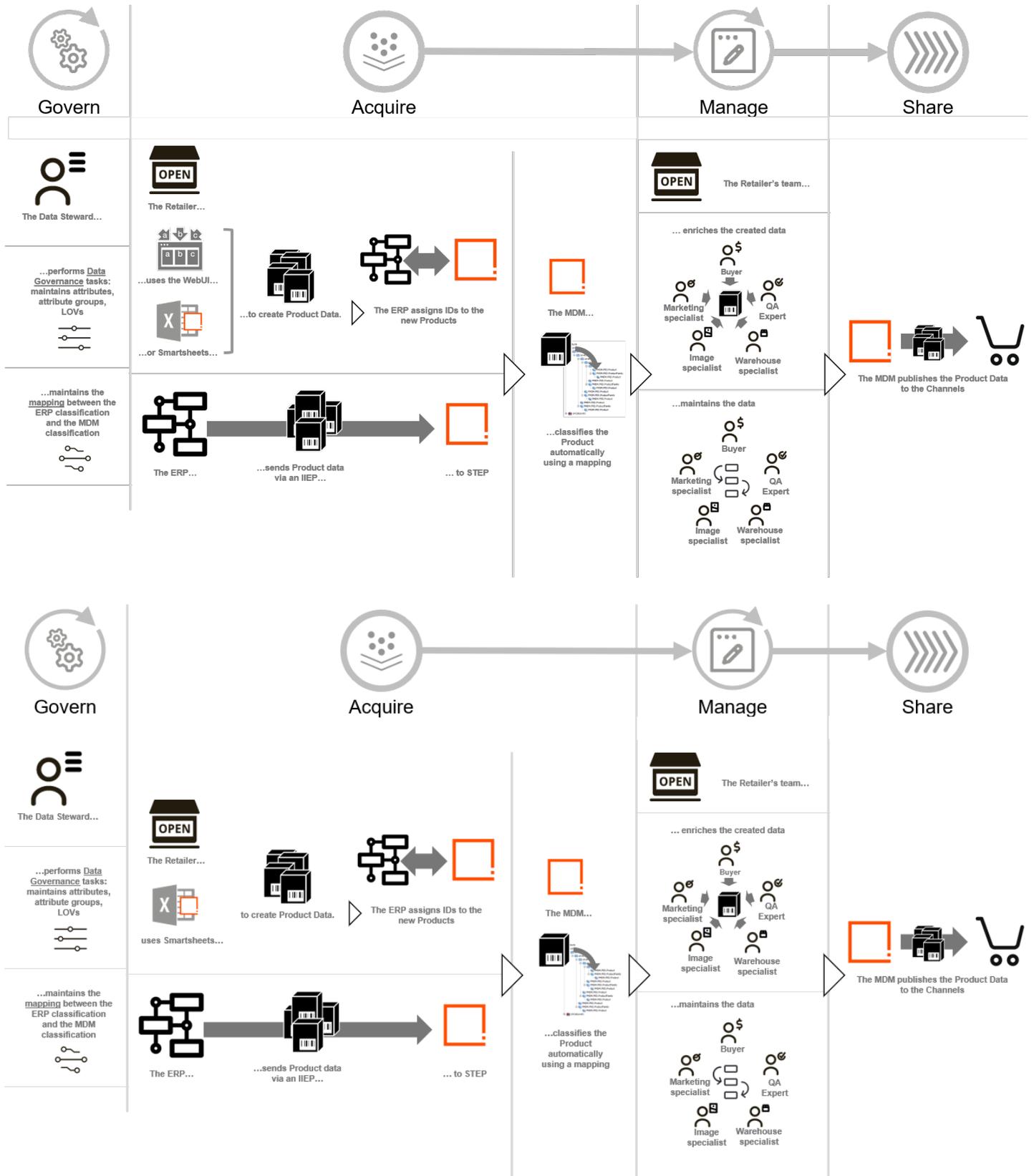


Configuration of the Product Content Management module is handled using configuration files as defined in the **Initial Setup for Product Content Management Module**.

The following topics explain the activities managed by the 'Product Content Management' module included in PIM for Retail as displayed in the image above:

- Product Content Management 'Govern' Activity
- Product Content Management 'Acquire' Activity
- Product Content Management 'Manage' Activity
- Product Content Management 'Share' Activity

Product Data Lifecycle in PCM



Initial Setup for Product Content Management Module

To access the Product Content Management business module, contact your account manager to activate the following commercial licenses for your system:

- Product Variants
- STEP Smart Sheets

Contact your Stibo Systems account manager or partner manager for information on installing PIM for Retail using configuration files.

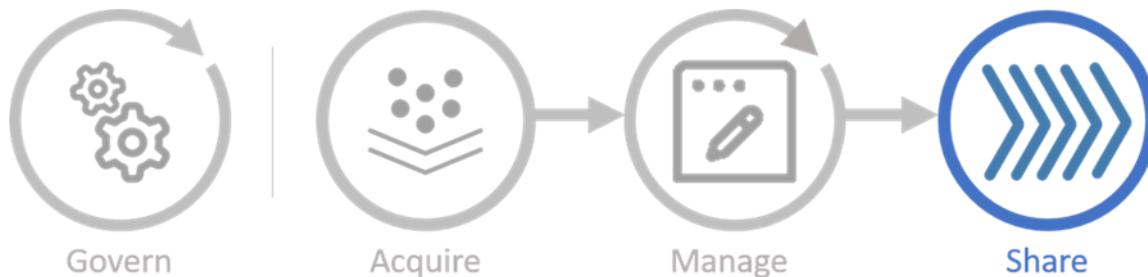
Prerequisites and Considerations

The following prerequisites and considerations apply to using the Product Content Management module:

- The Product Content Management module deals with sell-side products only.
- Users must be granted the 'Install Business Modules' setup action to install business modules.
- The module should only be installed on clean systems. If data structures already exist in the target system (e.g., product or classification hierarchy), or standard STEP base objects have been removed, it is not guaranteed that the module can be successfully installed.
- If any of the steps within a business module fail during installation, the installation may not fully complete, though as much data will be imported as possible.
- The minimum required baseline for the module is version 9.2-mp3.

Product Content Management 'Share' Activity

The Product Content Management module includes the Govern, Acquire, Manage, and Share activities.



Within the Product Content Management module, the 'share' activity includes an outbound integration endpoint (OIEP) that exports data in the STEPXML format to a hotfolder. The targeted system then imports the data and processes it.

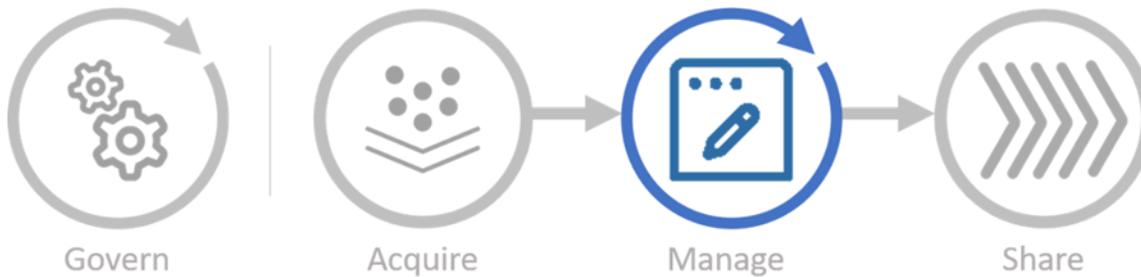
The OIEP 'Products Outbound (PMDM.OIEP.ProductOutbound)' is triggered on each approval.



For more information, see the **Outbound Integration Endpoints** topic in the **Data Exchange** documentation.

Product Content Management 'Manage' Activity

The Product Content Management module includes the Govern, Acquire, Manage, and Share activities.



Two actions are included in the 'manage' activity:

- Enrich data for a newly created product in the Product Creation Workflow.
- Collaborate about any subject on a product or a family in the Product Collaboration Workflow.

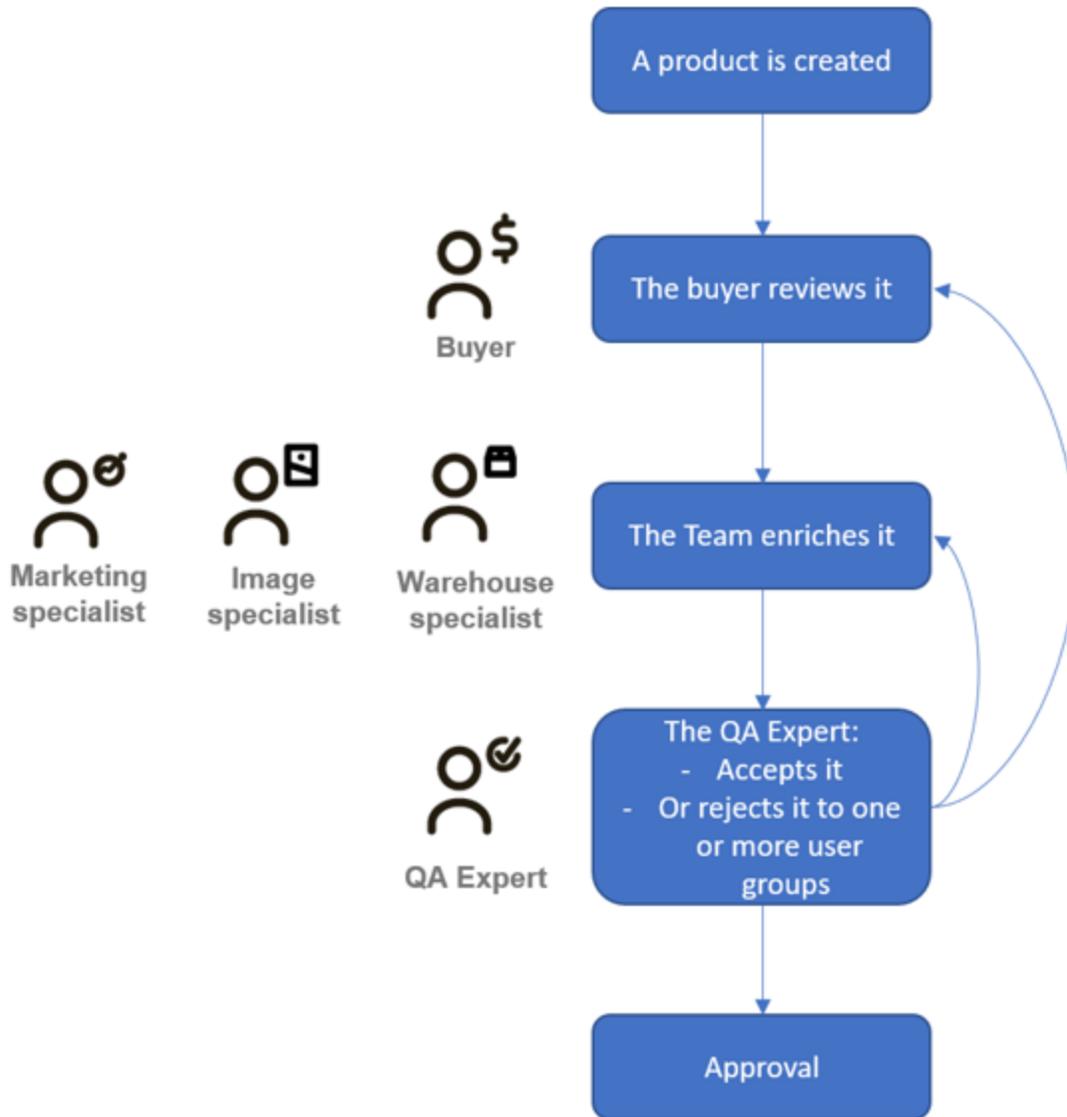
Each action is described below.

Enrich Product Data Action

Within the Product Content Management module, the 'enrich' action involves user groups for images, marketing copy, and warehouse providing the required data for the buyer's approval.

The business logic in this action is as follows:

- STEP checks if the product is classified, and if not, the product is assigned to the 'Buyer Group' for manual classification. This is repeated until the product is classified.
- The **Buyer** reviews the data. If the data is not acceptable, the task is reassigned to the previous individual user for additional data review.
- The product is reviewed and enriched by these user groups:
 - The **Marketing Copy Group** handles the 'Copy Writing' state and enriches marketing information.
 - The **Image Group** handles the 'Digital Assets' state and uploads digital assets relevant to the product.
 - The **Warehouse Group** handles the 'Warehouse Data' state and enriches warehouse data information.
- The **QA Expert** reviews all data and either accepts or rejects the product.



Review and enrichment actions by role



The Buyer reviews a newly-completed product completely before submitting it to the rest of the team.



The Marketing Specialist must assign the product to a Web Category and should also provide additional review as necessary.



The Image Specialist must attach a Primary Product Image, and should also provide additional review as necessary, and clicks the 'Proceed' button.



The Warehouse Specialist has no required actions, as this role can vary per customer. This review can include attribute information for Base Unit Information (the package of the 'each' dimensions and weight), Country of Origin, Regulatory Information, and Packaging Hierarchy (in this module, Packaging Hierarchy are modeled as a Data Container).



The QA Expert performs the final review and validation, and then approves or rejects the product.

Review and enrichment action process

1. On the homepage in the Product Creation Workflow widget, specialists see the number of products ready for review and enrichment based on role. In this example, the Marketing Specialist clicks the link to display the 'To do' tab and the tasks in the Copywriting Review state.

PRODUCT CREATION WORKFLOW		
	High	Normal
Copywriting Review	0	→ 4

2. On the To Do tab, the specialist reviews the product, focusing on the data listed, and clicks the **Assign To Me** button if editing is required. In this example, the Marketing Specialist clicks the 'Assign to me' button before providing the data for the Copywriting Review task.

The screenshot displays the product page for 'Lund's Apple Juice' in the STIBO SYSTEMS PIM. The product is in a 'Never Approved' state. The workflow progress bar shows steps: Buyer Review, SKU Request, Error Review, Copywriting Review (current), and Asset Review. The 'Collaboration' button is highlighted in red. The right sidebar shows a table with columns for ID, Name, Object Type, and Reference type, but it is currently empty with the message 'No existing records'.

3. After each team completes the review and enrichment, the QA Expert validates the data quality and takes one of these actions:

- Accepts the product, which is then automatically approved and exported, as defined in the **Product Content Management 'Share' Activity** topic.
- Rejects the product and returns it to the Buyer, Copy Writing, Digital Assets, and/or Warehouse group, adding a message for the group(s).

Collaboration Action

PIM for Retail integrates a Collaboration feature based on a workflow. When browsing a product page, a member of the team can forward the product to a user group with a message. Collaboration can be used to raise a question, request action from a team member, etc.

For example, consider the following process to conduct a conversation between Rachel, the buyer, and Imogen, the image specialist.

1. Buyer Rachel clicks the Collaboration button.



2. Buyer Rachel selects the Image Group as recipient and adds a message.

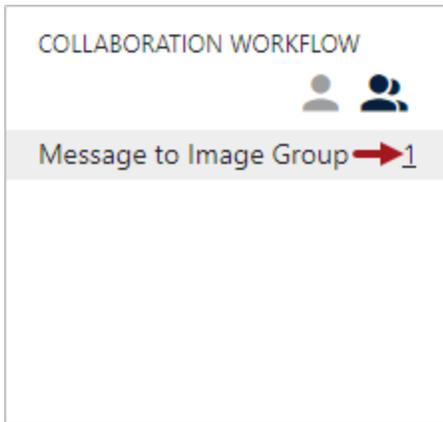
Pick recipient and add message

Message Receiver Image Group (Image) ▼

Message Could you check the color of the picture?

Cancel
OK

3. Image specialist Imogen sees there is a message for the Image Group on the homepage Collaboration Workflow widget and clicks the link.



4. Image specialist Imogen reviews the latest message in the task list.

STIBO SYSTEMS
MASTER DATA MANAGEMENT

Imogen – Digital Asset Manager
English US
☰
🔄
🔗
🏠

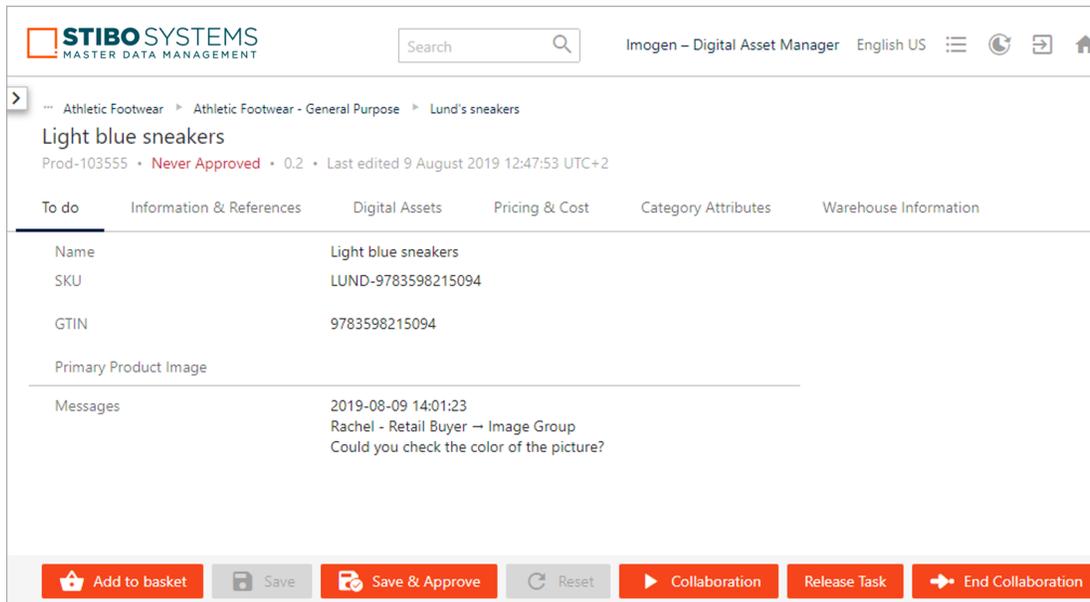
> Product Collaboration - Message to Image Group - Available

Select all

	ID	Title	Assignee	Assigned to me	Messages
<input type="checkbox"/>	Prod-103555	Light blue sneakers	Image Group	<input type="checkbox"/>	2019-08-09 14:01:23 Rachel - Retail Buyer → Image Group Could you check the color of the picture?

Number of items : 1

5. Image specialist Imogen views the conversation thread on the product page.

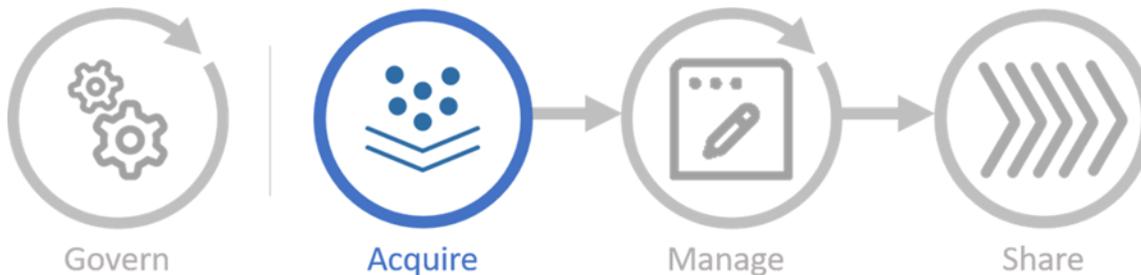


6. Image specialist Imogen can perform the following actions:

- Continue the conversation by adding a new message and clicking the **Collaboration** button.
- Click the **Release Task** button to remove the current assignment so that someone else in the group can work the task.
- Click the **End Collaboration** button to finish the conversation.

Product Content Management 'Acquire' Activity

The Product Content Management module includes the Govern, Acquire, Manage, and Share activities.



Within the Product Content Management module, the 'acquire' activity is performed by the buyer working with the sell side products.

Product data can be created via the following activities and is defined below:

- In STEP Web UI by the retailer.
- With an Excel Smartsheet by the retailer.
- From the ERP via an inbound integration endpoint (IIEP).

Regardless of the method used to create product data, a unique Product Creation Workflow is executed. Among other things, the workflow communicates with the ERP and performs the following tasks (see the **PIM and an ERP** section of the **Product Data Lifecycle** topic):

- Requests the SKU ID from the ERP: a common scenario in retail is that the ERP holds SKU identifiers. This logic is included in the process.
- Automatically classifies the product: implements the 'manage' activity, which consists of dispatching the enrichment and review activities of the team.

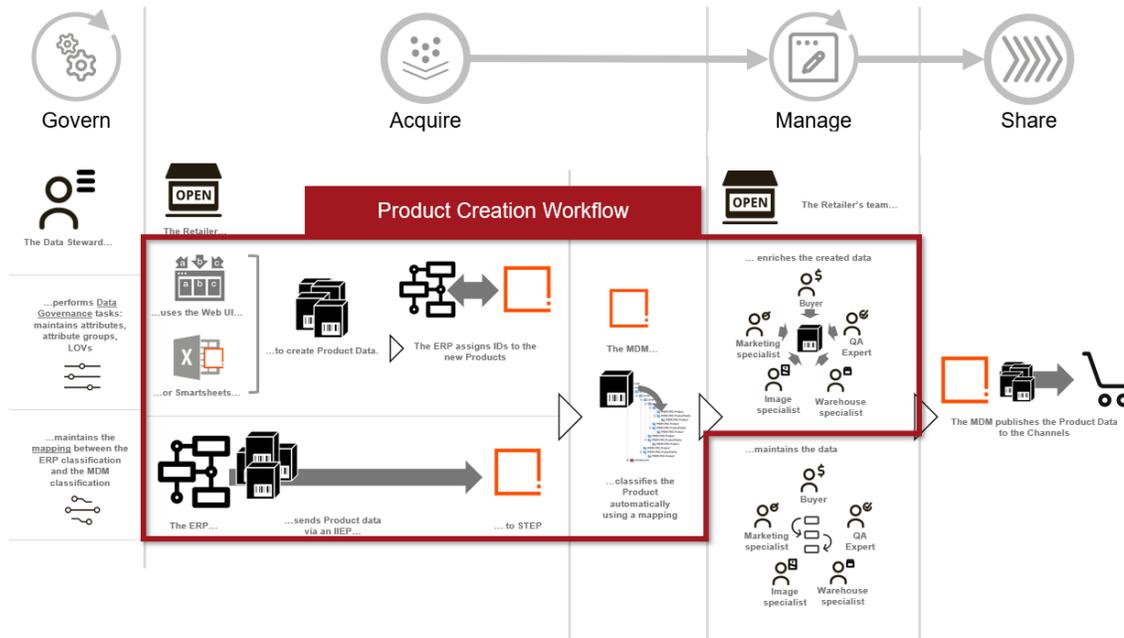
The topics that describe the 'acquire' activity include:

- 'Acquire' Activity - Common STEP Workflow
- 'Acquire' Activity - Create Products in Web UI
- 'Acquire' Activity - Create Products via Excel Smartsheet
- 'Acquire' Activity - Create Products via IIEP

'Acquire' Activity - Common STEP Workflow

Regardless of the method used to add a product—in the Web UI, Excel Smartsheet, or IIEP—a single STEP workflow handles the business processes in the red frame below.

For more information, see the **Workflows** documentation.



Workflow Status Flag

In a specific state, the product can be in two statuses: 'Normal' or 'High.' When a product enters the workflow, the status is set to 'Normal.' When a product is 'rejected' by the QA group, the status becomes 'High.'

SKU ID

The SKU ID is the identifier sent by the ERP for a specific product. When the product is created by the ERP, it is assumed that it has a SKU ID, in PIM this attribute is 'SKU (PMDM.AT.SKU)'.

ERP Product Classification

Mapping identifies a relationship between the ERP and PMDM for the following two attributes:

- 'ERP Product Classification (PMDM.AT.ERPLine)' attribute sent by the ERP.
- 'ExternalIdentifier (ExternalIdentifier)' attribute on the primary product hierarchy node to which the product must be attached.

This mapping is maintained in the 'ERP To PMDM Mapping (PMDM.LUT.ERPToPMDMMapping)' lookup table.

'Acquire' Activity - Create Products in Web UI

The retailer uses the Web UI to add one or more new products in PMDM.

The methods available for adding new product using the Web UI include:

- Create a single product
- Create multiple products
- Create families and variants

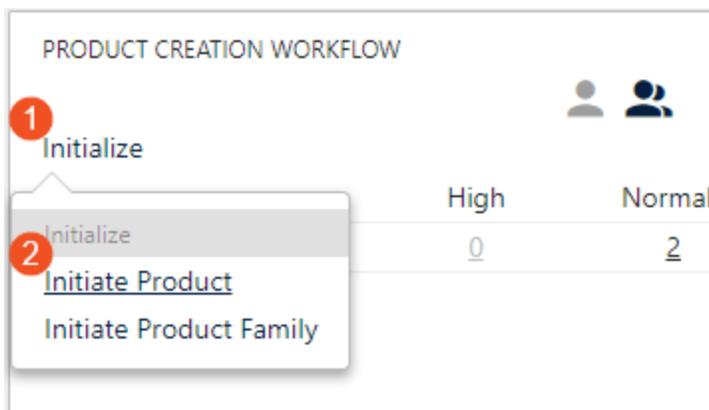
Each is defined in the sections below.

Create a Single Product

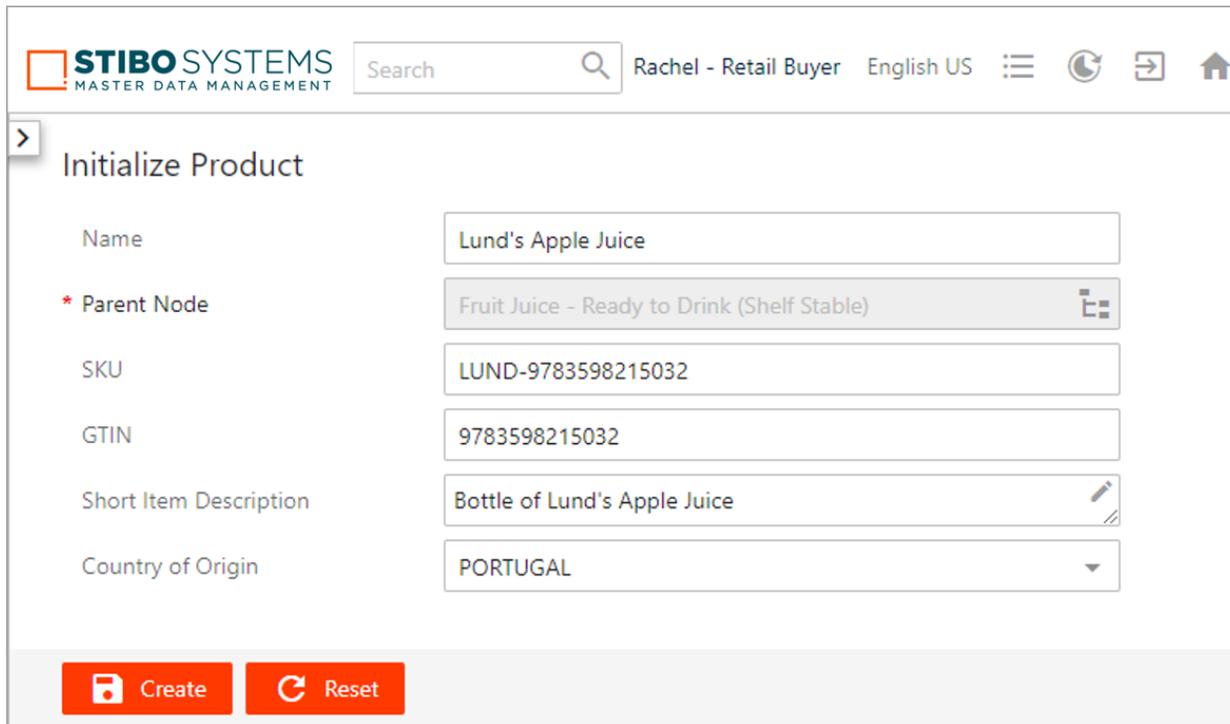


The buyer performs all steps to create a single product.

1. On the 'Product Creation Workflow' homepage widget click the **Initialize** link and click the **Initiate Product** link.



2. Supply the necessary information and click the **Create** button.



The screenshot shows the 'Initialize Product' form in the STIBO SYSTEMS interface. The form includes the following fields and values:

Field	Value
Name	Lund's Apple Juice
* Parent Node	Fruit Juice - Ready to Drink (Shelf Stable)
SKU	LUND-9783598215032
GTIN	9783598215032
Short Item Description	Bottle of Lund's Apple Juice
Country of Origin	PORTUGAL

At the bottom of the form, there are two buttons: **Create** (with a save icon) and **Reset** (with a refresh icon).

3. Choose a method to categorize the product:

- Manually - Click the **Categorize Manually** button if the product is not already categorized in the Product Primary Hierarchy.
- Automatically - First select an 'ERP Product Category' from the dropdown and then click the **Categorize**

Automatically button to align ERP Product Categorization and the PMDM Product Categorization.

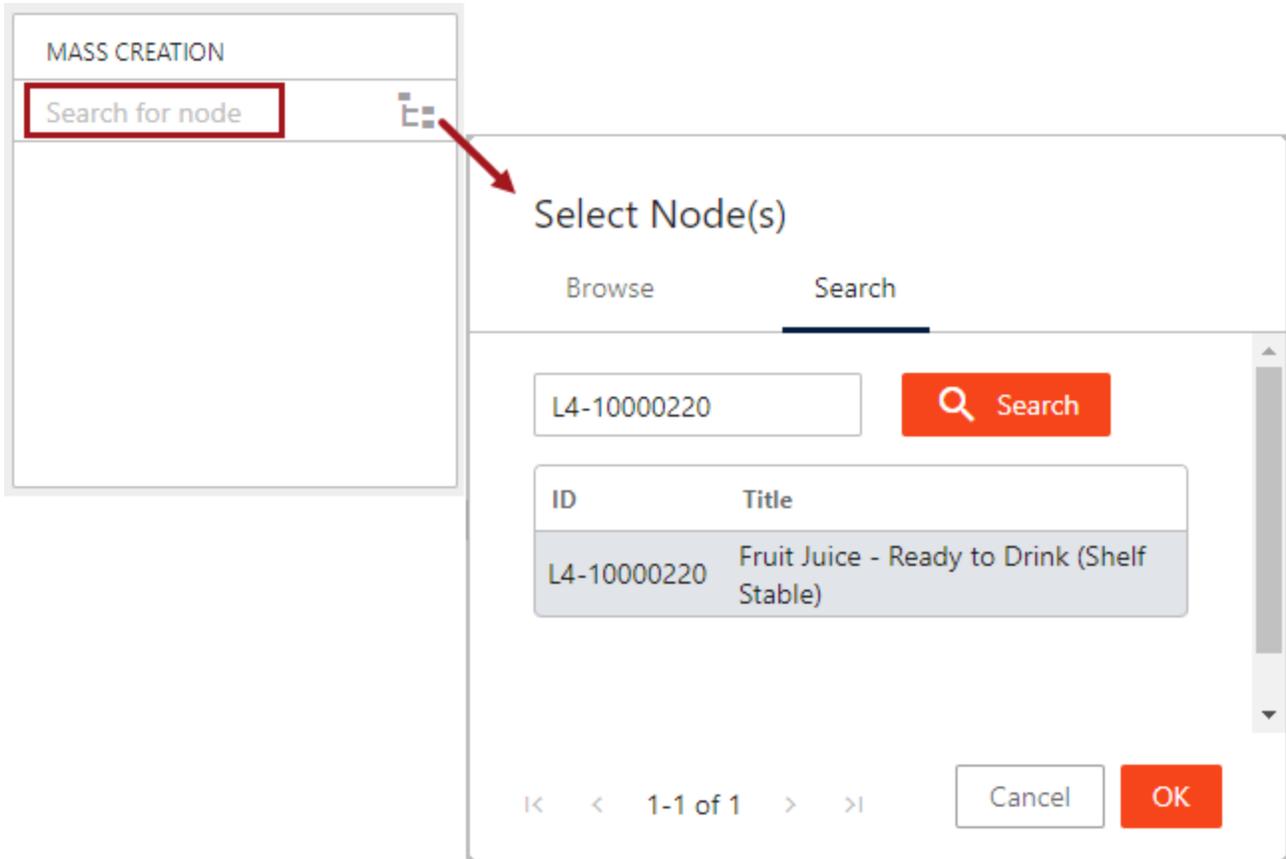
4. If desired, continue in the workflow and assign the task by clicking the **Assign to Me** or the **Assign to Group** option and then clicking the **Proceed** button. The product task can be worked.
5. Continue with the **Product Content Management 'Manage' Activity** topic.

Create Multiple Products

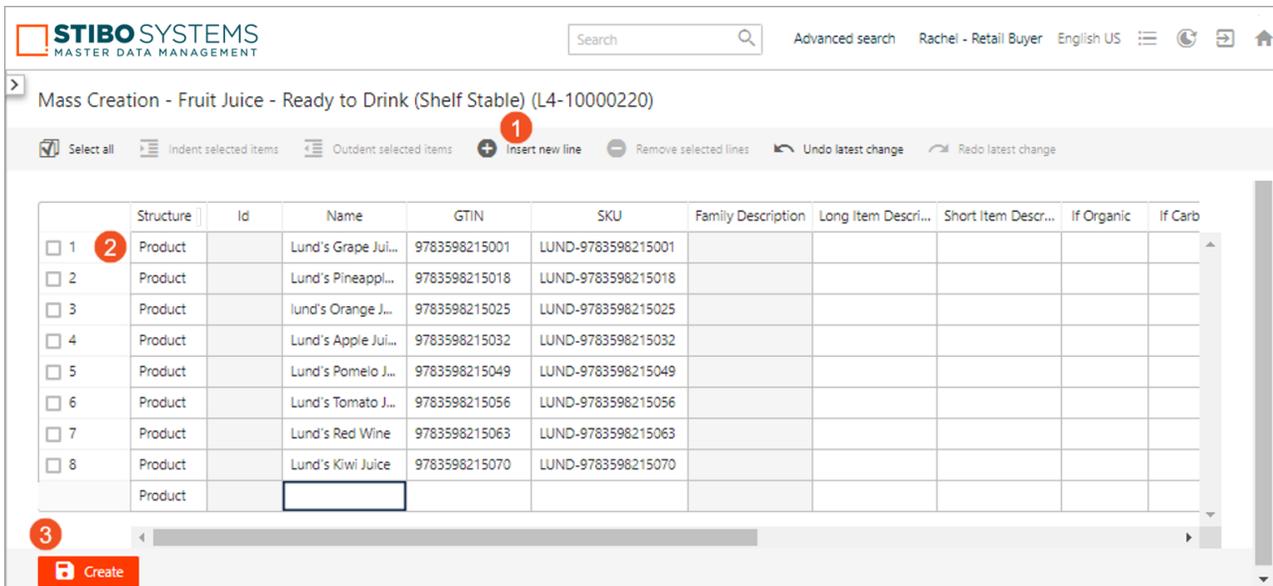


The buyer performs all steps to create multiple products.

1. On the homepage 'Mass Creation' widget, choose a method to identify the node under which the products will be created:
 - Type a node into the text box.
 - Click the hierarchy button to display the Select Nodes dialog. Use the Browse or Search option, select the node and click the **OK** button.



2. Click the **Insert new line** button and add the necessary information on the new row inserted.
Repeat this step until all new products are displayed.



3. Click the **Create** button.
4. Continue with the **Product Content Management 'Manage' Activity** topic.

Create Families and Variants

The buyer performs all steps to create families and variants.



In PIM for Retail, a 'variant' is a product which has a 'family' for parent. The buyer must first create a family and then create as many variants as necessary.

Note: PIM for Retail includes generic 'Size (PMDM.AT.Size)' and 'Color (PMDM.AT.Color)' attributes for variants. If GS1 also has 'size' and 'color' specific data, it can be complex to implement. The use of generic 'size' and 'color' attributes is commonly encountered.

1. On the homepage 'Product Creation Workflow' widget, click the **Initialize** link and click the **Initiate Product Family** link.

PRODUCT CREATION WORKFLOW

	High	Normal
<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> 1 </div> <div> Initialize </div> </div>	0	16
<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> 2 </div> <div> Initiate Product Initiate Product Family </div> </div>		

2. Add a name, select a parent node, add a family description, and click the **Create** button.

3. Create variants using one of the following methods:

- On the **To Do** tab, click the **Create Variants** button to display the Create Variants dialog. This method is similar to the steps described above in the **Create a single product** section.

On the 'Create variants' dialog, add the variant information and click the **OK** button.

Create variants

Object type: **Product**

Size

Source: 37, 39

Result: 36, 38

Color

Source: Black, Blue, Gray, Red

Result: (empty)

2 variants

Cancel OK

- Select a family from the Tree, then click the **Create variants** button to create the variants.

STIBO SYSTEMS MASTER DATA MANAGEMENT

Search [] Advanced search Rachel - Retail Buyer English US

Tree

- Assets
- Web Hierarchy
- Products
 - 1 Level Not Categorized
 - Arts/Crafts/Needlework
 - Audio Visual/Photography
 - Automotive
 - Beauty/Personal Care/Hygiene
 - Building Products
 - Camping
 - Cleaning/Hygiene Products
 - Clothing
 - Communications
 - Computing
 - Crops
 - Cross Segment
 - Electrical Supplies
 - Food/Beverage/Tobacco
 - Footwear
 - Footwear
 - Athletic Footwear
 - Athletic Footwear - Gene...
 - (Prod-101063)
 - Lund's sneakers**
 - (Prod-103510)
 - (Prod-103511)
 - (Prod-103512)
 - (Prod-103549)
 - Light blue sneakers
 - Gray sneakers
 - Athletic Footwear - Speci...

Product Creation Workflow

Collaboration Workflow

Basket (0)

Footwear > Athletic Footwear > Athletic Footwear - General Purpose

Lund's sneakers

Fam-103501 • Never Approved • 0.1 • Last edited 9 August 2019 12:15:24 UTC+2

Information & References Product Variant Details Digital Assets Pricing & Cost Category Attributes Warehouse Information

2 Create variants

	Thumbnail	ID	Size	Color
(Prod-103510)		Prod-103510	37	Black
(Prod-103511)		Prod-103511	36	Gray
(Prod-103512)		Prod-103512	36	Black
(Prod-103549)		Prod-103549	39	
Gray sneakers		Prod-103509	37	Gray
Light blue sneakers		Prod-103555	37	Blue

Number of items : 6

Add to basket Save Save & Approve Reset Categorize Manually Categorize Automatically Collaboration

On the 'Create variants' dialog, add the variant information and click the **OK** button.

Create variants

Object type: Product

Size

Source	Result
37	36
39	38

Color

Source	Result
Black	
Blue	
Gray	
Red	

2 variants

Cancel OK

'Acquire' Activity - Create Products via Excel Smartsheet

Excel is often a vital part of an organization. For example, the retailer can export an Excel Smartsheet from STEP and send it by email to a supplier. The supplier updates the Excel Smartsheet and returns it to the retailer. The retailer validates the data using the built-in STEP validation feature of the Excel Smartsheet format, and imports it into STEP. For more information, see the **Excel Smartsheet Format** topic in the **Data Exchange** documentation.

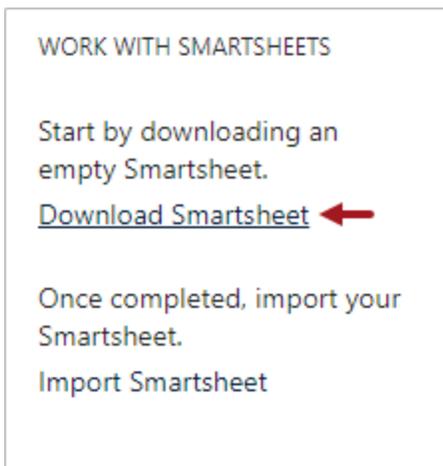


The buyer performs most of the steps to create products using Excel Smartsheet.

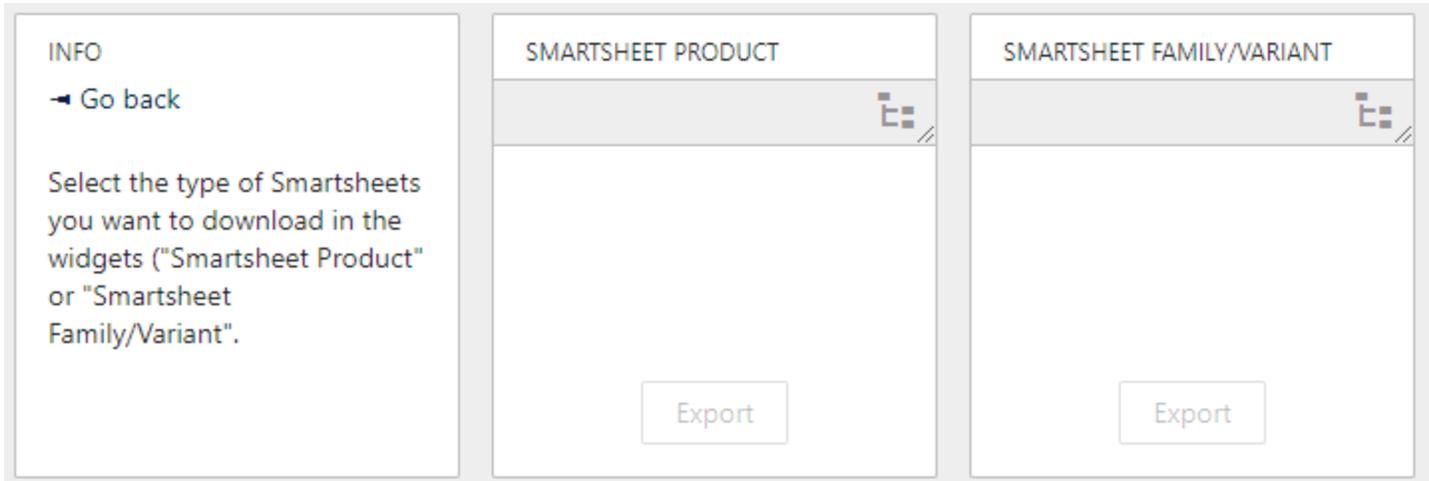


The Smartsheet user supplies data for the Excel Smartsheet.

1. On the homepage 'Work With Smartsheets' widget, click the **Download Smartsheet** link.



2. Select the appropriate widget to create products or families / variants, select a node, and export the Smartsheet.



3. On the Background Process Details page, click the background process link to download the Smartsheet.

Background Process Details

ID: BGP_103572
 Started By: RACHEL
 Description: Smartsheet template export
 Template ID: Export Manager Pipeline
 Status: ✓ Succeeded
 Started: 09/08/19 13:06:11
 Finished: 09/08/19 13:06:12
 Elapsed: 3 s

[Fruit Juice - Ready to Drink - Shelf Stable - 2019-08-09--13-06.xlsm](#)

Export

ID	Type	Text
10	Info	Export process started. (Fri Aug 09 13:06:11 CEST 2019)
20	Info	Logging on to PIM server pmdm-enablement-dev2.stibo.com as RACHEL...
30	Info	Logged on
40	Info	Analysis started. (Fri Aug 09 13:06:11 CEST 2019)
50	Info	Analyzed 1 objects from initial object selection in 0 seconds. (Fri Aug 09 13:06:11 CEST 2019)
70	Info	Analyzed 0 children objects (including aggregates) in 0 seconds. (Fri Aug 09 13:06:11 CEST 2019)
90	Info	Analyzed 5 initial parents in 0 seconds. (Fri Aug 09 13:06:11 CEST 2019)
120	Info	Analyzed 0 objects referenced from other objects in 0 seconds. (Fri Aug 09 13:06:11 CEST 2019)
170	Info	Analyzed 0 referenced parents in 0 seconds. (Fri Aug 09 13:06:11 CEST 2019)
190	Info	Removed duplicates in 0 seconds. (Fri Aug 09 13:06:11 CEST 2019)

1-25 of 52

https://pmdm-enablement-dev2.stibo.com/webui/webui/bgpf?processID=BGP_103572&field=OUTPUTFILE&csrf_token=9E8B84E78C51D866E89ABDCD5918D394&portalID=PMDMWebUI&contextID=Context1&workspaceID=Main

4. Send the downloaded Excel Smartsheet to the Smartsheet user to complete, validate, and return to the buyer.

5. On the homepage, click the **Import Smartsheet** link.

WORK WITH SMARTSHEETS

Start by downloading an empty Smartsheet.
Download Smartsheet

Once completed, import your Smartsheet.
[Import Smartsheet](#) ←

6. A background process is initiated as shown in a notification like the one below.

Creation of background process initiated BGP_103702 (Web UI Smartsheet Import) X

7. The background process is reported.

Finished Processes (2)	Open Process List
<p>Web UI Smartsheet Import</p> <p>2019-08-19 12:57 - 2019-08-19 12:57</p> <p>PMDM.USR.BUYER1</p>	<p>Show Report</p>

8. Products are initiated into the 'Product Creation Workflow' as reported in the notifications panel.

← Web UI Smartsheet Import (100%) 

All (11) Errors (0) Warnings (0)

Import Started

Logged On

Started 1 objects in Workflow
'PMDM.WF.ProductCreation' (0 failed).

Started 1 objects in Workflow 'PMDM.WF.VariantHandling'
(0 failed).

Imported 1 new products, 0 new classifications, 0 new entities and 0 new assets.

Processed 0 existing products, 0 existing classifications, 0 existing entities and 0 existing assets.

Skipped 0 products, 0 classifications, 0 entities and 0 assets.

Deleted 0 products, 0 classifications, 0 entities and 0 assets.

Found 0 warnings

Found 0 errors

Import completed

'Acquire' Activity - Create Products via IIEP

Products, as well as families and variants, can be created by an inbound integration endpoint (IIEP) 'Products Inbound (PMDM.IIEP.ProductsInbound)', connected to the ERP.

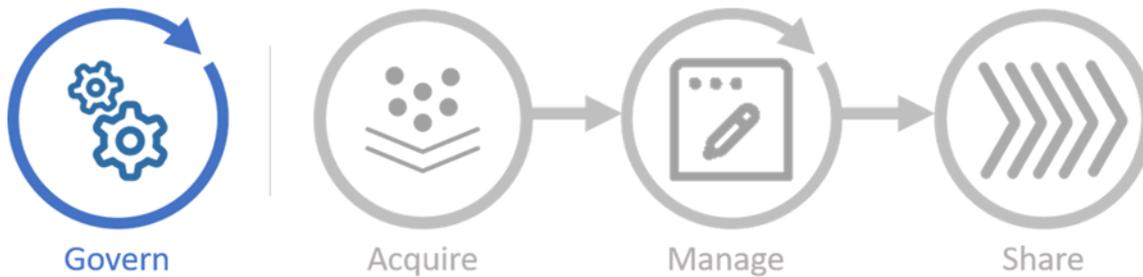


- The ERP creates product data with a few pieces of key information, one of them being the 'SKU.' The ERP generates a STEPXML file and saves it in a hotfolder.
- STEP automatically imports the STEPXML file and creates and/or updates products.
- The products created already have a SKU assigned by the ERP and are initiated into the 'Product Creation Workflow.'

For more information, see the **Creating an Inbound Integration Endpoint** topic in the **Data Exchange** documentation.

Product Content Management 'Govern' Activity

The Product Content Management module includes the Govern, Acquire, Manage, and Share activities.



Data Steward

The data steward:



- maintains the mapping between the ERP classification and the MDM classification.
- performs Data Governance tasks to maintain attributes, attribute groups, and LOVs.

Each of these tasks are defined below.

Maintain the ERP and PIM Classification Mapping

Within the Product Content Management module, the 'govern' activity includes defining and maintaining a mapping between the ERP and PIM. This task is usually performed by the data steward.

The product is automatically classified in the primary product hierarchy using a value ('ERP line') provided by the ERP. And it is also possible to classify products directly in STEP.

Applying automatic classifications requires a mapping between the 'ERP line' code, provided by the ERP, and a unique identifier of a node (a level) in the primary product hierarchy. This identifier is the attribute 'External Identifier (ExternalIdentifier)'.

This mapping is served by a Transformation Lookup Table (PMDM.LUT.ERPToPMDMMapping) and must be maintained in the workbench.

ERP Product Classification

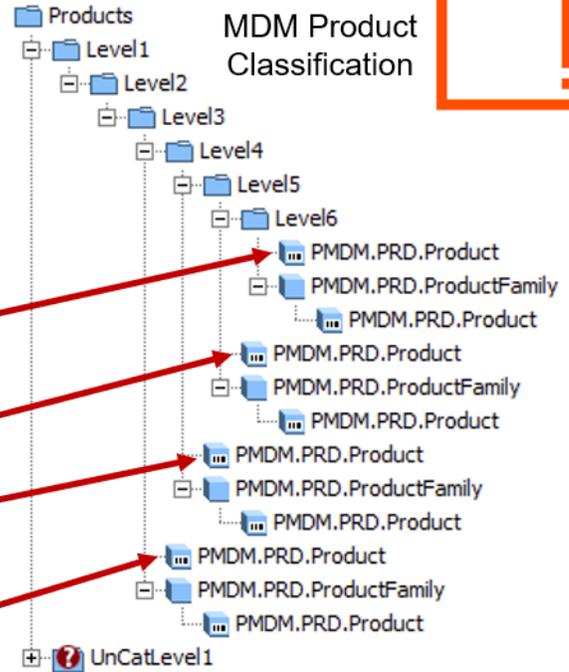


MDM Product Classification



Hierarchy tree

Material hierarchy	Hierarchy	Text
▼ Hierarchy		
▼ 00001	00001	Tools
▼ 0000100002	0000100002	Compre
• 000010000200000001	000010000200000001	Nail gu
• 000010000200000003	000010000200000003	Cleanin
• 000010000200000002	000010000200000002	Spray guns
▼ 0000200001	0000200001	Alcoholic
• 000020000100000001	000020000100000001	Beer
• 000020000100000002	000020000100000002	Wine
▼ 0000100001	0000100001	Electric
• 000010000100000002	000010000100000002	Drilling
• 000010000100000001	000010000100000001	Screw
▼ 00002	00002	Drinks
▼ 0000200002	0000200002	Non-alk
• 000020000200000002	000020000200000002	Water
• 000020000200000001	000020000200000001	Juice
▼ 0000200003	0000200003	Access
• 000020000300000001	000020000300000001	Glasses
• 000020000300000002	000020000300000002	Barrels



Attributes and LOV Data Governance

The data steward manages attributes, attribute groups, and LOVs in the Web UI. Data Governance features are accessed via a Stack Panel Item on the ---[MAIN]--- page of your Web UI.

Tree <

Product Creation Workflow

Collaboration Workflow

Data Governance

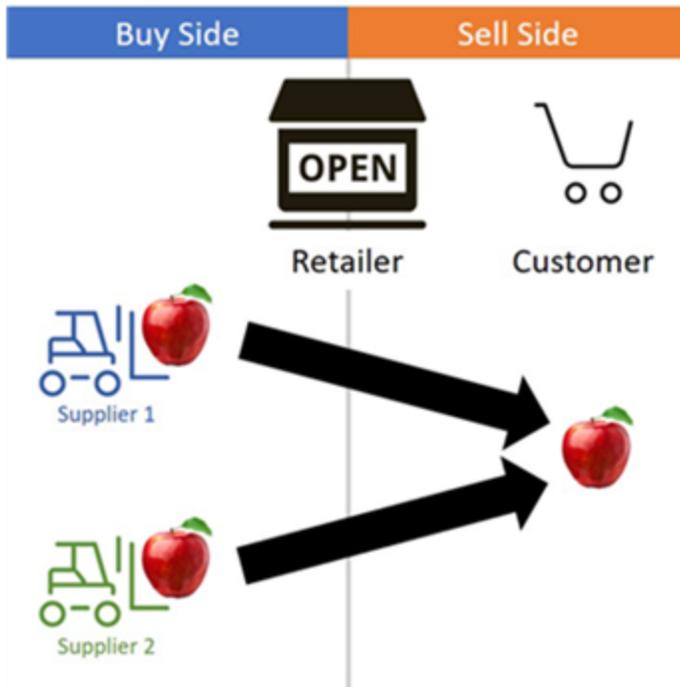
- Attributes
 - ▶  Category Specific Attributes
 - ▶  Product Maintenance
 - ▶  Asset Metadata
 - ▶  Web Category Attributes

List of Values

- ▶  GPC LOVs
- ▶  Product Attribute LOVs

Module - Vendor Data Onboarding

The Vendor Data Onboarding allows for multiple supplier-side products for one retailer-side product (buy-side, sell-side). In this configuration, the Suppliers onboard their data (while in the 'Product Content Management' module, the Retailer was onboarding the Product Data). A distinction is made between the product data coming from the suppliers (which may vary from one supplier to the other) and the product data as maintained by the retailer.



Source Records

Source Records are purchased products and sold products, or buy-side / sell side, and other expressions.

While you may know about 'buy-side product,' 'supplier product,' and 'vendor product,' a more generic naming is relevant. Product data can come from a supplier, but it can also come from a content provider (such as GDSN, Salsify, etc.), so the term 'source record' is used.

There are three types of Product Data (or 'Source Records').

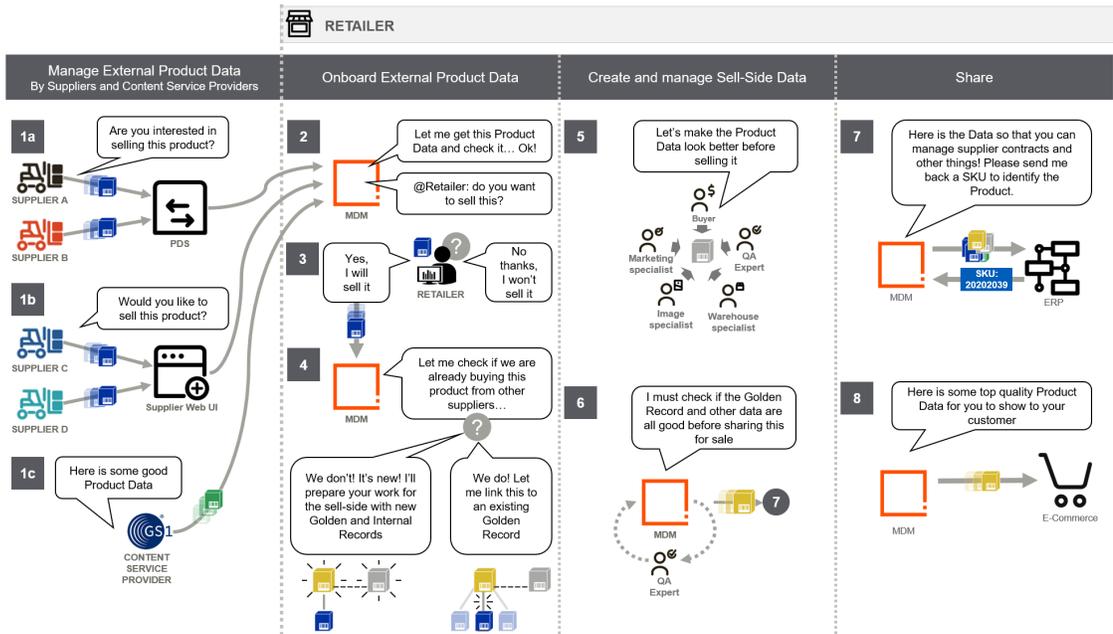
Object	Also known as	Definition
External Source Record	Buy-side product, supplier product, purchased product	An External Source record is a

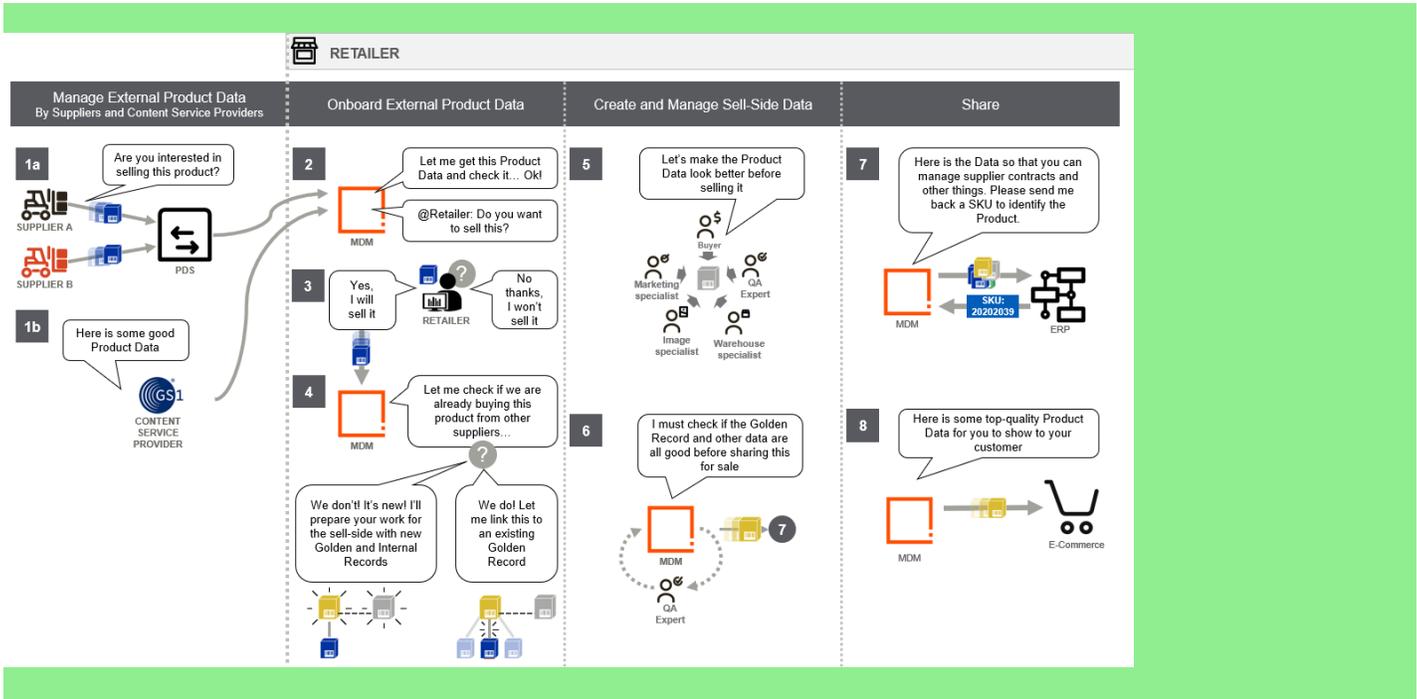
Object	Also known as	Definition
		<p>Product data object coming from a supplier, who would like the Retailer to buy its product, of from a product data provider (GDSN, etc.), which contains quality data on products. They are external to the retailer.</p>
Internal Source Record	Silver record, sell-side product, sold product	<p>Mixing the data provided by the supplier and present it directly to the consumer is often not enough. The Retailer needs specific data to make its product sell very well. This could be for instance: a powerful marketing text to tempt the consumer, an</p>

Object	Also known as	Definition
		<p>impactful picture, convincing argument explaining why it is best to buy it from the Retailer and not from a competitor, etc.</p> <p>The Internal Source Record is a Product data object on the retailer side containing retailer-specific data which will also be promoted to the Golden Record.</p>
Golden Record		<p>When there are several data sources for the same Product, it is indispensable to take the best of the data and aggregate them into a read-only object: this is the role of the Golden Record.</p>

Object	Also known as	Definition
		<p>It is the source of truth for product data that mixes the most relevant data from the external and internal sources.</p> <ul style="list-style-type: none"> • Contains both buy-side and sell-side data. • Published to the sales channels.

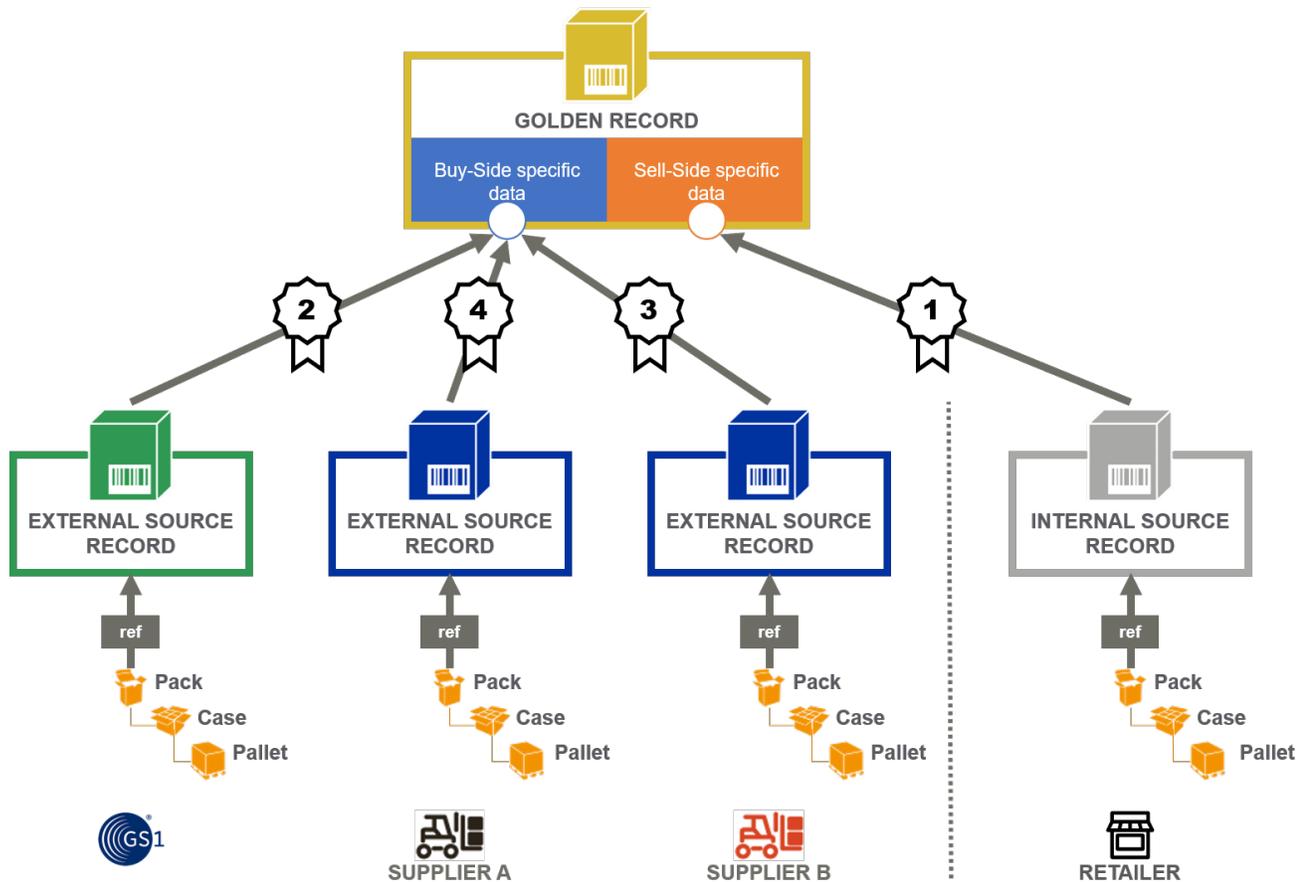
Onboarding Process Overview





This quick look at the onboarding process is detailed in the next sections.

Vendor Data Onboarding Data Model



The Vendor Data Onboarding data model includes External Source Records, an Internal Source Record, and a Golden Record. The following diagram illustrates how the different objects are articulated:

- The Golden Record aggregates data coming from the External Source records and the Internal Source records (aka 'Silver Record').
- The packaging hierarchy objects are attached to each record.
- The 'each' is the source record itself.
- Each Source Record has a 'rank'. This rank can be thought of as a 'weight' or 'trust index' used during the Matching & Linking process to prioritize data and chose which record to 'promote' from the different sources to the Golden Record.

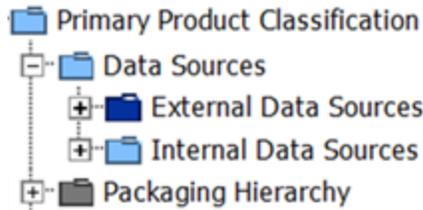
Primary Product Hierarchy

In the Vendor Data Onboarding configuration, the Primary Product Hierarchy is organized as follows:

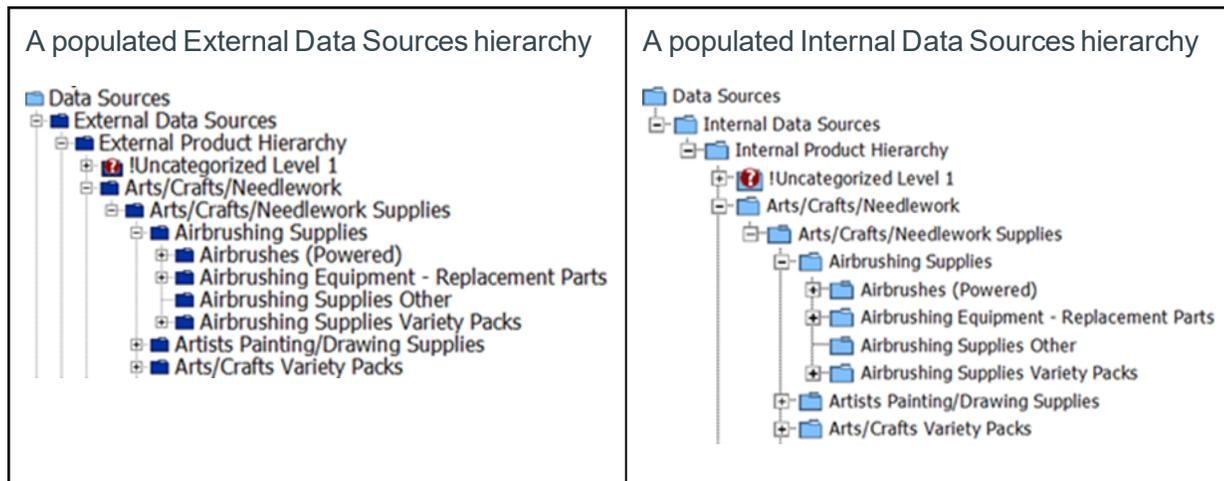
- External Data Sources
- Internal Data Sources

- Packaging hierarchy

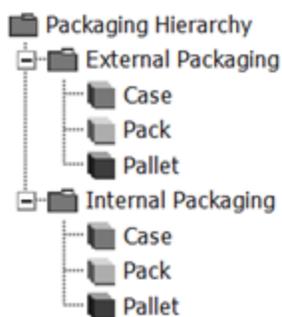
The structures of the 'External Data Sources' and 'Internal Data Sources' are identical, as shown below.



- In the External Data Sources classification, the External Source Records are stored.
- In the Internal Data Sources, the Internal Source Record and the Golden Records are stored.

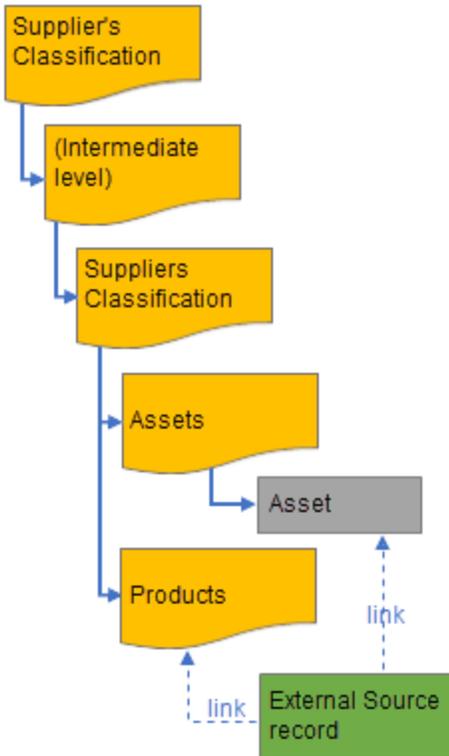


The Packaging hierarchy is a flat structure, used to store the packaging objects.



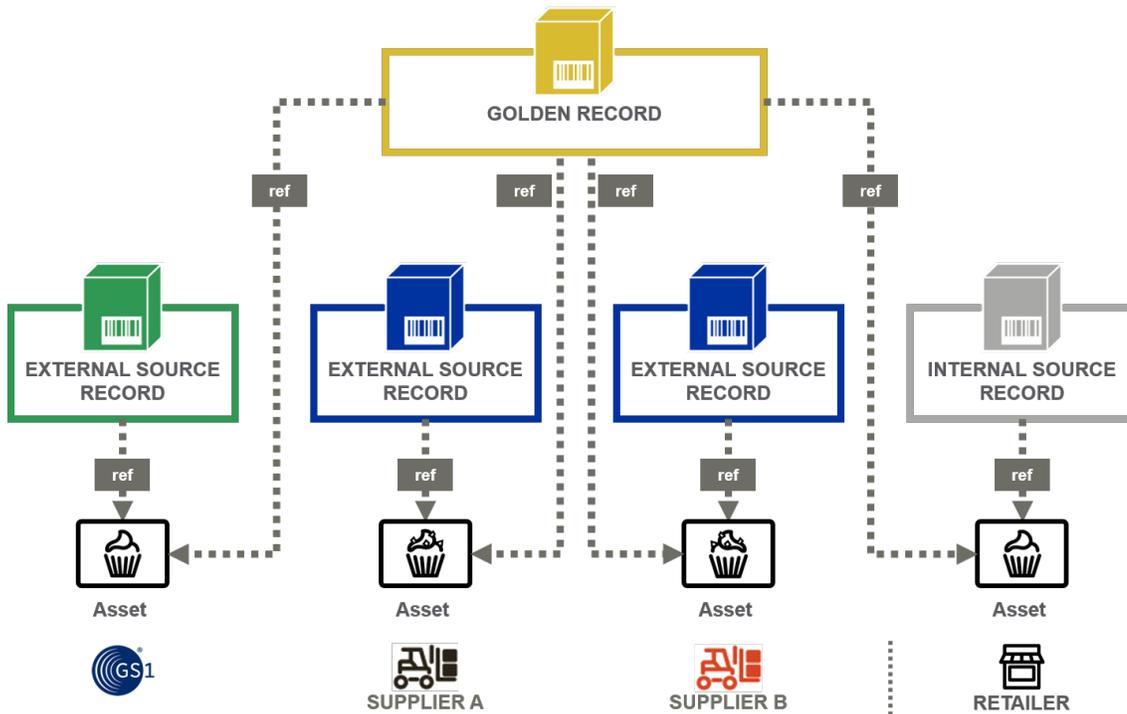
Supplier Classification

Suppliers are classified in a classic way:



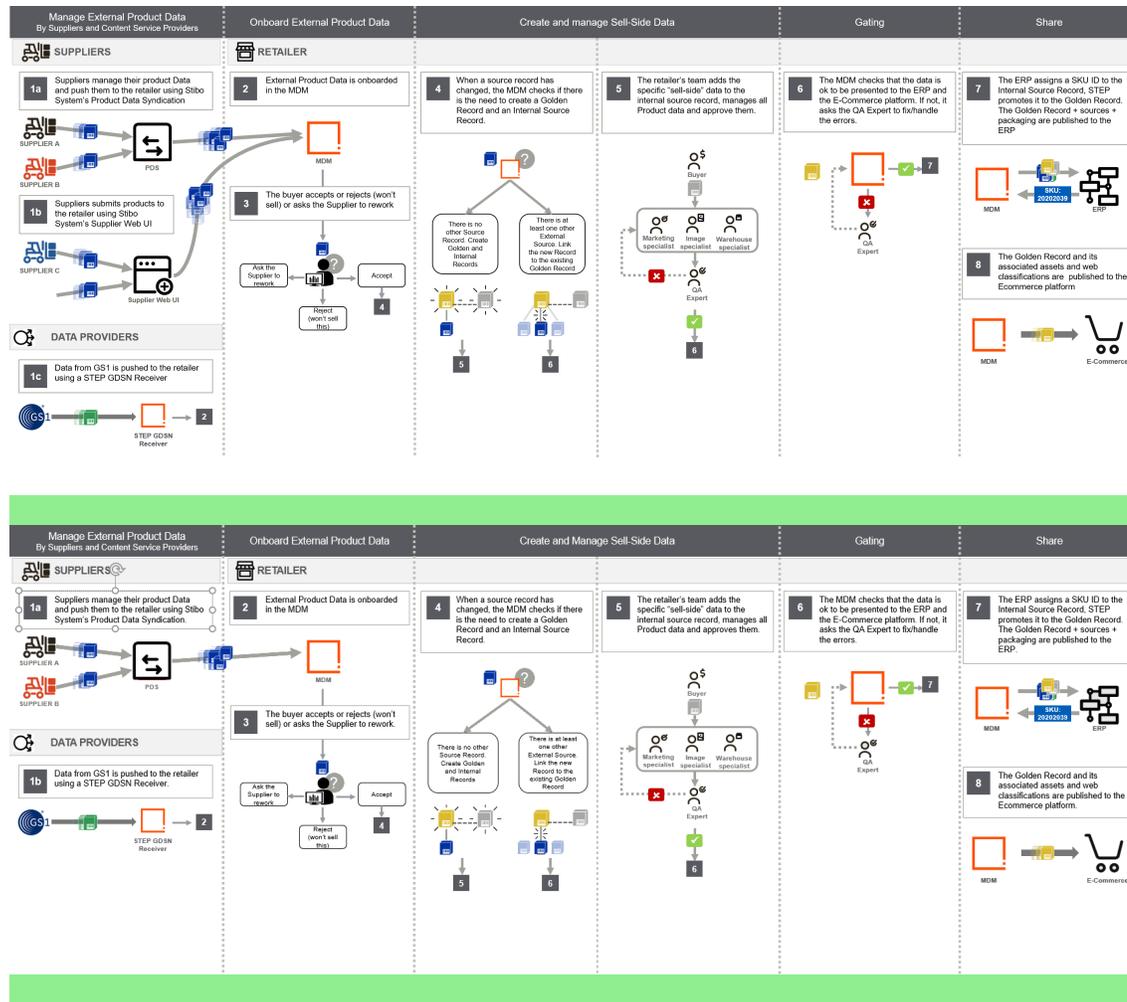
Assets

Assets are linked as follows:

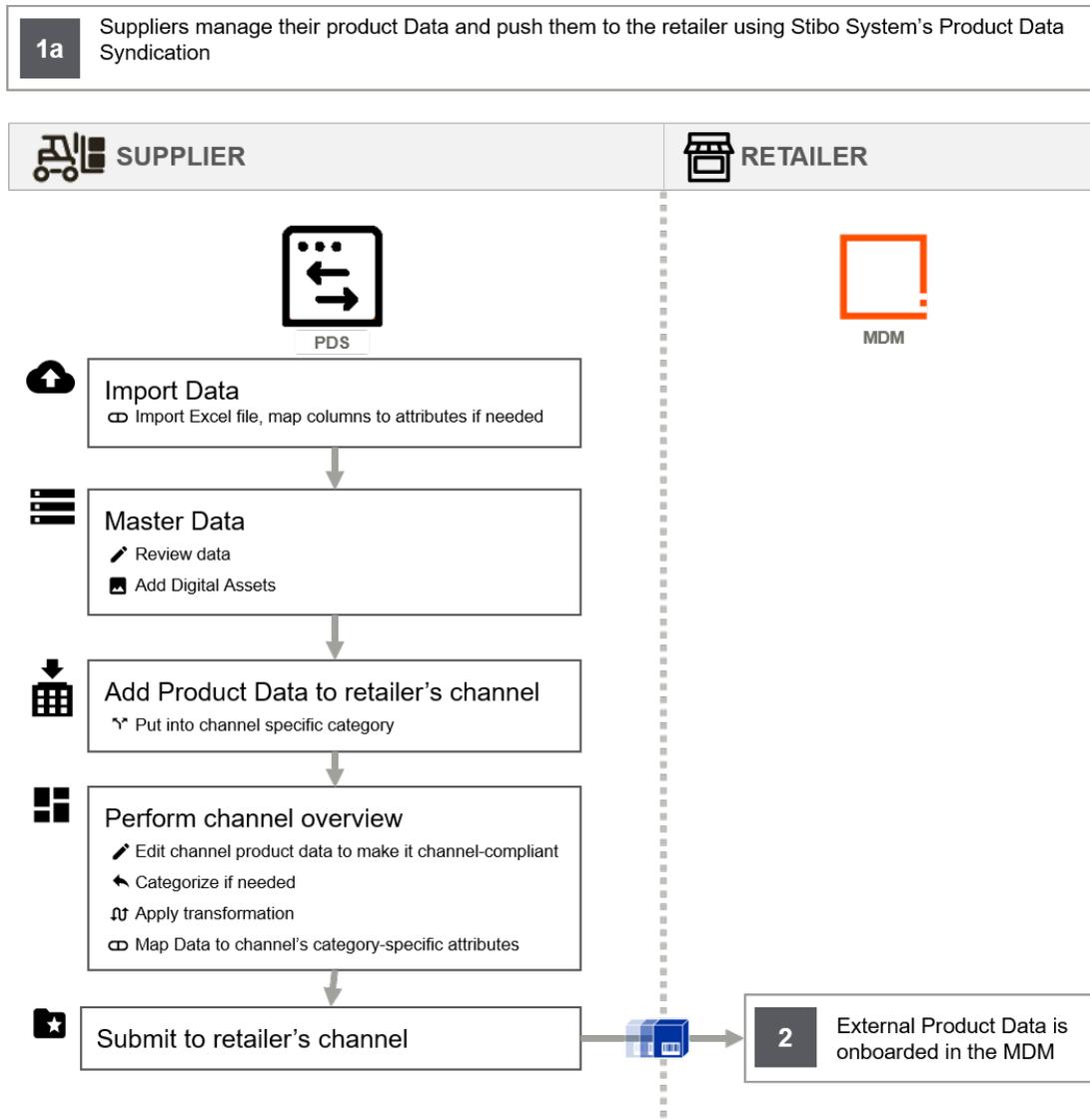


Vendor Data Onboarding - Process

Below is the full story about onboarding vendor data. Each number is detailed in its own section.



Onboarding 1a - Suppliers Manage and Publish Product Data Using PDS



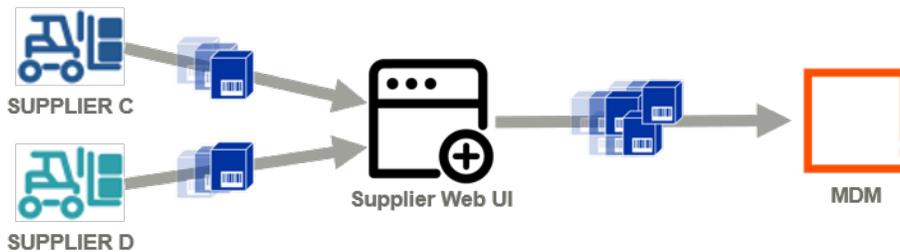
Using PDS, the vendor will onboard and submit their product information to the Retailer. The following is a typical process followed by the vendor.

- **Import Data:** Vendors can upload product data and assets either from Excel or using PDS' APIs to integrate with their internal systems.
- **Master Data:** Vendors can view, and when required, manage imported product data, and digital assets.
- **Categorization:** Vendors will manually select or create automation rules to map products to retailer categories.

- **Mapping and Validation:** To ensure they meet the Retailer's requirements, the vendor will map their master data attributes to the retailer specific attributes, viewing any error messages, and using attribute value transformations or data edits to resolve errors.
- **Process Management:** From product onboarding and maintenance to viewing and responding to reject and return reasons, vendors can use PDS to manage the end-to-end process of syndicating their product information to the retailer.

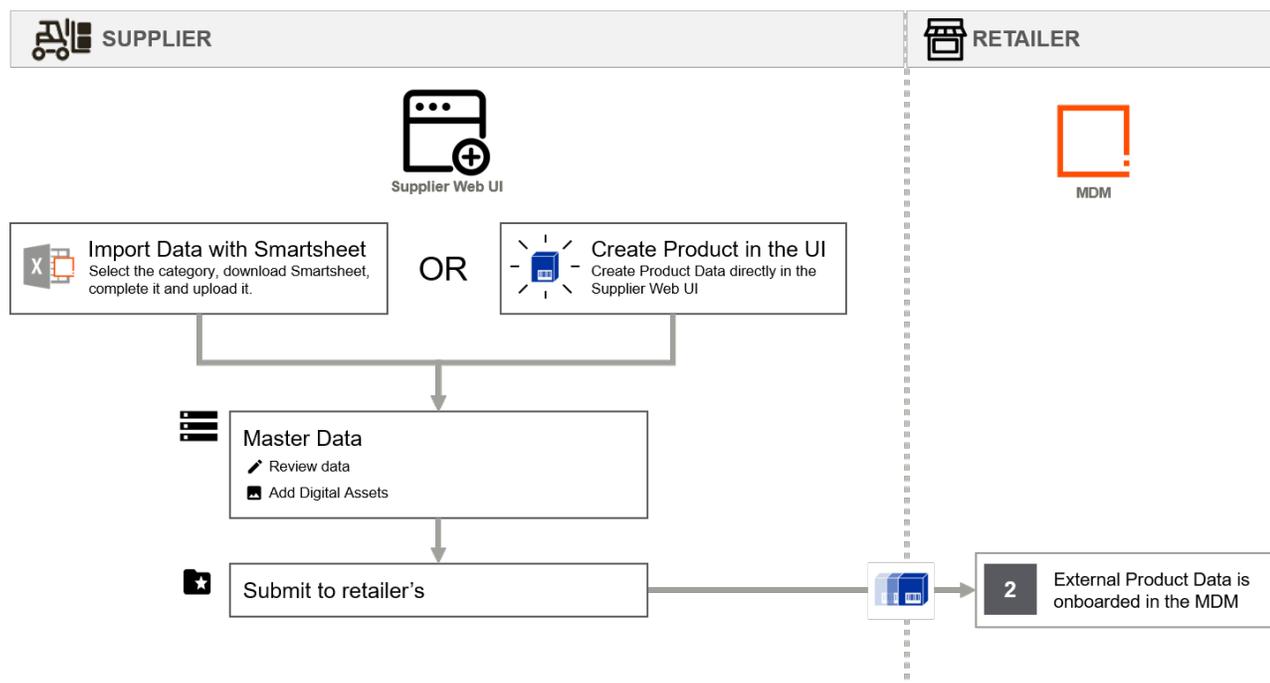
Onboarding 1b - Suppliers Manage and Publish Product Data Using Supplier Web UI

1b Suppliers submits products to the retailer using Stibo System's Supplier Web UI



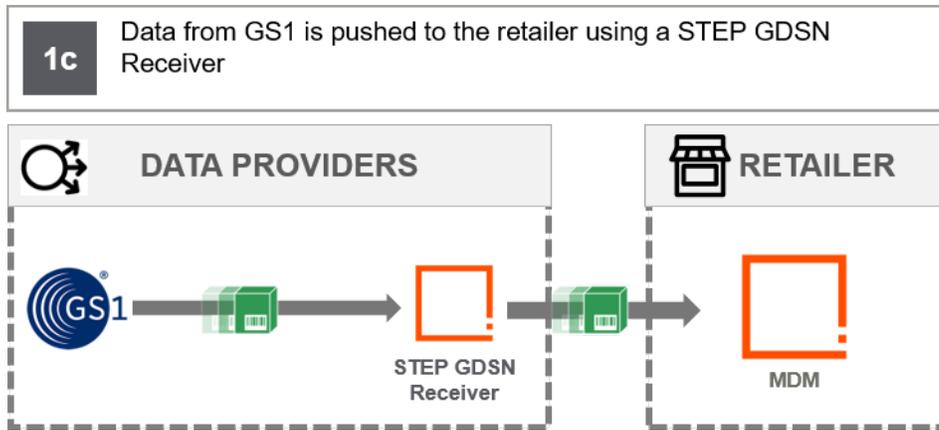
Suppliers use the Supplier Web UI to onboard data, either from Excel Smartsheet or by creating Product Data directly in the Supplier Web UI. Of course, each supplier is restricted to their own products and assets.

The activities are summarized in the following diagram:



For general information about the Supplier Web UI, see the **Supplier Web UI** documentation.

Onboarding 1c - PIM Onboards External Product Data from GDSN

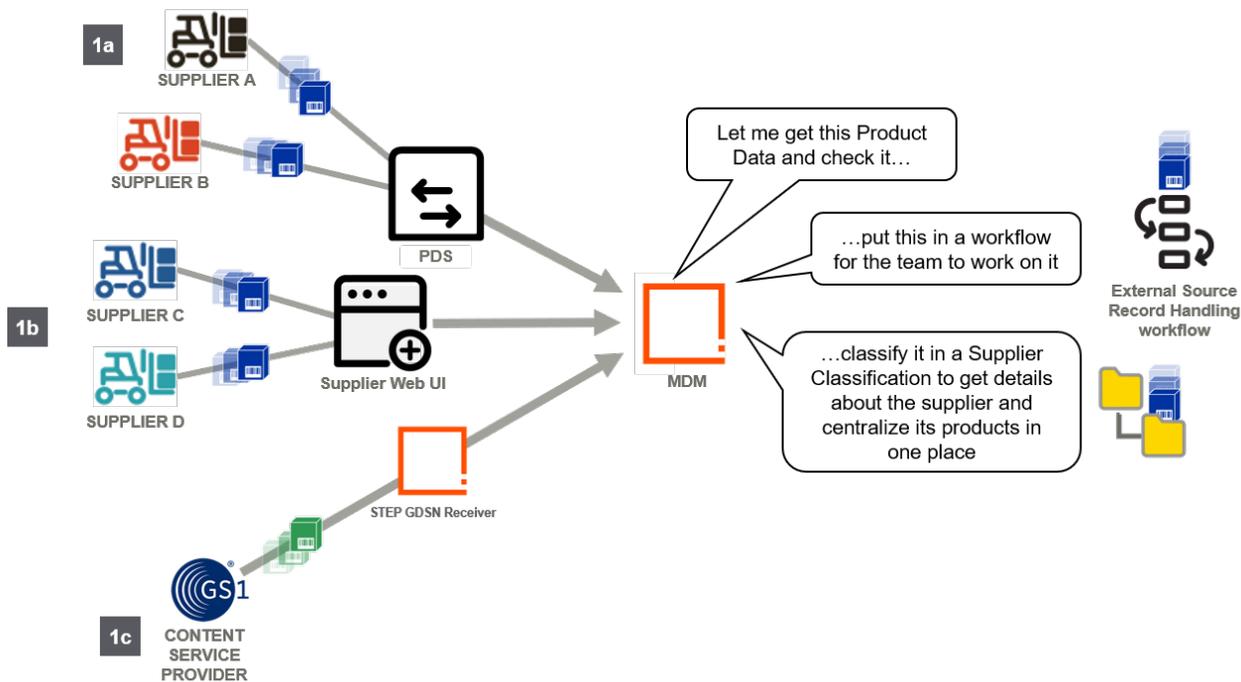


Product Data can be onboarded from GS1. This ensures a very high data quality. GS1 data is collected in a separate STEP instance with a GDSN receiver.

For more details, see the **Module - GDSN Receiver for PIM for Retail** topic.

Onboarding 2 - PIM Onboards External Product Data from Suppliers

2 External Product Data is onboarded in the MDM

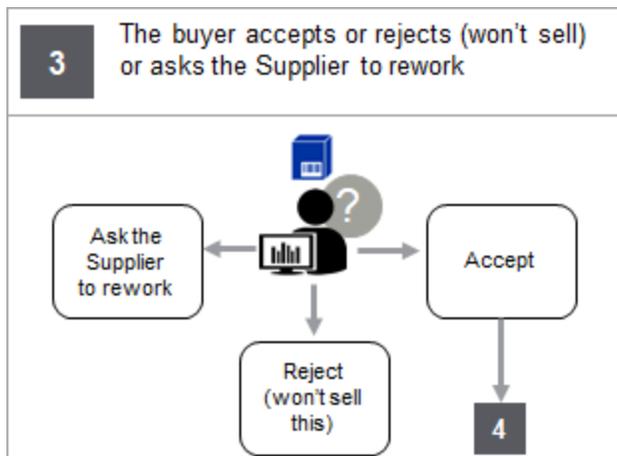


The product data received from the Supplier via PDS or subscribed to and received from GDSN is being created in PIM for Retail as a separate product object of the type External Source Record in the External Product Hierarchy and optionally separate packaging objects in the External Packaging hierarchy. As part of the creation, the External Source Record is being initiated in the External Source Record Handling workflow which will guide the External Source Record through the different states of the onboarding process.

The External Source Record is being linked to a Supplier classification to keep track of the products delivered per Suppliers. If product data for the same product is being received by multiple Suppliers or Content Providers they will be created as separate External Source Records, each linked to the relevant supplier.

The data on the External Source Record is owned by the Supplier and it will not be maintained by the retailer.

Onboarding 3 - Buyer Accepts or Rejects the Supplier's Product Proposal



When a new External Source Record has been created in PIM for Retail and initiated in the External Source Record Handling workflow, the workflow checks if the specific Supplier is configured to allow for automatic approval of proposed products or if it has to go through a manual process where the Buyer has to manually decide if we want to onboard the product.

On the homepage, in the 'External Record Handling' widget, the buyer will see the number of External Source Records concerned.

EXTERNAL RECORD HANDLING	
Proposal	36
Enrichment	35
Proposal Approval Buyer	35
Rework	1
Rejected	0

In the manual proposal approval process the buyer has the option to approve the product data and continue with the onboarding of the product, send it back to the Supplier for rework in case the supplied data is wrong or incomplete or reject the product for onboarding in case the Retailer do not want to onboarding and sell the product.

On the Product Page, the Buyer will choose:

Proposal Status

Approve

Reject

Rework

"Approve": the Product data is good, it will be sold.

"Reject": the product won't be sold.

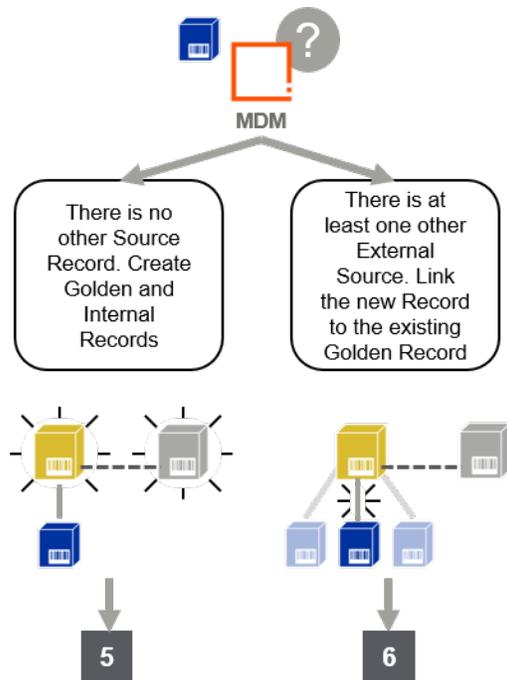
"Rework": ask the Supplier to rework on the data.

Message to Supplier

If you select "Reject" or "Rework", please write a message for the Supplier.

Onboarding 4 - PIM Aggregates the Data in a Golden Record

4 When a source record has changed, the MDM checks if there is the need to create a Golden Record and an Internal Source Record.



When the External Source Record is accepted for further onboarding in the External Source Record Handling workflow it advances to the Matching and Linking process.

The Matching and Linking process first creates a match code for the External Source Record which is used to check if there is already an existing Product with the same match code in the system. Per default, the match code is the GTIN of the Product.

If no existing Product with the GTIN is found, the system creates a new Golden Record and an Internal Source Record for this Product. The Internal Source Record is used by the Retailer to enrich the Product and will contain the Retailer's own product data like web descriptions, data from the ERP system, etc. If the External Source Record causing the Matching and Linking process to be executed has corresponding external packaging objects, they will be duplicated to internal packaging objects which will be linked to the created Internal Source Record.

If there is already a Product with the same GTIN, there is a match and the External Source Record will be linked to the existing Golden Record.

As part of the process, data from all linked sources (External and Internal Source Records) will be promoted to the Golden Record using a set of survivorship rules which is defined on the Products matching algorithm.

Onboarding 5 - Retailer Adds Sell-Side Specific Data

5 The retailer's team adds the specific "sell-side" data to the internal source record, manages all Product data and approves them.



The product data for a new Product needs to be enriched internally by the Retailer before it will be ready to go out for downstream systems and be sold. To support this process, the Internal Source Record Creation workflow is initiated when a new Golden Record and Internal Source Record are created.

First, a task is assigned to the Buyer Group to allow a Buyer to enrich and maintain the Buyer relevant part of the product data.

The Buyer Review task is visible on the homepage, in the 'Internal Record Creation' widget:

INTERNAL RECORD CREATION



	High	Normal
Buyer Review	<u>0</u>	<u>14</u>
Copywriting Review	<u>0</u>	<u>0</u>
Digital Asset Review	<u>0</u>	<u>0</u>
Warehouse Data Review	<u>0</u>	<u>1</u>
Enrichment Review	<u>0</u>	<u>0</u>
Product Review	<u>0</u>	<u>1</u>

Note: Only the tasks that are relevant to users will be visible to them.

The **Buyer** can also decide if the product should be sent for further enrichment by the **Marketing Specialists**, the **Image Specialists** and/or the **Warehouse Specialists** or if it should be sent directly to final review by the Quality Assurance Experts. If the Product is sent for further enrichment by Marketing, Image and/or Warehouse they will be able to do their enrichment in parallel.

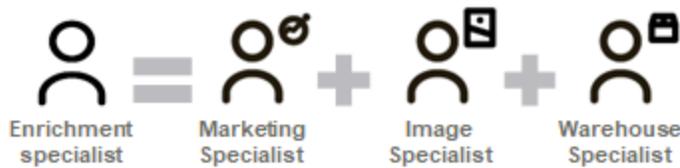
The enrichment tasks are visible on the home page, in the 'Internal Record Creation' workflow widget.

INTERNAL RECORD CREATION



	High	Normal
Buyer Review	<u>0</u>	<u>14</u>
Copywriting Review	<u>0</u>	<u>0</u>
Digital Asset Review	<u>0</u>	<u>0</u>
Warehouse Data Review	<u>0</u>	<u>1</u>
Enrichment Review	<u>0</u>	<u>0</u>
Product Review	<u>0</u>	<u>1</u>

Alternative: In smaller organizations, the Enrichment Specialist can accumulate the work of the Marketing Specialist, the Image Specialist, the Warehouse Specialist.



This option is visible in the Workflow widget, as the 'Enrichment Review' task.

INTERNAL RECORD CREATION		
	High	Normal
Buyer Review	<u>0</u>	<u>14</u>
Copywriting Review	<u>0</u>	<u>0</u>
Digital Asset Review	<u>0</u>	<u>0</u>
Warehouse Data Review	<u>0</u>	<u>1</u>
Enrichment Review	<u>0</u>	<u>0</u>
Product Review	<u>0</u>	<u>1</u>

When all enrichment tasks are done, the Product is assigned to the Quality Assurance Experts. They have the final saying if all product data is correct and can be approved. If the Quality Assurance Expert finds something that needs to be corrected, they have the option to reject the Product to the Buyer, Marketing, Image, or Warehouse Group for rework.

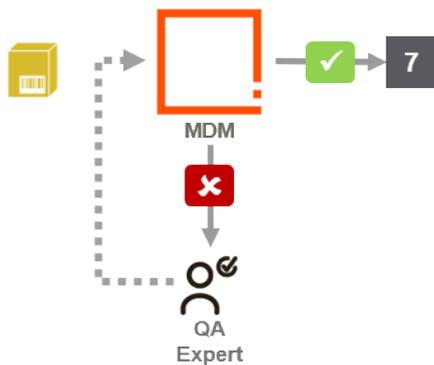
INTERNAL RECORD CREATION		
	  	
	High	Normal
Buyer Review	<u>0</u>	<u>14</u>
Copywriting Review	<u>0</u>	<u>0</u>
Digital Asset Review	<u>0</u>	<u>0</u>
Warehouse Data Review	<u>0</u>	<u>1</u>
Enrichment Review	<u>0</u>	<u>0</u>
Product Review	<u>0</u>	<u>1</u>

5



Onboarding 6 - MDM Checks that the Data is Ready to be Presented to Other Systems

6 The MDM checks that the data is ok to be presented to the ERP and the E-Commerce platform. If not, it asks the QA Expert to fix/handle the errors.



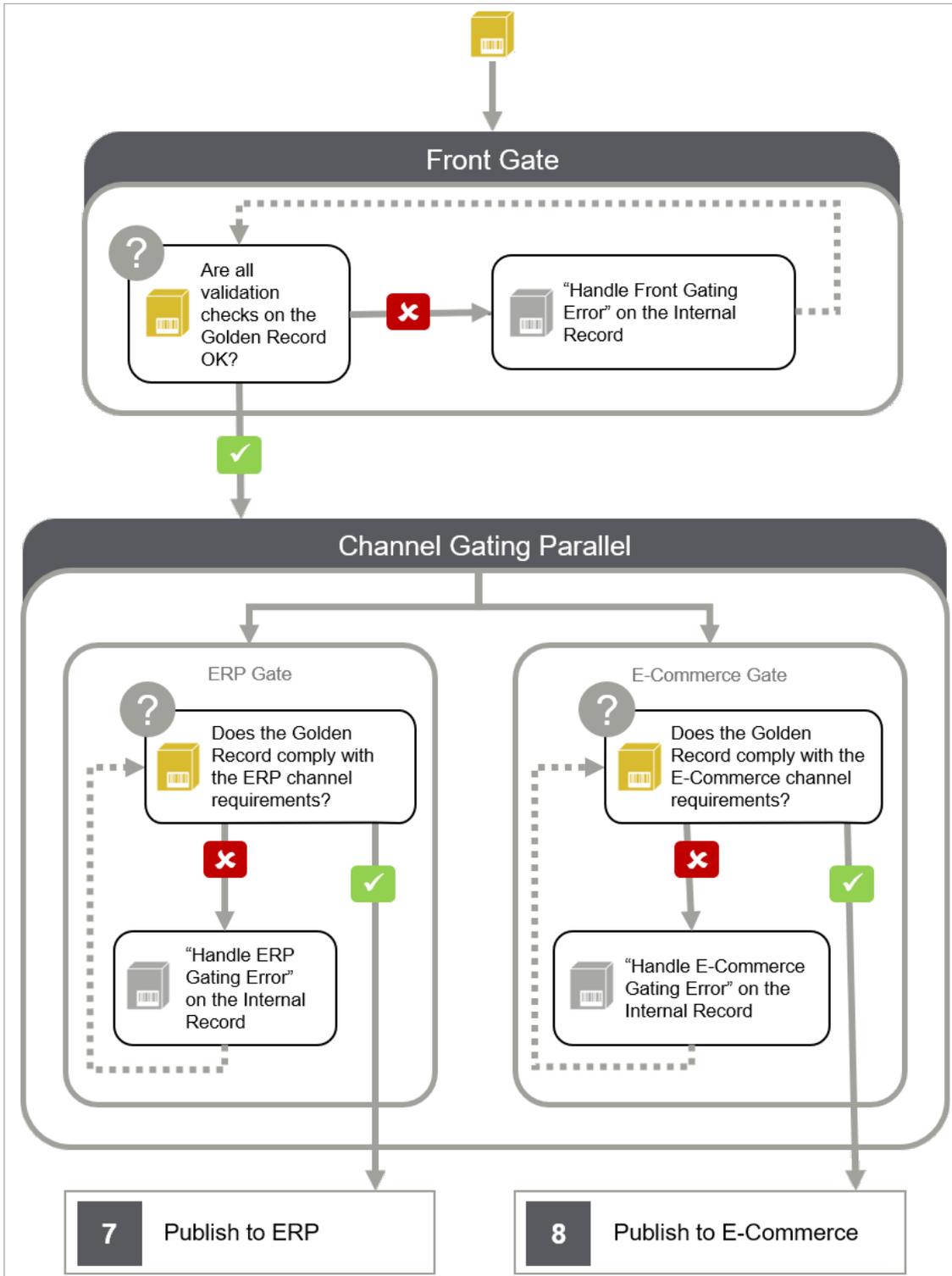
When the Product has been approved by the **Quality Assurance Expert** the Internal Source Record Creation workflow sends the Product to the **Matching and Linking** process again to promote the latest set of data from the linked sources to the Golden Record. When the data has been promoted, the Product is initiated in the **Golden Record Gating workflow** which will validate the Golden Record against a set of validation rules to see if the Golden Record is ready to be Published.

The Golden Record Gating workflow first runs the Product through a common validation (validation gate) to check for e.g. attribute values that are mandatory across all channels. If passed, it will continue with channel specific validation in parallel to check if specific validation rules for ERP and E-commerce are fulfilled.

If one or more validation errors are found, then the Product will be sent to a gating specific 'Handle Error' state in the **Handle Gating Error workflow** and a task will be assigned to the **Quality Assurance Expert**. When the product data has been corrected and the Quality Assurance Expert has proceeded the task, the process is executed again to check if the validation is now fulfilled.

If all general validation rules and the ERP specific validation rules are fulfilled, then Publish to ERP will be set to Yes on the Golden Record.

If all general validation rules and the E-commerce specific validation rules are fulfilled, then Publish to E-commerce will be set to Yes on the Golden Record.



The tasks related to Gating Errors can be found on the homepage, in the 'Handle Gating Error' widget.

HANDLE GATING ERROR		
	 Onboarding	 Update
Handle Front Gating Error	<u>0</u>	<u>1</u>
Handle ERP Gating Error	<u>0</u>	<u>0</u>
Handle Ecommerce Gating Error	<u>0</u>	<u>0</u>

The errors are displayed at the bottom of the Product Page, like this:

Front Gate: Errors	Primary Product Image: Missing Primary Product Image reference(s)
--------------------	---

Validation rules for gating process

During the Matching and Linking process the Golden Record is initiated in the Golden Record Gating workflow which will check if the Product it is ready to be send out to the ERP system and/or the E-commerce platform.

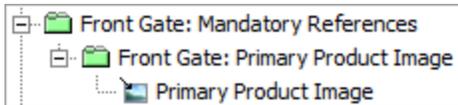
First the Golden Record will go to a common validation state (Front Gate) where it will be checked for mandatory attribute values, mandatory references etc. This check is being handled by the 'Front Gate' business rule.

Per default, the business rule checks the following:

- The Golden Record has a value for all attributes linked into the 'Front Gate: Mandatory Attributes' attribute group.
- The Golden Record has at least one existing reference per reference type linked into the 'Front Gate: Mandatory References' attribute group.

Each reference type must be linked into a separate sub attribute group below 'Front Gate: Mandatory References'.

If attributes are linked into the sub attribute group together with the reference type, then these attributes will be considered mandatory meta-data attribute on the reference.



If one or more validate errors are found, then the Internal Source Record will be forwarded to the 'Handle Front Gating Error' state in the Handle Gating Error workflow.

If the Front Gate is passed, then the Golden Record will continue with the channel specific validation states (ERP Gate and E-commerce Gate). Each of the two states are similar to the Front Gate.

ERP Gate

- Business rule used: ERP Gate
- Attribute Group for mandatory attributes: ERP Gate: Mandatory Attributes
- Attribute Group for mandatory references: ERP Gate: Mandatory References
- Attribute containing ERP Gate errors: ERP Gate: Errors
- State the Internal Source Record will be forwarded to on errors: Handle ERP Gating Error

If the ERP Gate is passed, then the 'Publish To ERP' attribute is set to Yes on the Golden Record and the Golden Record is exported to the ERP system using the 'Products Outbound – ERP' outbound integration endpoint.

E-commerce Gate

- Business rule used: E-commerce Gate
- Attribute Group for mandatory attributes: E-commerce Gate: Mandatory Attributes
- Attribute Group for mandatory references: E-commerce Gate: Mandatory References
- Attribute containing E-commerce Gate errors: E-commerce Gate: Errors
- State the Internal Source Record will be forwarded to on errors: Handle E-commerce Gating Error

If the E-commerce Gate is passed, then the 'Publish To E-commerce' attribute is set to Yes on the Golden Record and the Golden Record is exported to the E-commerce system using the 'Products Outbound - E-commerce' outbound integration endpoint.

Onboarding 7 - PIM Communicates with the ERP

7

The ERP assigns a SKU ID to the Internal Source Record, STEP promotes it to the Golden Record. The Golden Record + sources + packaging are published to the ERP



When the Golden Record has passed the validation for ERP then the Golden Record is sent to the 'Products Outbound – ERP' outbound integration endpoint. The corresponding Internal Source Record is initiated in the ERP Communication workflow, which is used to handle the two-way communication with the ERP system.

The export uses STEPXML format and contains the Golden Record, all linked Source Records (Internal and External), plus all packaging objects linked from the sources.

Onboarding 8 - PIM Sends Product Data to the E-commerce Platform

8

The Golden Record and its associated assets and web classifications are published to the Ecommerce platform



MDM



E-Commerce

When the Golden Record has passed the validation for E-commerce, then the Golden Record is sent to the 'Products Outbound - E-commerce' outbound integration endpoint.

The export uses STEPXML format and contains the Golden Record, the assets referenced from the Golden Record, and the web hierarchies where the Golden Record is linked.

Collaboration Workflow



The Vendor Data Onboarding configuration includes a collaboration workflow which works in the same way as in the Product Content Management Module.

The workflow uses the objects introduced in this module: Internal Source Record, External Source Record, and Golden Record.

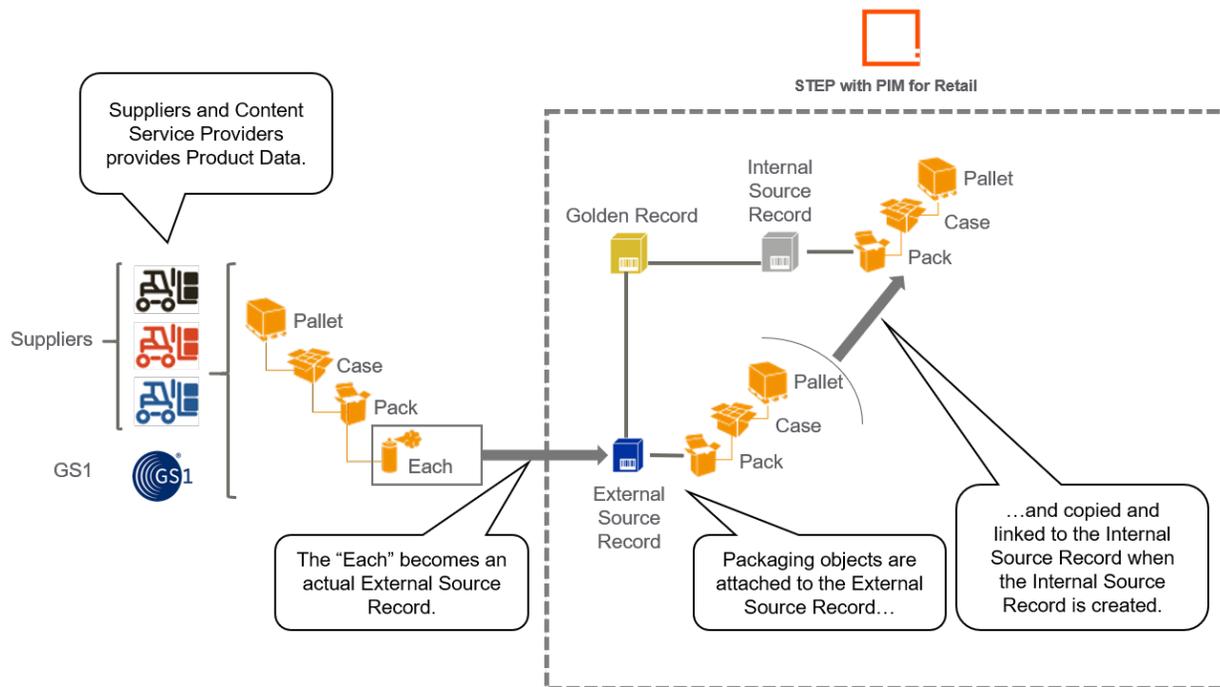
With this workflow, the retailer's team can collaborate on product data. This is an internal communication feature, which cannot include external suppliers, using different systems.

Note: For PDS, a communication channel is included in the onboarding workflow to handle when the retailer accepts a supplier's product, rejects it, or asks the supplier to have it reworked.

Vendor Data Onboarding - Packaging Hierarchy

If the product data received from PDS or GDSN contains packaging information, then it will be created as a separate packaging object per packaging hierarchy level. PIM for Retail is pre-configured with support for Pack, Case, and Pallet, which will be linked from the largest unit to the smallest unit with the quantity of next lower package stored as meta-data on the reference. The Each is represented by the External Source Record.

The packaging objects are modeled as products in PIM for Retail. They will be categorized directly under either External Packaging or Internal Packaging in the separate Packaging Hierarchy without further categorization.



The Packaging Hierarchy can be viewed in a Product details page, in the 'Packaging Hierarchy' tab.

Husqvarna Splitting Axe S2800

EXT-309217 • **Never Approved** • 0.1 • Last edited 10 September 2020 15:01:53 UTC+2

Information & References Assets Pricing & Cost Category Attributes Warehouse Information **Packaging** Language view



	Name	Object Type	ID	GTIN	SKU	Qty of Next Lower Package	Number Of Items	+ Packaging Weights and
	Husqvarna Splitting Axe S2800	External Source Record	EXT-309217	7393080392145	Acme-7393080392145	1	1	
	Pack-384345	Pack	Pack-384345	5077991192101	Acme-5077991192101	12	12	
	Case-384350	Case	Case-384350	4439293250070	Acme-4439293250070	6	72	
	Pallet-384351	Pallet	Pallet-384351	4294150091599	Acme-4294150091599	4	288	

Number of items: 4

Add to basket
 Save
 Save & Approve
 Reset
 Move
 Collaboration

Initial Setup for Vendor Data Onboarding

Contact your Stibo Systems account manager or partner manager for information on activating the PIM for Retail solution:

- PIM: STEP 10.0 (or greater)
- Service activation (license: PDS channel)
- Install and configure the module

Some of the key setup activities are described in the next paragraphs.

More tasks must be performed to make the configuration fully operational and are handled by your dedicated consultants or partners.

- PDS-related data (see below)
- Suppliers (see below)
- Matching and linking
- Users and groups
- Contexts
- Asset push
- OIEP
- Configure profiling for KPIs

Configuration of the Data Model for the PDS Channel

For the Suppliers to be able to onboard Products via PDS, the schema used for the PDS channel needs knowledge about the Supplier facing product hierarchy, the set of Supplier relevant attributes and asset references etc., as defined in PIM for Retail. This section contains information about how this can be controlled in PIM for Retail.

When there has been a change to the data model in PIM for Retail which is relevant for the PDS channel, then it is necessary to make a schema update in PDS to reflect the change. This can be done as a weekly scheduled process or on request.

Supplier-facing Product Hierarchy

The selectable product categories in the PDS channel include all nodes of the object types External Level1 - External Level 6 defined below the 'External Product Hierarchy' node.

The product hierarchy allows for creation of External Source Records starting at External Level 3.

Packaging Objects (Pallet, Case, Pack) will be created directly below the 'External Packaging' node.

Attributes

There are three attribute groups where all viewable attribute groups will be stored: Product Maintenance, Packaging Maintenance and Category Specific Attributes.

All attributes in the mentioned groups will per default be shown to the Suppliers in PDS.

If specific attributes in the mentioned attribute groups should not be shown in PDS then the attributes have to be linked to the 'PDS: Hide From Supplier' attribute group.

Asset references

The set of asset reference types to display in PDS can be controlled by setting the 'PDS: Relevance' attribute to Yes on the asset reference type definition for the PDS relevant asset reference types.

Display sequence of Attributes and Attribute Groups

The 'Display Sequence' attribute valid on attribute definitions, attribute group definitions and on attribute links can be used to control the display order of attribute groups and attributes within those groups in PDS.

Required for Initiate

It might not be necessary that the Supplier fills out the full set of mandatory attributes before he submits a new Product to PIM for Retail. A short description and the GTIN of the Product might be enough for the Retailer to determine if this is a product they would like to onboard.

The set of attributes being mandatory for initiate is defined by linking the attributes to the 'PDS: Mandatory For Proposal' attribute group.

Mandatory Attributes

The set of attributes being mandatory for submit after initiate is defined by linking the attribute to the 'PDS: Mandatory For Submit' attribute group.

Category specific mandatory attributes are controlled using the standard Mandatory option on the attribute link.

Category Specific Mandatory Asset References

Category specific asset references that are mandatory will sit on the product category node itself. The multi-valued 'PDS: Mandatory References' attribute will hold the list of references that are mandatory on that category.

Locked Down Attribution

It might be beneficial to be able to lock certain attributes after a product has been initially onboarded into PIM for Retail to prevent the value of these attribute gets changed by the Supplier. To enable this, the relevant attributes must be linked to the 'PDS: Locked After Proposal' attribute group.

Attribute Help Text

It is possible to show description of attributes and asset references to the Suppliers in PDS by using the 'PDS: Description' attribute being valid for attribute definitions and asset reference definition.

Setup of New Suppliers

Before a Supplier can submit product data from PDS, the Supplier has to be created in PIM for Retail. Objects and configuration options must be defined per supplier.

To setup a new Supplier the following steps are needed:

1. Create a new Supplier User Group below the Suppliers user group.

As part of this process, the Supplier Classification is created by selecting the parent for the Supplier Classification below the 'Suppliers' classification node.

2. Create a User below the new Supplier User Group.

This user is used by PDS to authenticate against PIM for Retail.

3. Set the value of the 'PDS: Is Service Account?' attribute to 'Yes' on the new User.

This will start a process which will link the user to the 'PDS: Service Accounts' user group and add the User ID to the 'PDS: Service Account' attribute on the Supplier Classification.

4. On the Supplier Classification the following attributes should be maintained:

- **Supplier ID and Supplier Name** - Used to identify the Supplier and to ensure uniqueness.
- **Type of Supplier** - Used for information purpose when comparing sources for a Golden Record.
- **General Handling of New Source Records** - Controls if new External Source Records from this Supplier should be automatically approved in PIM for Retail or if the Buyer needs to manually approve the product data before onboarding the Product.
- **General Handling of Updated Source Records** - Controls if a change to an existing External Source Records from this Supplier should be automatically approved in PIM for Retail or if the Buyer needs to manually approve a change before it is considered for promotion by the Matching and Linking process.
- **General Rank For Supplier and General Rank Type Of Supplier** - Used by the Matching and Linking survivorship rules to control the preferred order of source when promoting product data to the Golden Record.

Rank Type Of Supplier has the following options: 'Approved Content Source' (AC) and 'Non-Approved Content Source' (NA).

Rank For Supplier has the following options: 1, 2, 3, 4, 5.

The values of the two attributes are concatenated into a single Source Rank For Promotion value which is used by the survivorship rules when promoting product data to the Golden Record.

The preferred order of sources configured in the survivorship rules in PIM for Retail is:

MDM, AC1, AC2, AC3, AC4, AC5, NA1, NA2, NA3, NA4, NA5, NA99

where:

MDM: Internal Source Record

AC1-5: Approved Content Source

NA1-5: Non-Approved Content Source

NA99: Used if no Rank Type or Rank is defined for the supplier.

Example

Attribute A has the value 'Yes' on a source having AC2 as Source Rank For Promotion.

The survivorship rules check the sources in the defined preferred order. First it checks the Internal Source Record which doesn't have a value for Attribute A. It continues to look for a source with AC1 but that External Source Record does not have a value for Attribute A either. So it continues by looking for a source with AC2. Finally, a value for Attribute A is found so this value will be promoted to the Golden Record and it will skip looking for values on lower ranked sources.

For some Suppliers it might be required to be able to overwrite the general source record handling and product data ranking on all Products below specific Product Hierarchy nodes. This can be done by linking a node from the External Product Hierarchy to the Supplier Classification using the Category Ranking For Supplier link type. The link will have the following meta-data attributes: Category Handling of New Source Records, Category Handling of Updated Source Records, Category Rank for Supplier and Category Rank Type of Supplier.

5. The Supplier Classification must be approved.

This will start a process which will generate a unique supplier identifier in the 'PDS: Supplier Identifier' attribute on the Supplier Classification.

6. The 'PDS: Supplier Identifier' value generated within a minute of the initial approval of the Supplier Classification is what the Supplier needs for authentication when adding the channel in PDS.

Vendor Data Onboarding - Translation

The Retailer may need to show products in different languages, either because the products are distributed in several countries, or because there are several official languages in the Retailer's country.

What is translated

The data on the Internal Source Record can be translated.

Types of translation

Two types of translation are included in the Vendor Data Onboarding solution:



Translation in PIM

The translation is handled internally by a translator or a team of translators directly in PIM for Retail Web UI.



Translation Service

The translation involves an external service (such as SDL or Lionbridge) via asynchronous translations functionality.

	User	Role
	Buyer	Regarding translation, the Buyer decides if a Product is to be translated in a certain language. The translation then becomes the responsibility of the Translator.
	Quality Assurance Expert	During the onboarding process (see the Onboarding 5 - Retailer Adds Sell-Side Specific Data topic), when doing the final review, the Quality Assurance Expert can ask for a Product to be translated.
	Translator	The Translator works in the Retailer's team and is in charge of the translation, which can be done personally, in-house, or by an external Translation Service.
	Translation Reviewer	Reviews the translation once it has been done by the Translator.
	Translation Service	A Translation Service (such as asynchronous services like Lionbridge or SDL) translates content on demand, under the supervision of the Retailer's Translator.

Process

The translation process involves the following steps, each of which is described in the topics shown below.

1

Setup - The Retailer configures who will translate and what type of translation to use. See the **Translation Process 1 - Setup** topic.

2

Translating Specific Products - The Retailer decides if a specific product or group of products must be translated. See the **Translation Process 2 - Translating Specific Products** topic.

3

Translation -The Translator performs and reviews the translation. See the **Translation Process 3 - Translation** topic.

4

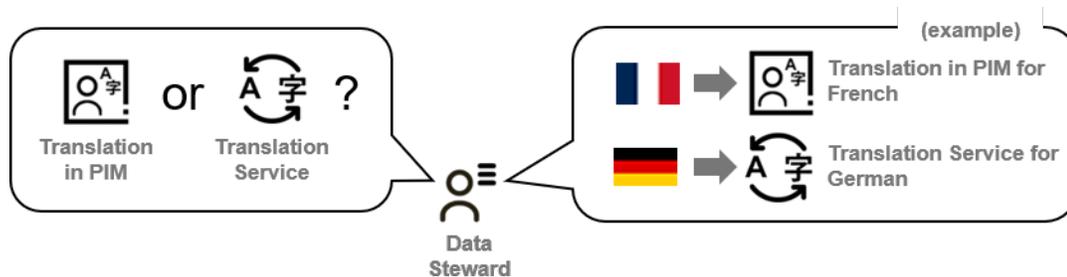
Matching & Linking and Gating -The PIM executes Matching & Linking and runs some controls (gating process). See the **Translation Process 4 - Matching & Linking and Gating** topic.

Translation Process 1 - Setup

Setup involves deciding if translation is required, who should translate, and if products have default translation languages.

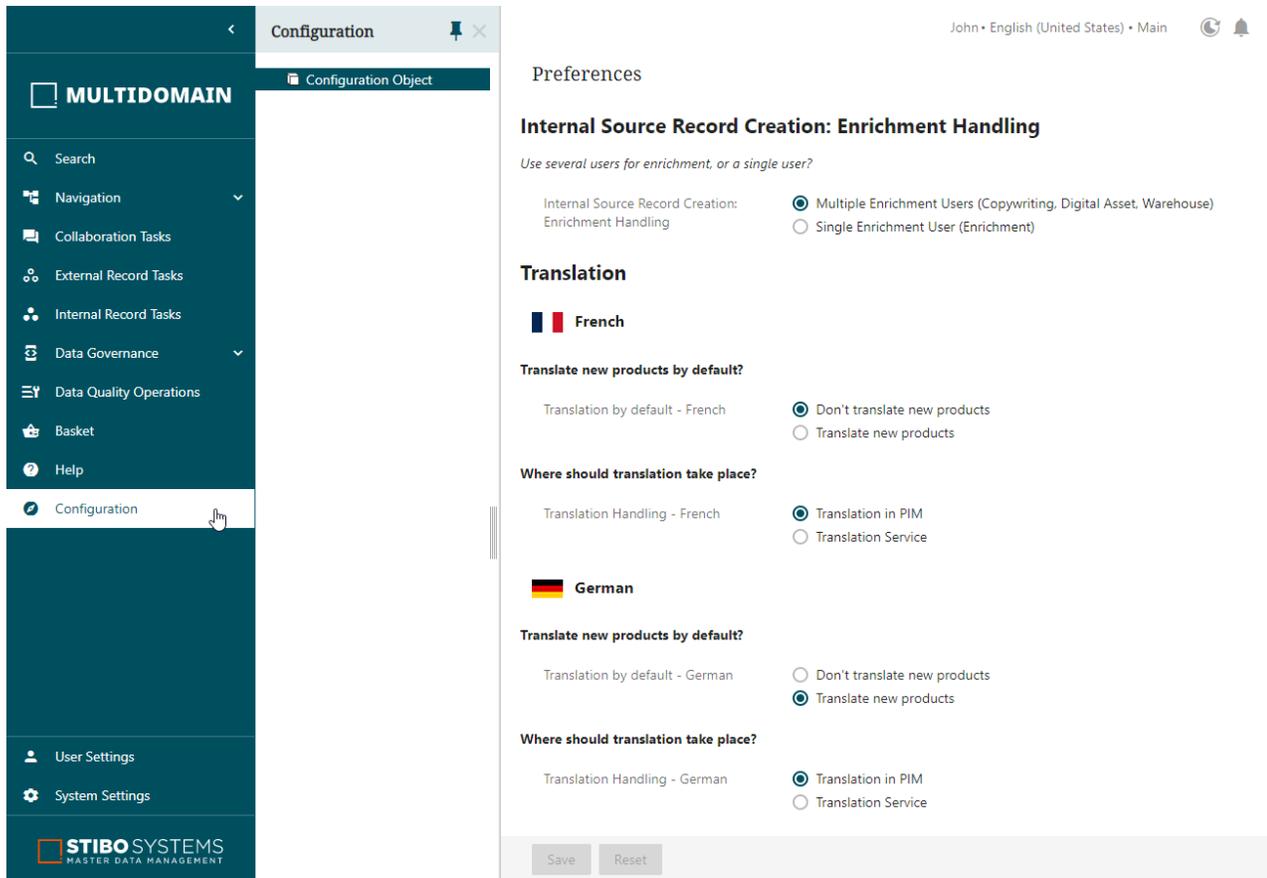
Decide if translation is required and who should translate

For each language, the Data Steward decides if the translation will be handled internally (Translation in PIM Web UI) or externally (using an asynchronous Translation Service).

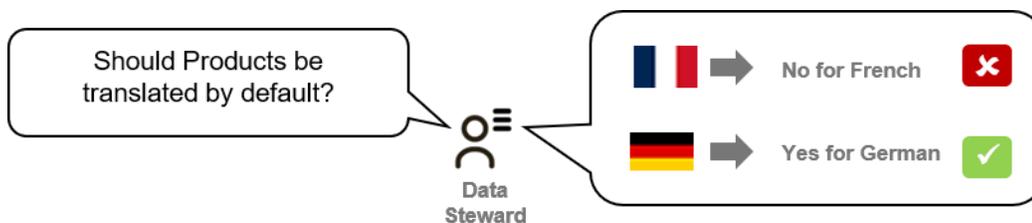


By default, the type is set to 'Translation in PIM'.

Setup is managed in the Web UI Configuration section as shown below.



Decide if products should be translated by default in a certain language

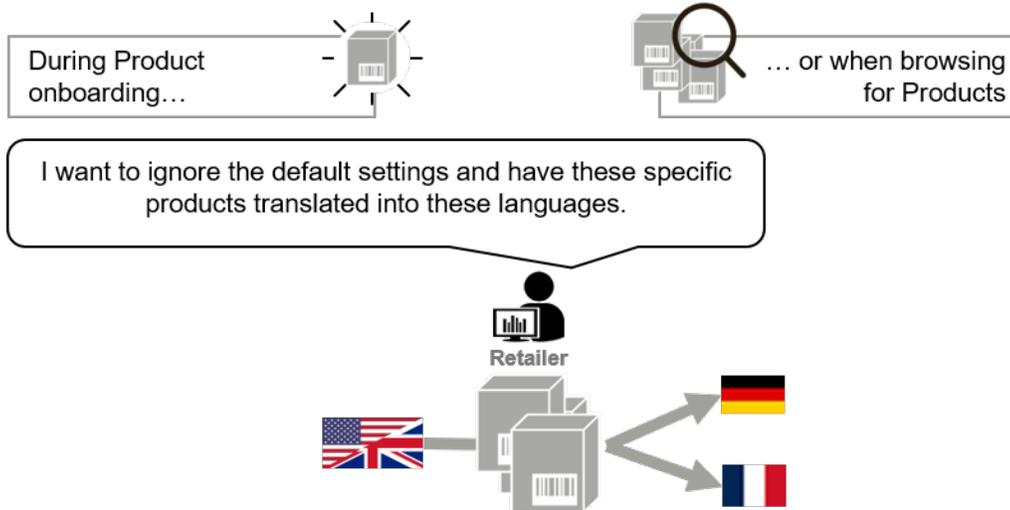


Similarly, the Data Steward decides if all products should or should not be translated by default in a certain language.

Setup is managed in the Web UI Configuration section as shown above.

This default choice can be overridden for one or more products, as explained in the **Translation Process 2 - Translating Specific Products** topic.

Translation Process 2 - Translating Specific Products



Whatever the default settings are for translation, it can be decided to translate one Product or a group of Products.

This can happen:

- In the onboarding workflow, in the 'buyer review' states and in the 'product review' state.
- At any moment, when browsing for products on a product page or a node list as shown below.

Example product page

▼ Translation


French

Translate new products by default?

Where should translation take place?

Don't translate new products

Translation in PIM

Start translation into French?

No
 Yes

Translation Status - French

Not translating


German

Translate new products by default?

Where should translation take place?

Translate new products

Translation in PIM

Start translation into German?

No
 Yes

Translation Status - German

Not translating

Example node list page

The user chooses the products to be translated, the translation languages, and clicks the **Send for Translation** button.

phre • English (United States) • Main 🔔

Food/Beverage/Tobacco > Beverages > Alcoholic Beverages (Includes De-Alcoholised Variants)

Wine - Sparkling

INT.L4-10000275 • Partly Approved • 0.3 • Last edited by phre on November 19, 2020 at 3:08:09 PM UTC+1

Product Hierarchy Basic Information and Status Attribute links Language View

🗑️ Clear all ➡️ Send For Translation 🔗 Multi edit view

Name	Object Type	Thumbnail	ID	Translation Status	Start translation ...	Start translation ...
<input checked="" type="checkbox"/> Blanc de blancs champagne - Ruinart - 75cl	Golden Record		GR-100499			Start translation into French?
<input type="checkbox"/> Blanc de blancs champagne - Ruinart - 75cl	Internal Source Record		INT-100500	• Translating French, • No German Translation ^{fr}	Yes	No
<input checked="" type="checkbox"/> Champagne - ruinart - 750ml	Golden Record		GR-101902			
<input type="checkbox"/> Champagne - ruinart - 750ml	Internal Source Record		INT-101903	• Translating French, • No German Translation ^{fr}	Yes	Yes
<input type="checkbox"/> Champagne Lanson Black label brut - 750 ml	Golden Record		GR-100503			
<input type="checkbox"/> Champagne Lanson Black label brut - 750 ml	Internal Source Record		INT-100504	• No French Translation, • No German Translation ^{fr}	No	No

Number of items: 6; Selected items: 2

Add to basket
Save
Save & Approve
Reset
Create node
Move
Delete

Translation Process 3 - Translation

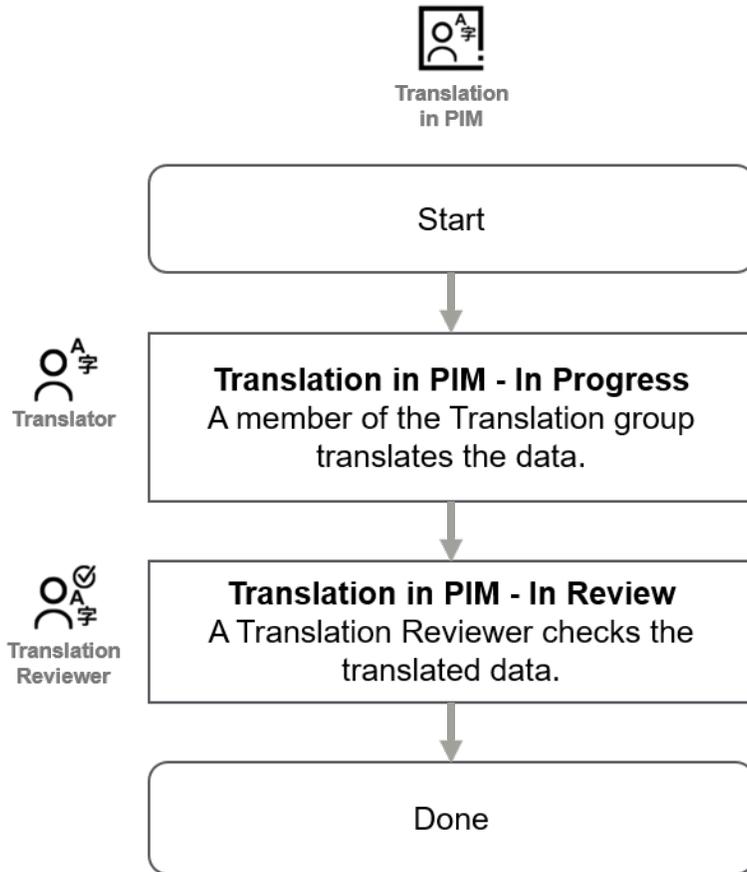
Whenever the translation is done (in the PIM Web UI or using an asynchronous Translation Service), all the translation-relevant tasks are centralized in one workflow visible on the homepage of the Web UI.



Translation Workflow		
	High	Normal
FR - Translation in PIM - In Progress	0	20
FR - Translation in PIM - In Review	0	95
FR - Translation Service - In Progress	0	0
FR - Translation Service - Failed	0	0
DE - Translation in PIM - In Progress	0	0
DE - Translation in PIM - In Review	0	0
DE - Translation Service - In Progress	0	255
DE - Translation Service - Failed	0	84

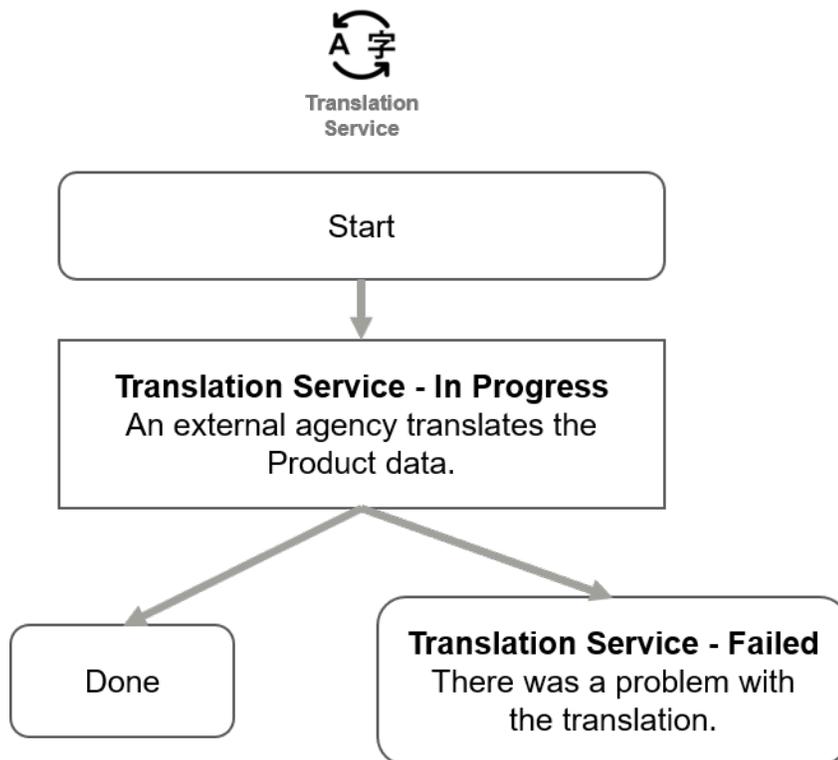


Translation in PIM



Once the translation is started, a Translators group member will perform the translation. When the translation is complete (Done), the product data is forwarded to the Translation Reviewers group.

Translation Service



The translation is sent to an external service. The end result can be either translated product data or a problem importing the translation.

The translation process uses the asynchronous translation of STEP (for more details, see the **Asynchronous Translations** topic in the **Data Integration** documentation for more details).

The Data Steward, the Buyer, and the Translator can view the more technical actions as needed. These 'tasks' are tracked in the Translation Service widget which displays a list of background processes (this is not a workflow).

Each item in the widget is a link to a page listing all the background processes where the user can get more information.

Translation Service	
All configurations	
Waiting	0
Query Translation	0
Translation Export	0
Extract File To Translate	0
Store in Out folder	0
Waiting for Translation	8
Store Translation Result	0
Import Translation	0
Completed	3

Translation Process 4 - Matching & Linking and Gating

Once the translation is 'Done' it is considered as a change on the Internal Source record and will trigger the Matching & Linking process. For more information, see the **Onboarding 4 - PIM Aggregates the Data in a Golden Record** topic and the **Onboarding 6 - MDM Checks that the Data is Okay to be Presented to Other Systems** topic.

Additional Information and Limitations

The following items should be considered for the Vendor Data Onboarding pack.

Languages

- The master language is English (US) and additional available languages are French and German.
- The user interface is fully localized in French and German.

To add new languages, contact your Stibo Systems account manager or partner manager.

GPC

GPC data is provided in English, French, and German.

Important: Because this pack follows GDSN, English is the only reference catalog and the translation is provided in other languages. Attributes, list of values, and classifications, are based on the English catalog.

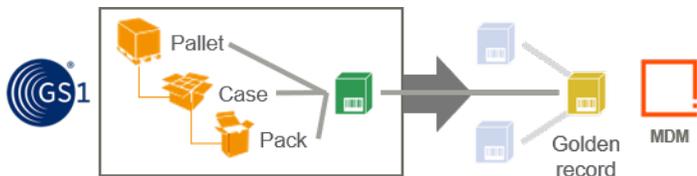
PDS and the Supplier UI

PDS and the Supplier UI are assumed to provide content in the master language (English).

Module - GDSN Receiver for PIM for Retail



The GDSN Receiver module is installed on top of the Vendor Data Onboarding module. With it, the Retailer can receive quality Product Data from GS1.



GS1 GDSN is an automated, standards-based global environment that enables secure and continuous data synchronization, allowing all trading partners to have consistent item data in their systems at the same time.

The GS1 Global Data Synchronization Network connects retailers and suppliers via their selected GDSN-certified data pools to the GS1 Global Registry.

To benefit from GS1 GDSN in PIM for Retail, an external STEP system with the GDSN Receiver can be set up using a preconfigured solution.

GDSN Receiver Solution

The GDSN Receiver solution includes the following elements:

- Installable solution which is separate from the MDM and on its own release cycle
- Prebuilt GS1 attributes, code lists, Units of Measure (UoMs), and GPC hierarchy
- Full attribute mapping for inbound CINs
- Web UI for managing GDSN admin tasks
- Built-in workflows to manage messaging, MDM data flow, and Hierarchy Withdrawals
- Framework for automating the Catalogue Item Confirmation (CIC) response
 - Completeness Rules that can be maintained by non-technical users
 - GPC Validations that can be maintained by non-technical users
 - Framework to add custom API calls, custom JavaScript, etc. for more complex rules
- Framework for transforming GDSN data model to match downstream systems
 - Transformation tables for attribute IDs, LOVs, object types, reference types, and unit descriptors
 - XSLT post-processor

GDSN Receiver Architecture

The following diagram shows the relationship and interaction between GDSN and PIM for Retail.

