Product Catalog Management Tool User Documentation

PCMT Version 1.0 Release - January 30, 2020

What is PCMT?

Features for supply chain professionals
- User-friendly product information management
  - How to Log In
  - Akeneo Terminology
  - Make edits, see what's changed, and approve changes
- Interoperable with other systems
  - Automate loading products from template GFPVAN catalog
  - Import product data from manufacturers via GS1 GDSN on the E2Open Data Pool
  - Export product catalogs to GFPVAN via the E2Open B2B Client
  - Export and sync product catalogs with other OpenHIE systems
- Supports multiple ways of coding, classifying and identifying products
  - Pre-defined product attributes including GS1 standard code lists
  - Localize products and attributes into any languages
    - Ability to add definitions to Attributes and localize definitions
  - Create concatenated fields
  - Apply multiple classification systems and hierarchies

Features for system administrators
- Flexible
  - Can be deployed on-premise or in cloud servers
  - Configuration can be exported, saved and imported using simple uploads
  - Easy to define new attributes/fields, group and organize them, and apply validation
- Powerful
  - Handle products and items with related units of measure, multiple GTINs, product kits and bundles
  - Schedule jobs to import, export or process data, and track exceptions including data and formatting issues
- Secure
  - Straightforward control of users and role-based permissions
  - Log all changes, activities and versions of products and attributes edited

What is PCMT?

PCMT is open source software that allows organizations to publish and manage product catalogs and interoperates with other systems used in LMIC countries using global standards including GS1. PCMT is a set of add-on modules for Akeneo, an open source PIM. PCMT helps health care supply chains work for everyone by facilitating product information management, master data management and interoperability.

For additional background on PCMT see www.productcatalog.io. Thanks to USAID and the Bill and Melinda Gates Foundation for their support of PCMT.

Features for supply chain professionals

User-friendly product information management

How to Log In

PCMT is a set of add-on modules for Akeneo. To use PCMT's capabilities, you must be running Akeneo with the PCMT modules. To Log In, start at the Akeneo home page.

- See How to Log In documentation from Akeneo
- See Your First Steps with Akeneo documentation from Akeneo

Akeneo Terminology

To use PCMT, it's important to understand the meaning of Akeneo's key concepts, including Products, Categories, Variants, and Attributes. The Akeneo terminology differs from terms used by GS1 and manufacturers and also differs from terms used by OpenHIE and other communities working to support global health supply chains. These resources can help you establish clear terminology:

- See Akeneo Design Elements from the PCMT wiki to explain Akeneo's key concepts
- See Product Identification Terminology from OpenHIE (aligns with the APICS dictionary)
- See GS1 Fundamentals from OpenHIE

Add and edit products with data validation rules

Akeneo provides a user-friendly experience to add, enrich and manage product records. It allows users to track completeness. For example, what percentage of required fields are present? Learn more:

- See Create products documentation from Akeneo
- See Take The Power Over Your Products documentation from Akeneo

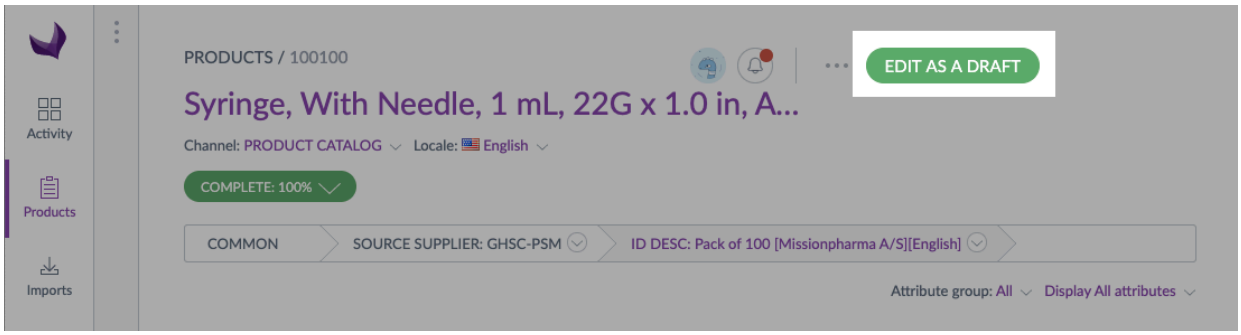
Akeneo supports data validation rules for different fields (called Attributes in Akeneo):

- See Attributes Validation Parameters documentation from Akeneo

Make edits, see what's changed, and approve changes

PCMT adds a lightweight and user-friendly approval process to Akeneo. When this module is enabled, all edits to any Product, Product Model and Variant create a Draft which can be approved or rejected.

This functionality changes Akeneo's standard "Save" button into the "Edit As A Draft" button:



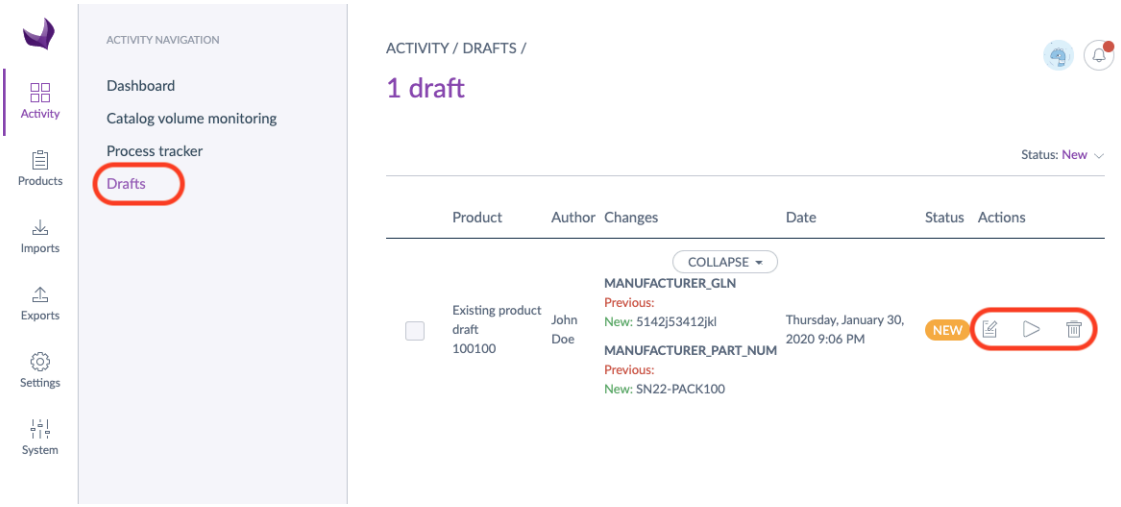
Users must click "Edit As A Draft" before they can begin making changes. Before clicking, fields are gray and uneditable. Users with edit permissions can click "Edit As A Draft" to start making changes, which creates a Draft record.

Once a draft is created, all users see that a draft is in progress. Users can click "Save Draft" at any time. Changes are held in the Draft record and do not take effect until approved.



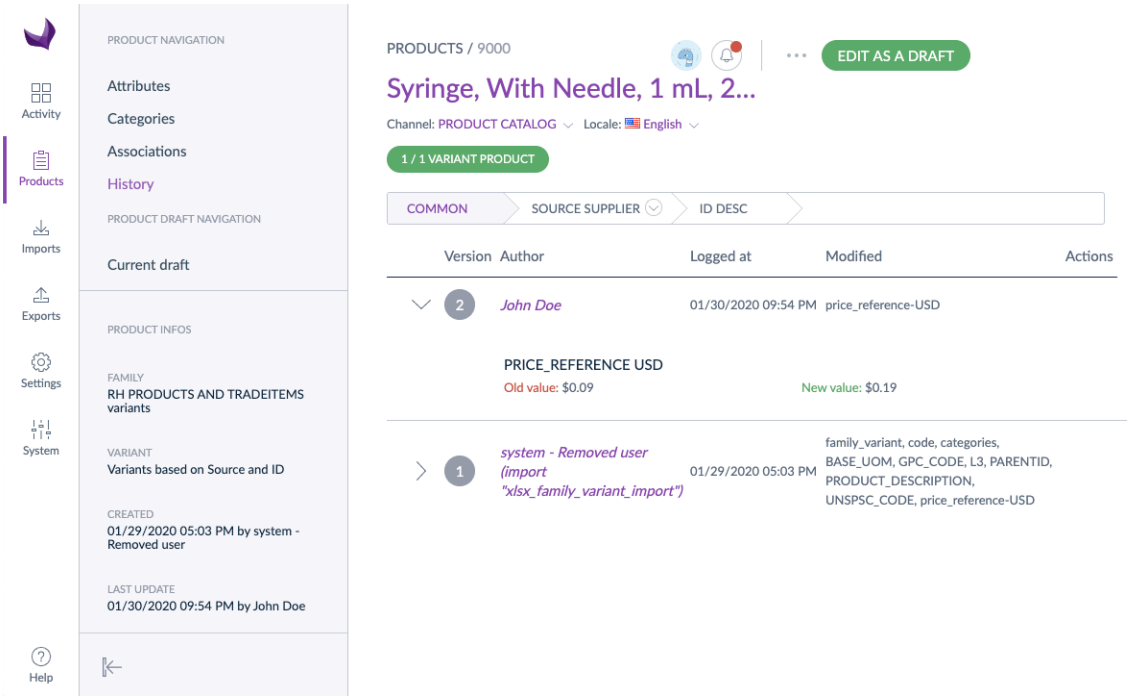
When there is already an existing draft that has not been approved or rejected, then clicking "Edit As A Draft" opens the existing draft in its current state. Users can continue to make changes and click Save Draft as many times as needed. All of these changes are held in the draft record until they are approved or rejected.

This PCMT functionality adds a Drafts view into the Akeneo dashboard with a list of all Drafts that are awaiting review for approval or rejection:



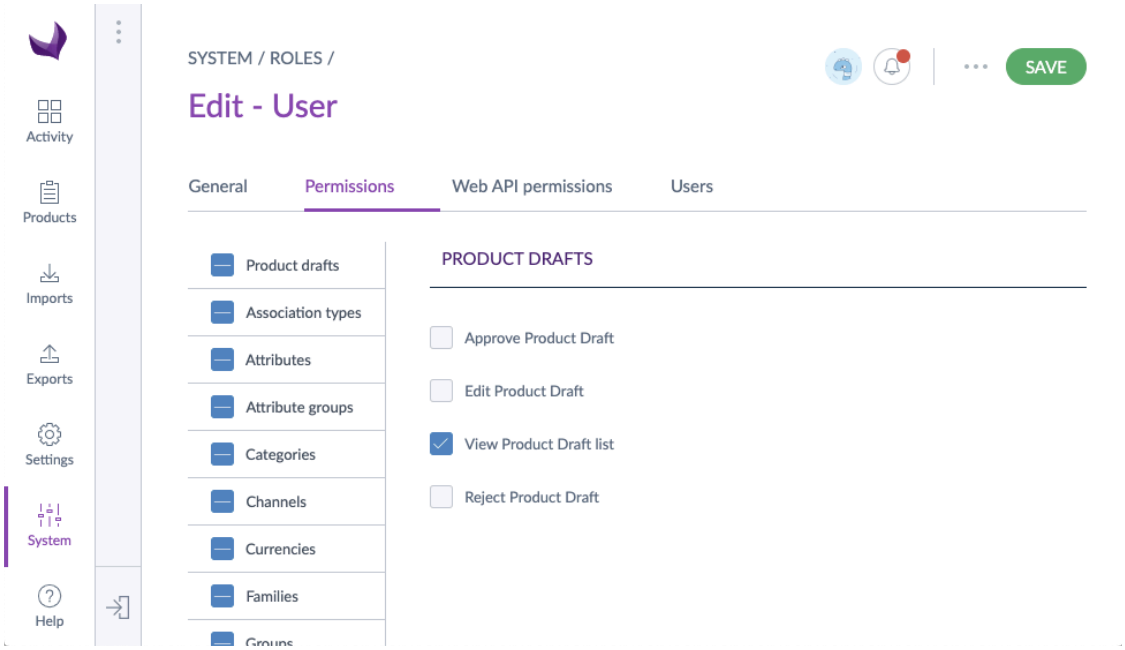
The Actions at the right allow authorized users to Edit, Approve, or Reject the draft. Editing the draft works as shown above, and you must return to this Drafts view to approve or reject before changes take effect to the record or appear in Exports and via the API.

The full history of changes can be viewed in the Product > History page:



You can expand and collapse each version to see all attributes (fields) changed with each version.

The PCMT Draft-Approval process is controlled by Product Drafts permissions added into Akeneo:



See more about this Draft-Approval functionality that PCMT adds to Akeneo:

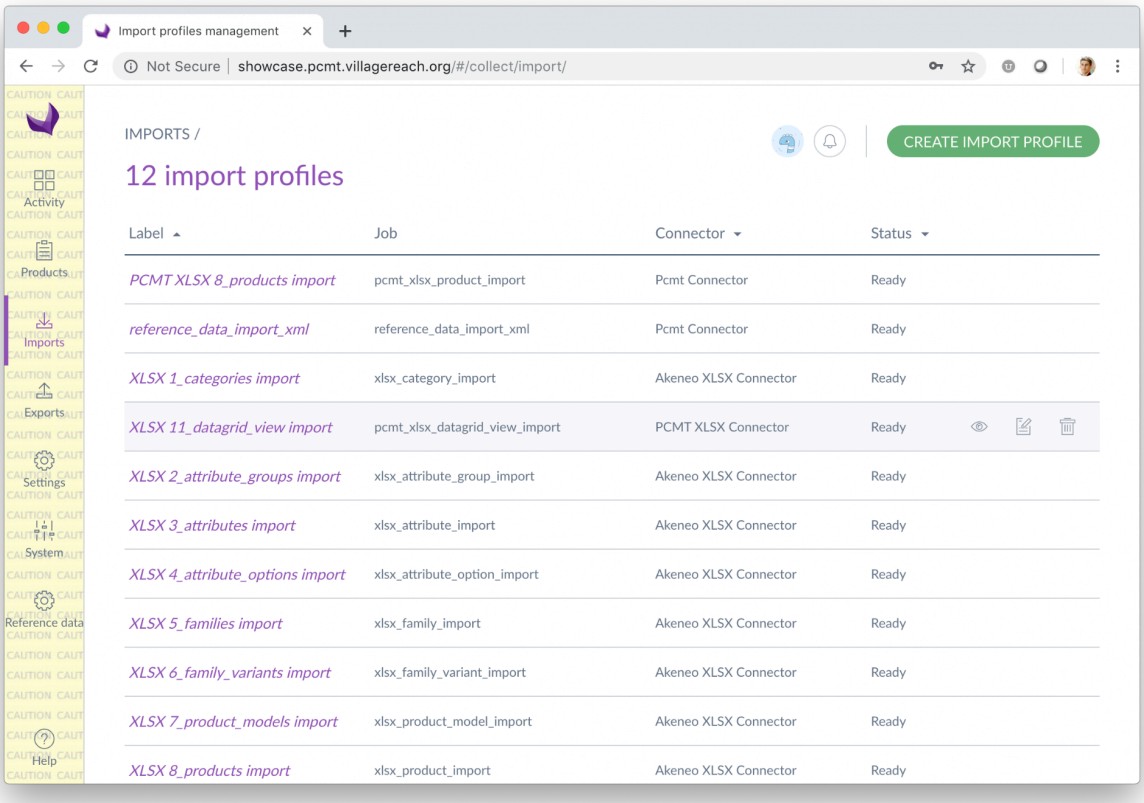
- Epic documentation and linked issues in the Approving Data Modifications epic
- View the PcmtDraftBundle source code

Interoperable with other systems

Automate loading products from template GFPVAN catalog

PCMT provides automated imports from GFPVAN data that can be tailored to help import other existing catalogs. This includes template schemas for products, items (with GS1 data), and classifications.

A set of data imports automate loading of all these types of data, including products, attributes, categories, variants and more:

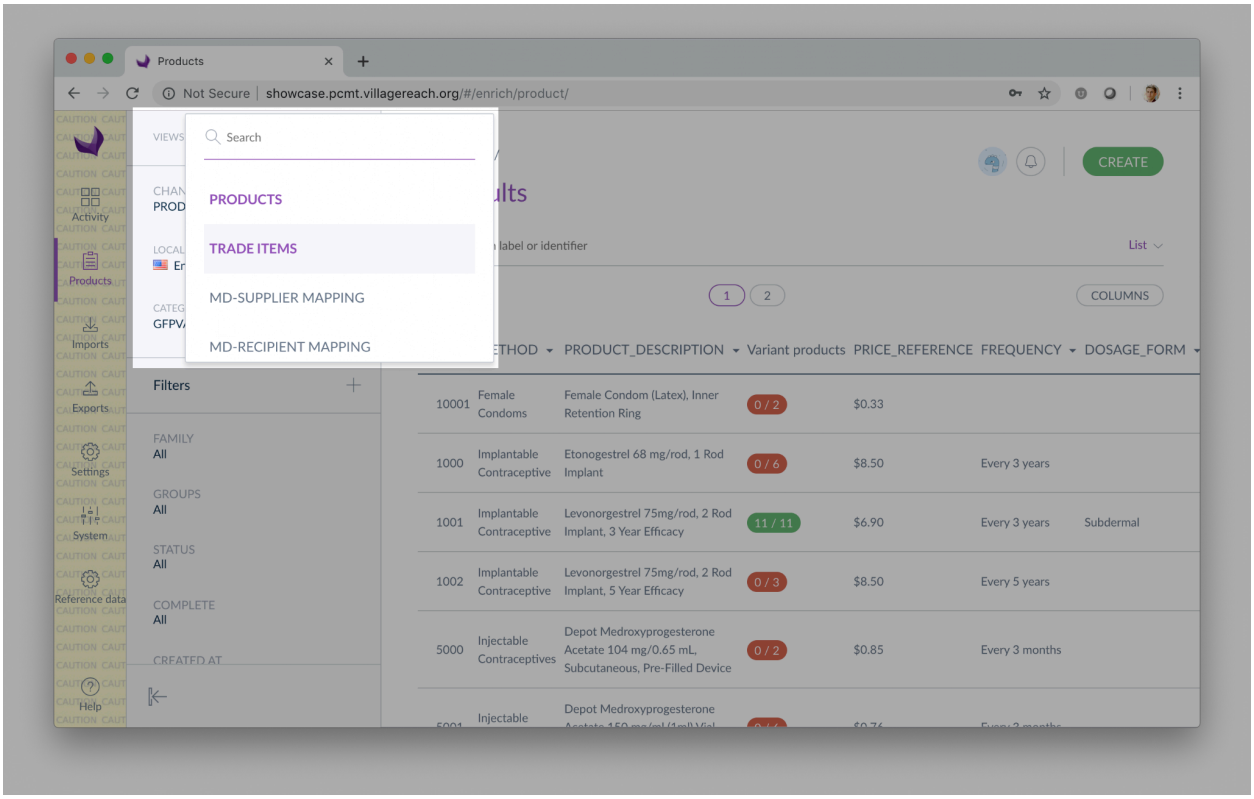


These imports and corresponding exports can be triggered manually in Akeneo or can be automated on PCMT start-up (details below).

Product imports include multiple classification hierarchies such as GPC and GFPVAN:



Some of the imports use custom PCMT connectors, such as the ability to import pre-configured Product Views:



The imports come from a custom dataset configured in the PCMT's config.yml file here: https://gitlab.com/pcmt/pcmt/blob/master/pim/app/config/config.yml#L122
The imports pull data from PcmtCustomDatasetBundle/Resources/fixtures/pcmt_global/

See Akeneo's documentation on custom datasets:

- See How to Customize the Dataset from Akeneo documentation

See PCMT issues with linked source code:

- https://gitlab.com/pcmt/pcmt/issues/38 Import GFPVAN Catalog
- https://gitlab.com/pcmt/pcmt/issues/36 Automate Loading Products
- https://gitlab.com/pcmt/pcmt/issues/103 Automate Loading Product Views

Import product data from manufacturers via GS1 GDSN on the E2Open Data Pool

PCMT 1.0 includes functionality to receive GDSN data from the E2Open Data Pool in XML format over SFTP. This allows PCMT catalogs to automatically include manufacturer-provided data that is available in the GS1 GDSN by GTIN (see GS1 Fundamentals for background). GDSN connections require a working subscription through the E2Open data pool provider and a secure certificate.

As of version 1.0, this functionality works as follows:

- A background job periodically connects to the E2Open Data Pool, finds any new GDSN XML files, processes them, and moves them into an `archive/` folder on the SFTP server
- PCMT retrieves and processes new files every seven minutes. The connection is configured via environment variables and is detailed in the SFTP Download Tool.
- PCMT contains a hard-coded mapping from the E2Open XML data format into PCMT/Akeneo product attributes
- GDSN records are imported as one single record for each GTIN and stored in the "GS1-GDSN QUEUE" family in PCMT/Akeneo

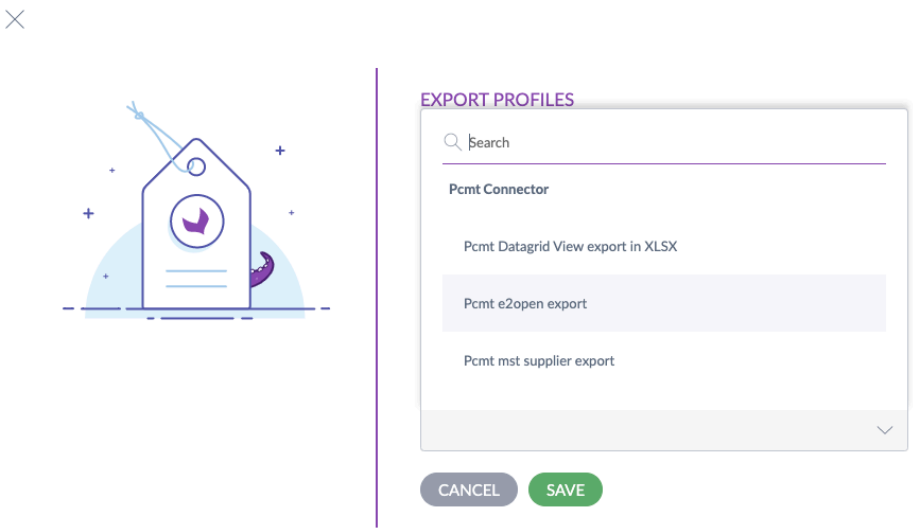
See PCMT user stories with linked source code:

- See the Connection to a GDSN provider epic
- See the SFTP Download Tool which is part of this PCMT functionality

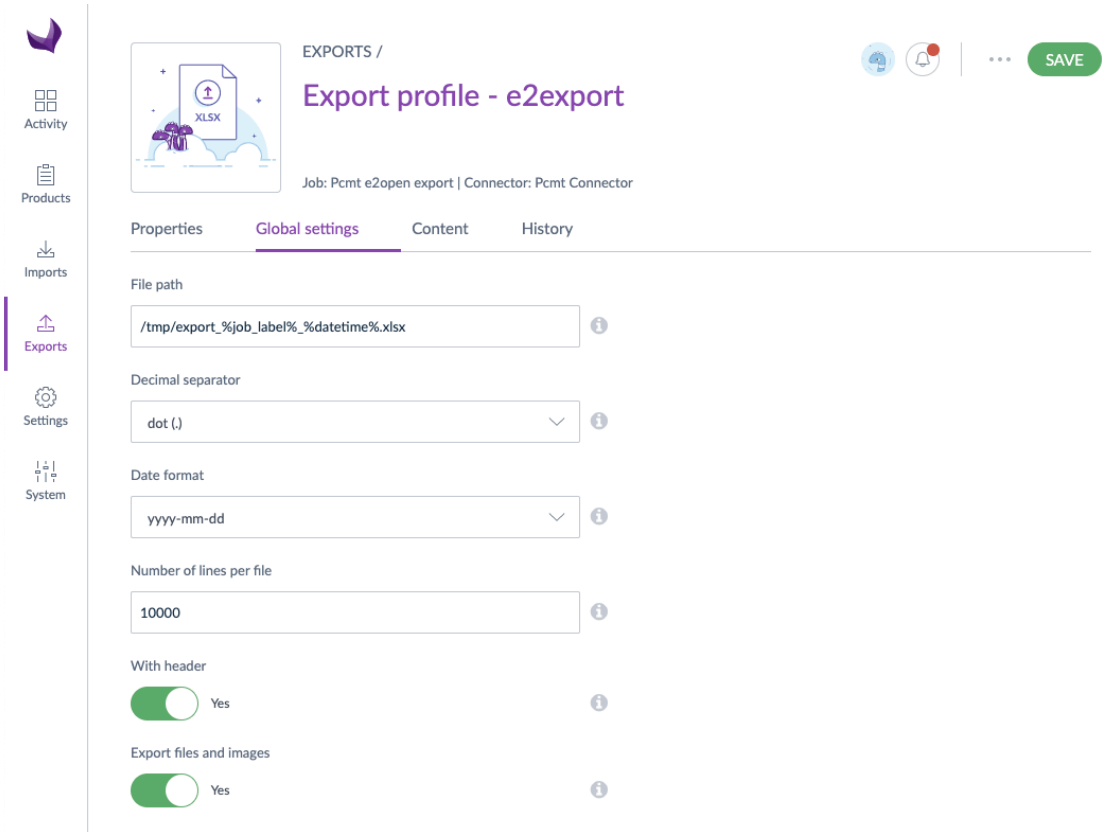
Export product catalogs to GFPVAN via the E2Open B2B Client

PCMT 1.0 includes functionality to export PCMT catalog data into E2Open-supported XLS formats. There are two specific export file formats supported: "Pcmt e2open export" and "Pcmt mst supplier export". The first provides a list of products, and the second provides a list of suppliers.

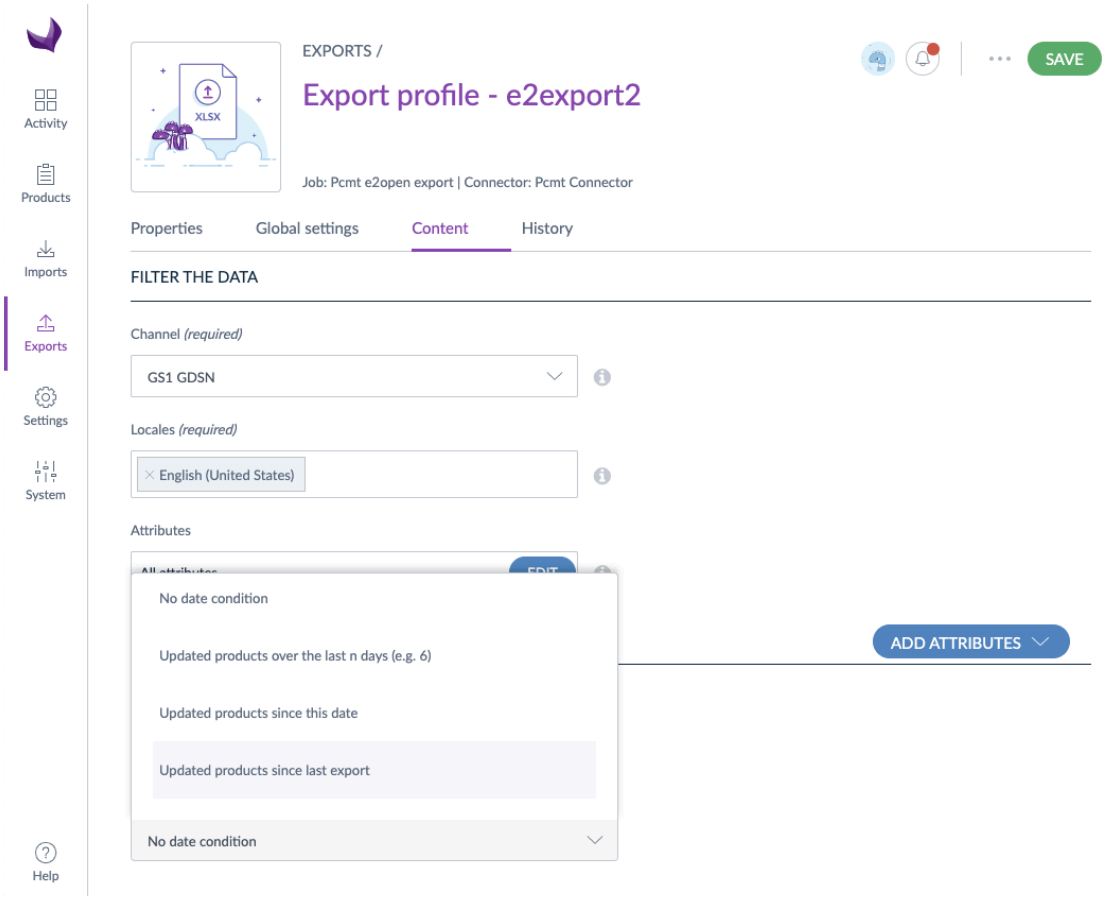
To create an Akeneo export profile in one of these formats, navigate to Exports > Create Export Profile as usual. The new PCMT formats appear at the bottom of the Job dropdown:



Each of these formats provides specific options for file path, decimal separator, and more:



In addition, the Content tab provides specific options for choosing which attributes are included and filtering by family and time:



These exports allow authorized users to retrieve these XLS files from PCMT and use the B2B Client to import this data into E2Open.

See PCMT user stories with linked source code:

- See the Connection to a GDSN provider epic

Supports multiple ways of coding, classifying and identifying products

Pre-defined product attributes including GS1 standard code lists

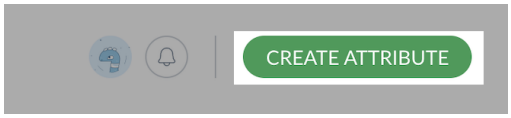
PCMT provides a set of GS1 code lists so that products in Akeneo can have attributes that are dropdown select fields to choose from a controlled list that matches global standards. Examples include official GS1 PackageTypeCode (such as a cardboard box or a pallet) or official US Food & Drug Administration Route of Administration codes (such as oral or topical).

Here is all these codes that are supported in PCMT:

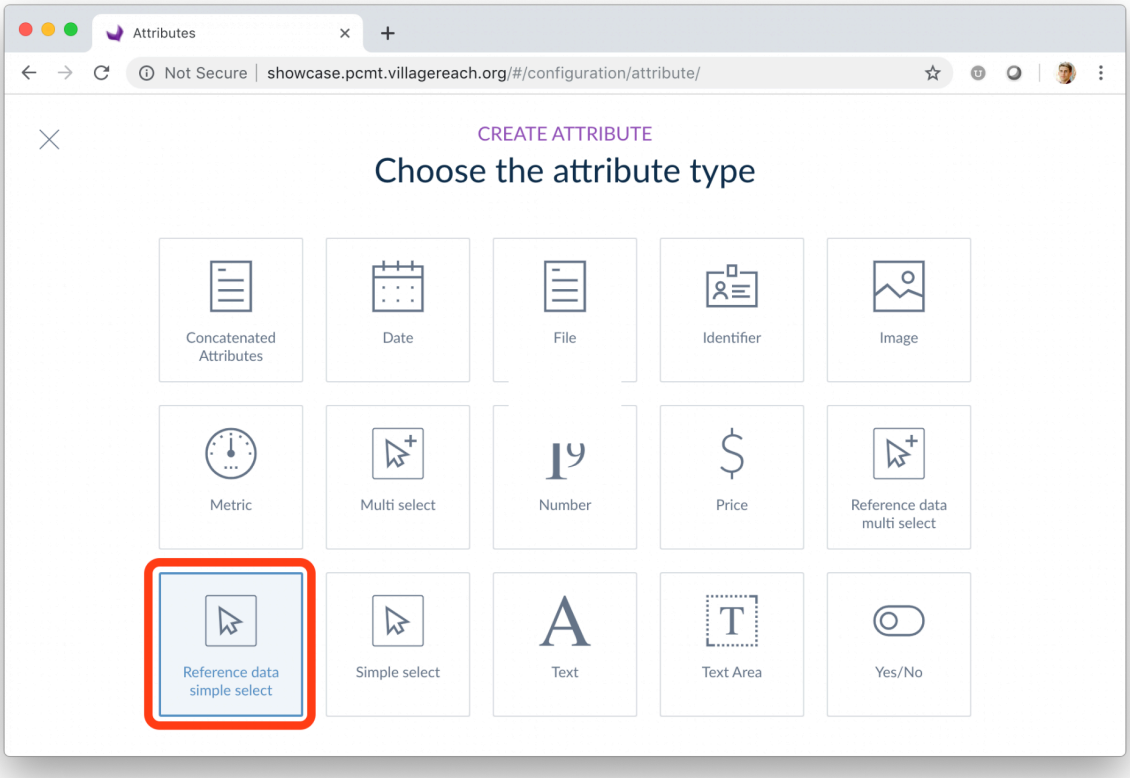
additionalTradeItemClassificationCodeListCode
additionalTradeItemIdentificationTypeCode

colourCodeListCode
CountryCode (ISO 3166-1, 3 Numeric)
dataCarrierTypeCode
route-administration
GDSN_MeasurementUnitCode
gs1TradeItemIdentificationKeyCode
ImportClassificationTypeCode
LanguageCode (ISO 639-1, 2 alpha)
NonfoodIngredientOfConcernCode
PackageTypeCode
PlatformTypeCode
ReferencedFileTypeCode
RegulationTypeCode
ShippingContainerTypeCode
SizeCodeListCode
TemperatureQualifierCode
TradeItemUnitDescriptorCode

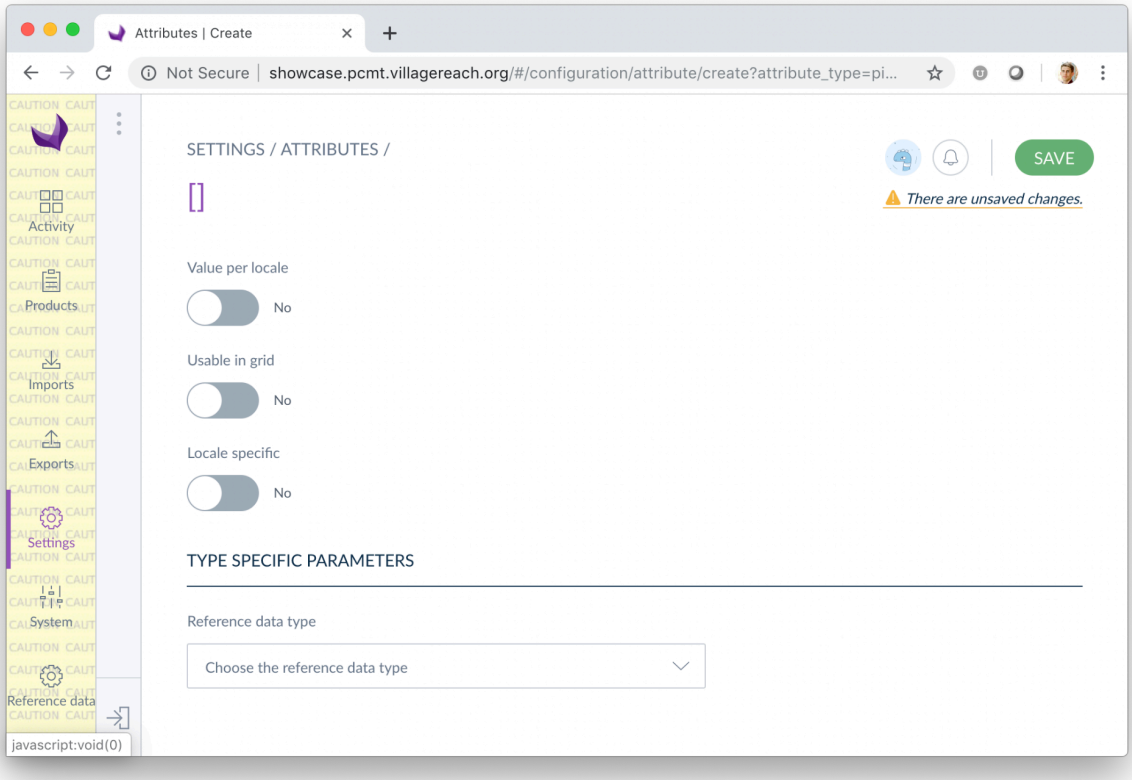
To add an attribute in Akeneo based on one of these code lists, go to Settings > Attributes and click Create Attribute:

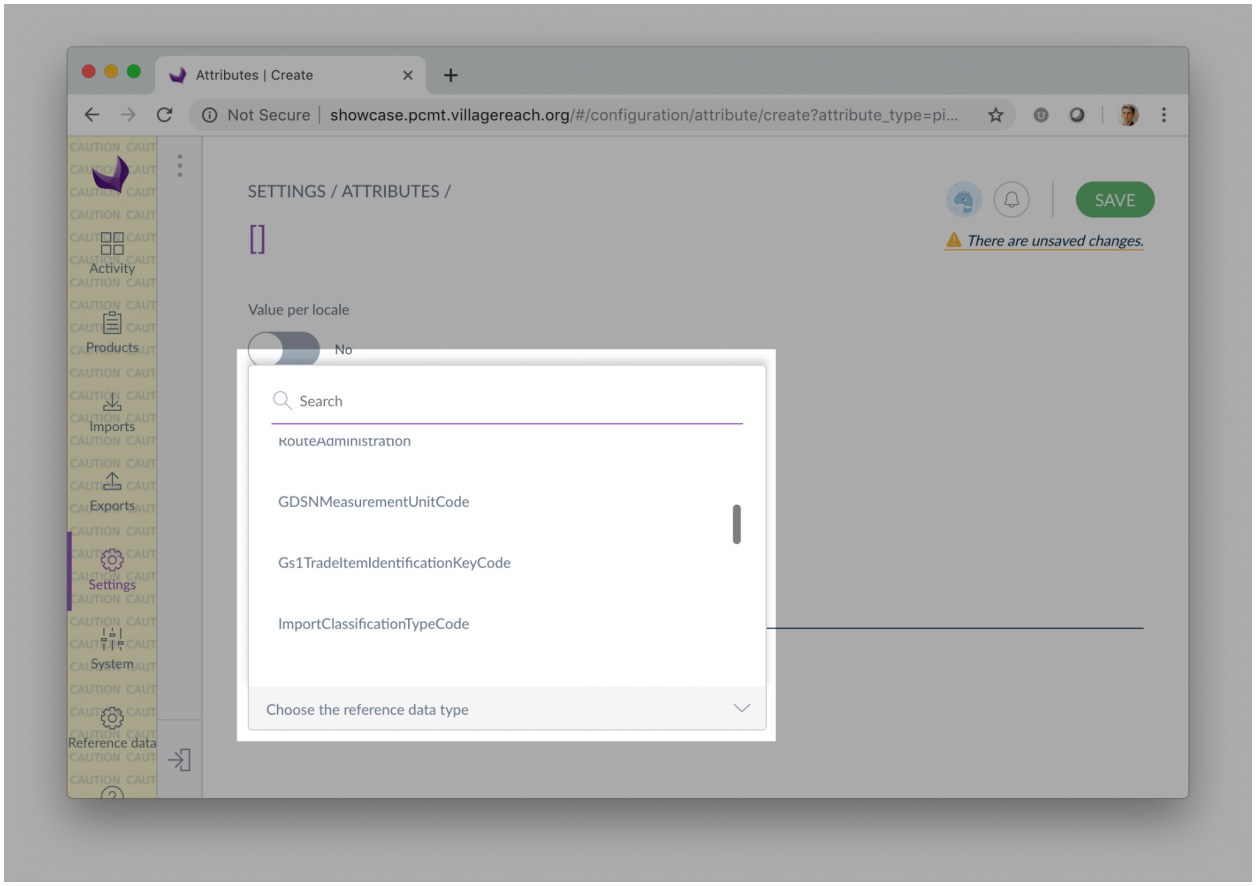


Then choose 'Reference Data Simple Select':



PCMT provides a new choice called 'Reference data type' where you can pick any of the PCMT-supported code lists:


Attributes | Create
Not Secure | showcase.pcmt.villagereach.org/#/configuration/attribute/create?attribute_type=pi...
SETTINGS / ATTRIBUTES /
[]
SAVE
There are unsaved changes.
Activity
Products
Imports
Exports
Settings
System
Reference data
Value per locale
No
Usable in grid
No
Locale specific
No
TYPE SPECIFIC PARAMETERS
Reference data type
Choose the reference data type
javascript:void(0)

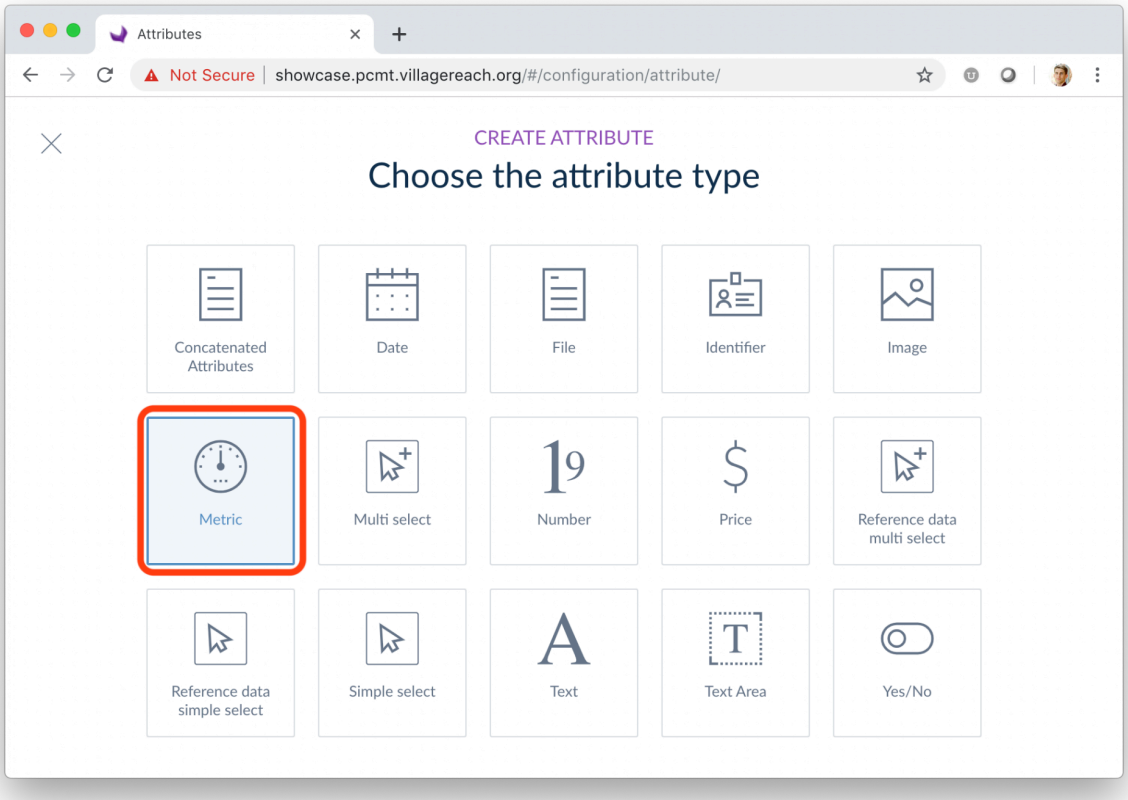


Once you add this attribute to your product family, users get an easy dropdown list to choose any of the values with the name and code displayed.

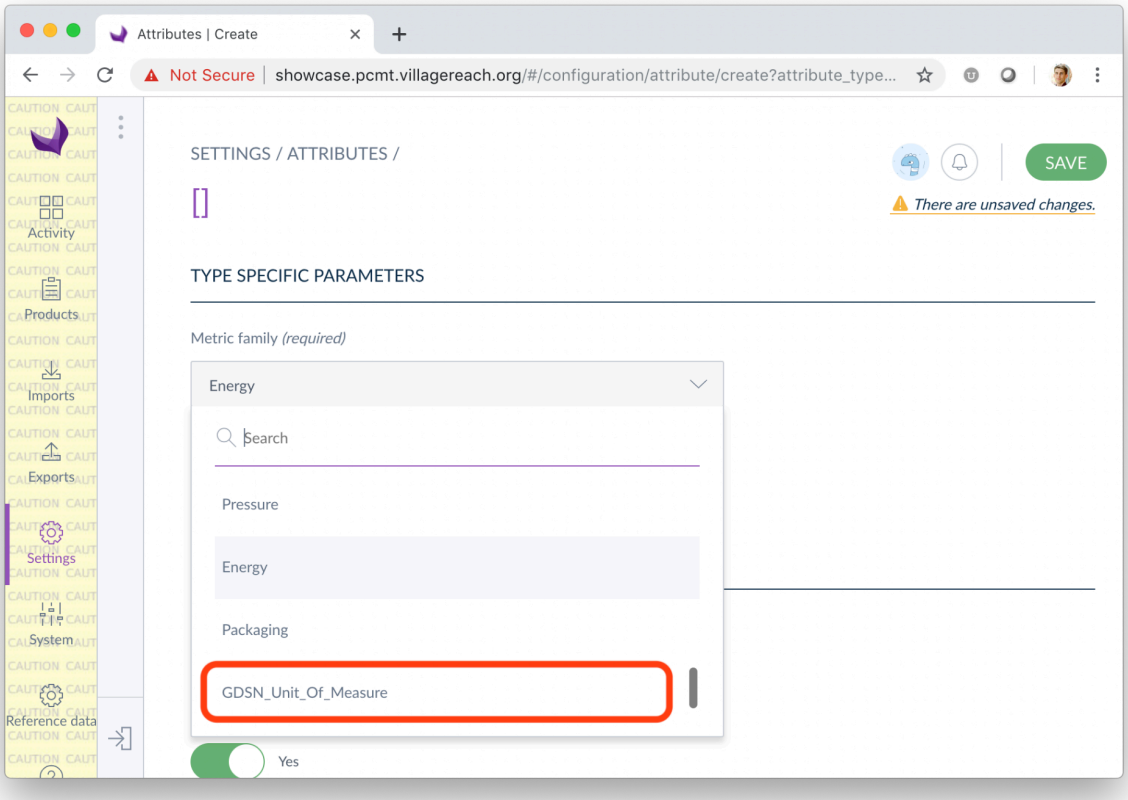
See PCMT issues with linked source code:

- https://gitlab.com/pcmt/pcmt/issues/61 Load GS1 Reference Data types
- https://gitlab.com/pcmt/pcmt/issues/40 Preload of common GS1 attributes

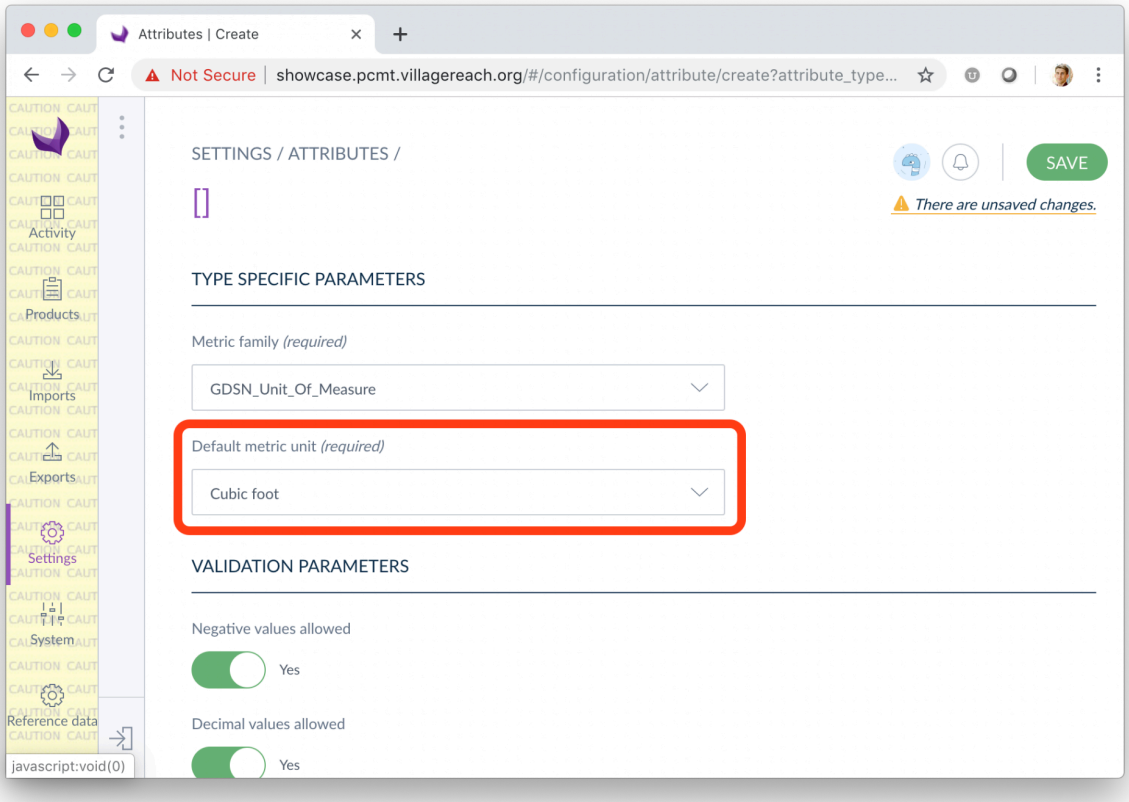
PCMT also offers support for a GDSN Unit of Measure field. To add a Unit of Measure attribute, go to Settings > Attributes, click Create Attribute and choose Metric:

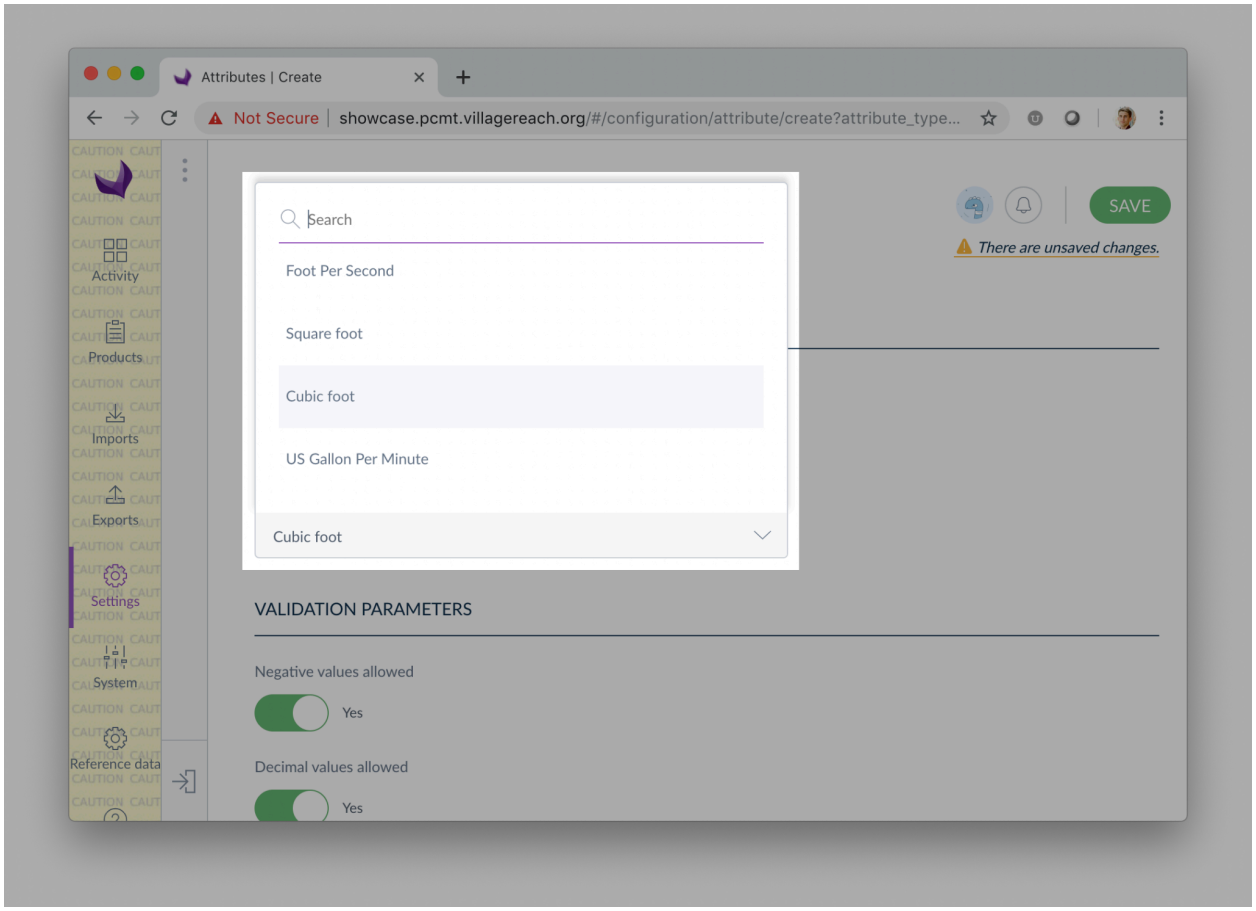


For your new Metric attribute, PCMT provides a new choice called 'GDSN_Unit_Of_Measure':

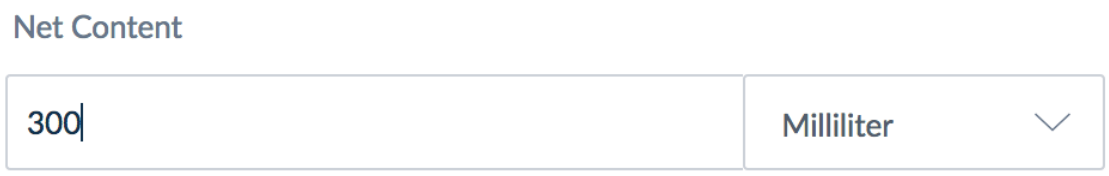


Once you select that, you get a new choice for 'Default metric unit' where you can choose any of the [GS1 GDSN MeasurementUnitCodes] (such as Cubic foot or Milliliter):


Attributes | Create
Not Secure
showcase.pcmt.villagereach.org/#/configuration/attribute/create?attribute_type...
SETTINGS / ATTRIBUTES /
[]
SAVE
There are unsaved changes.
Activity
Products
Imports
Exports
Settings
System
Reference data
TYPE SPECIFIC PARAMETERS
Metric family (required)
GDSN_Unit_Of_Measure
Default metric unit (required)
Cubic foot
VALIDATION PARAMETERS
Negative values allowed
Yes
Decimal values allowed
Yes
javascript:void(0)



Once you add this new Metric attribute to your product family, users get a special metric field where the units you selected are the default units:



See the PCMT issue with linked source code:

- https://gitlab.com/pcmt/pcmt/issues/67 Custom Metric Family

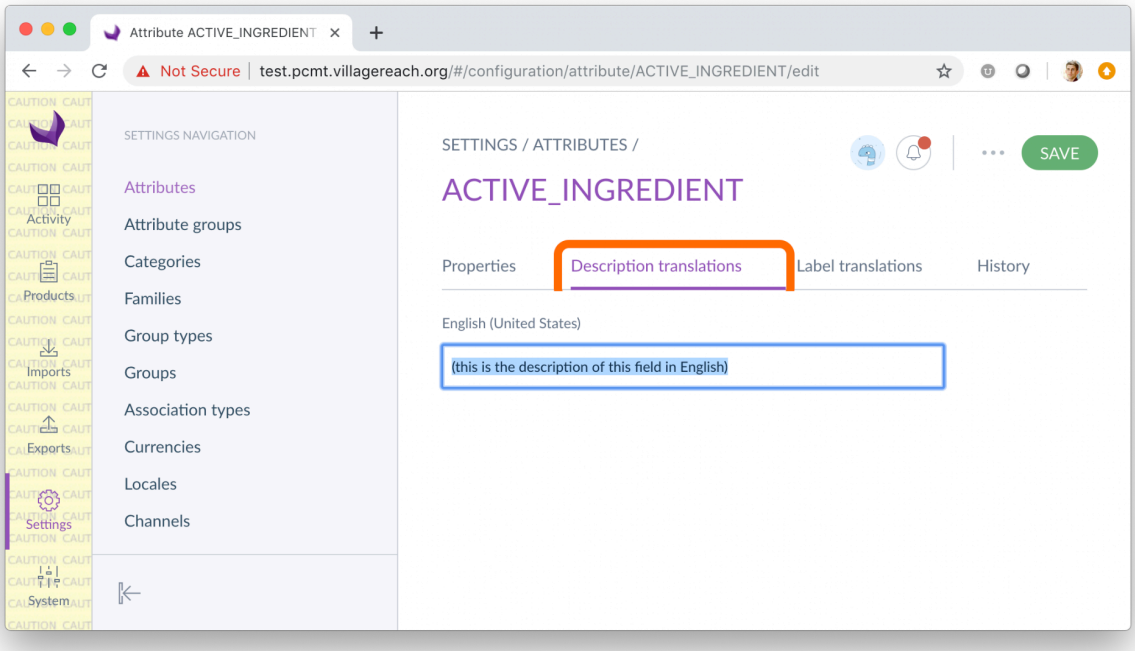
Localize products and attributes into any languages

Akeneo has support for localization into multiple languages. PCMT extends that support to add translatable definitions to any attribute (detailed below). Learn more about Akeneo locales:

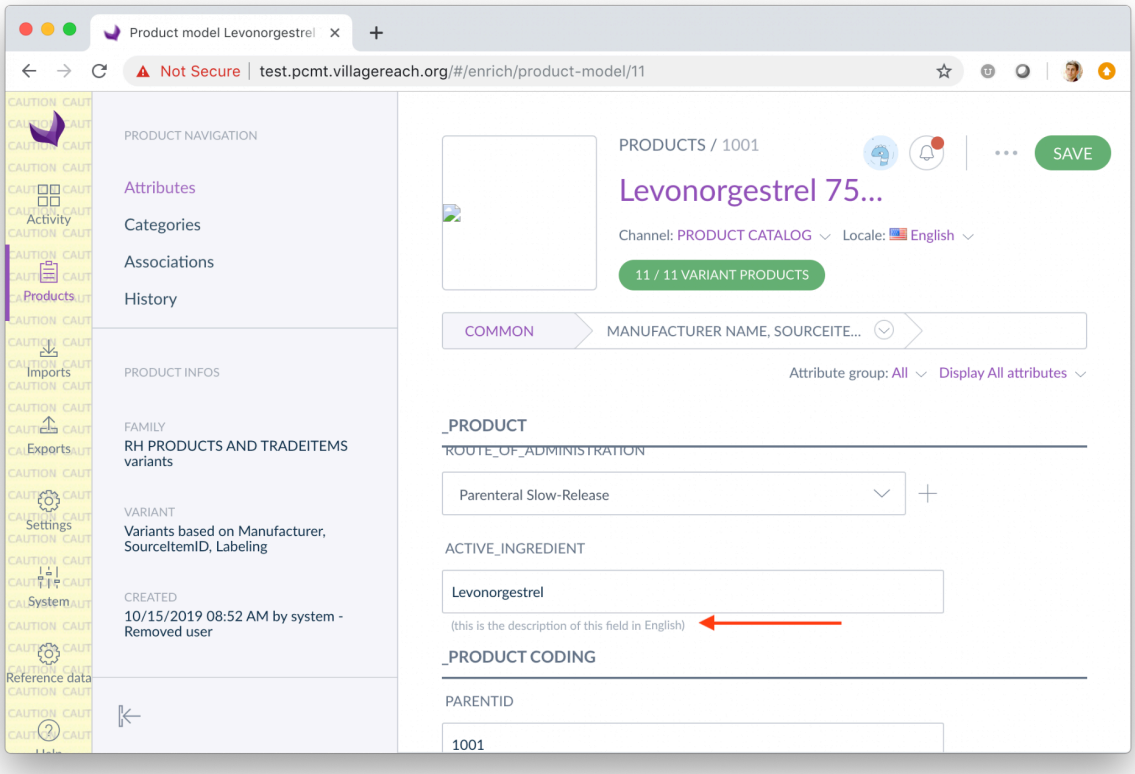
- See What is a Locale documentation from Akeneo

Ability to add definitions to Attributes and localize definitions

This PCMT feature adds a translate-able Description field to any Attribute in Akeneo. When configuring any attribute in Settings > Attributes, a 'Description translations' tab is available to allow you to configure an optional description in any of the active localizations:



After you enter any descriptions and save the Attribute settings, then the relevant description appears below the Attribute when editing a product:



See the PCMT issue with linked source code:

- GitLab issue: https://gitlab.com/pcmt/pcmt/issues/60 Add definitions to Attributes

Create concatenated fields

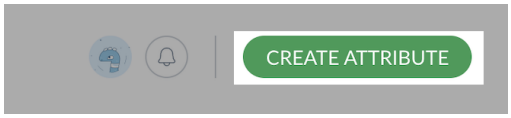
PCMT provides a new attribute type that concatenates (combines) the value of two other fields together. For example, an attribute defined as

```
REGULATORY_CODE + " : " + REGULATORY_EXP_DATE
```

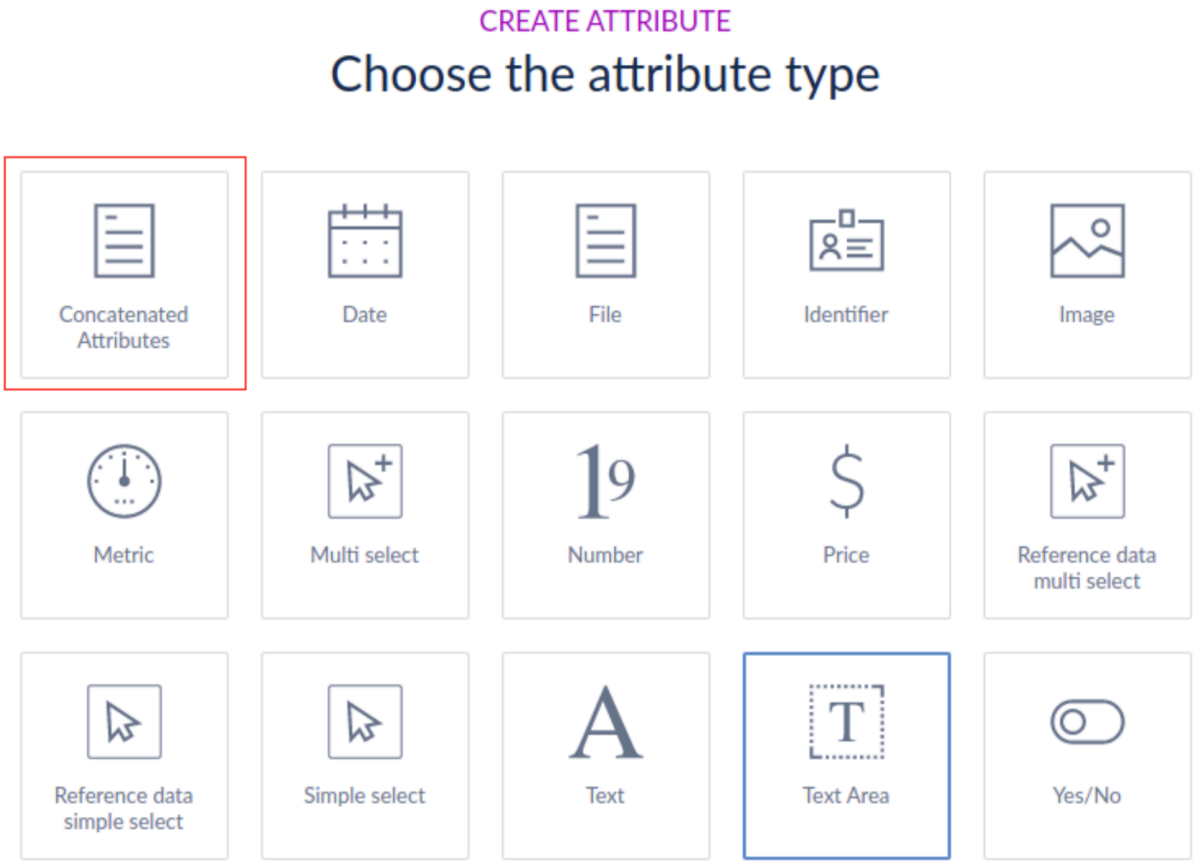
Could automatically display the concatenated value as

```
PMPB/PL108/53 : 2020/09/17
```

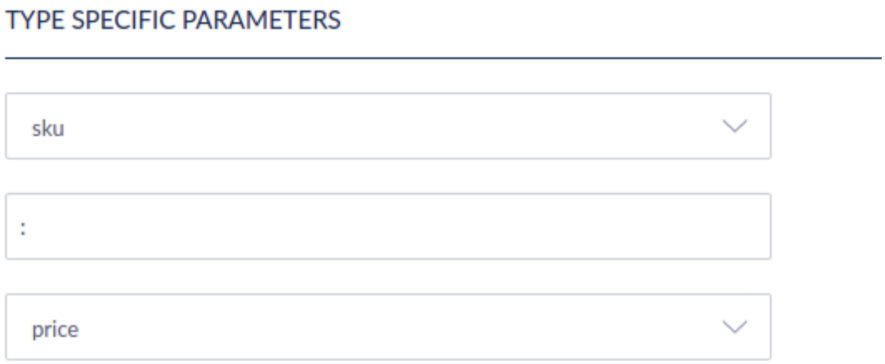
To create a concatenated attribute, go to Settings > Attributes, click Create Attribute:



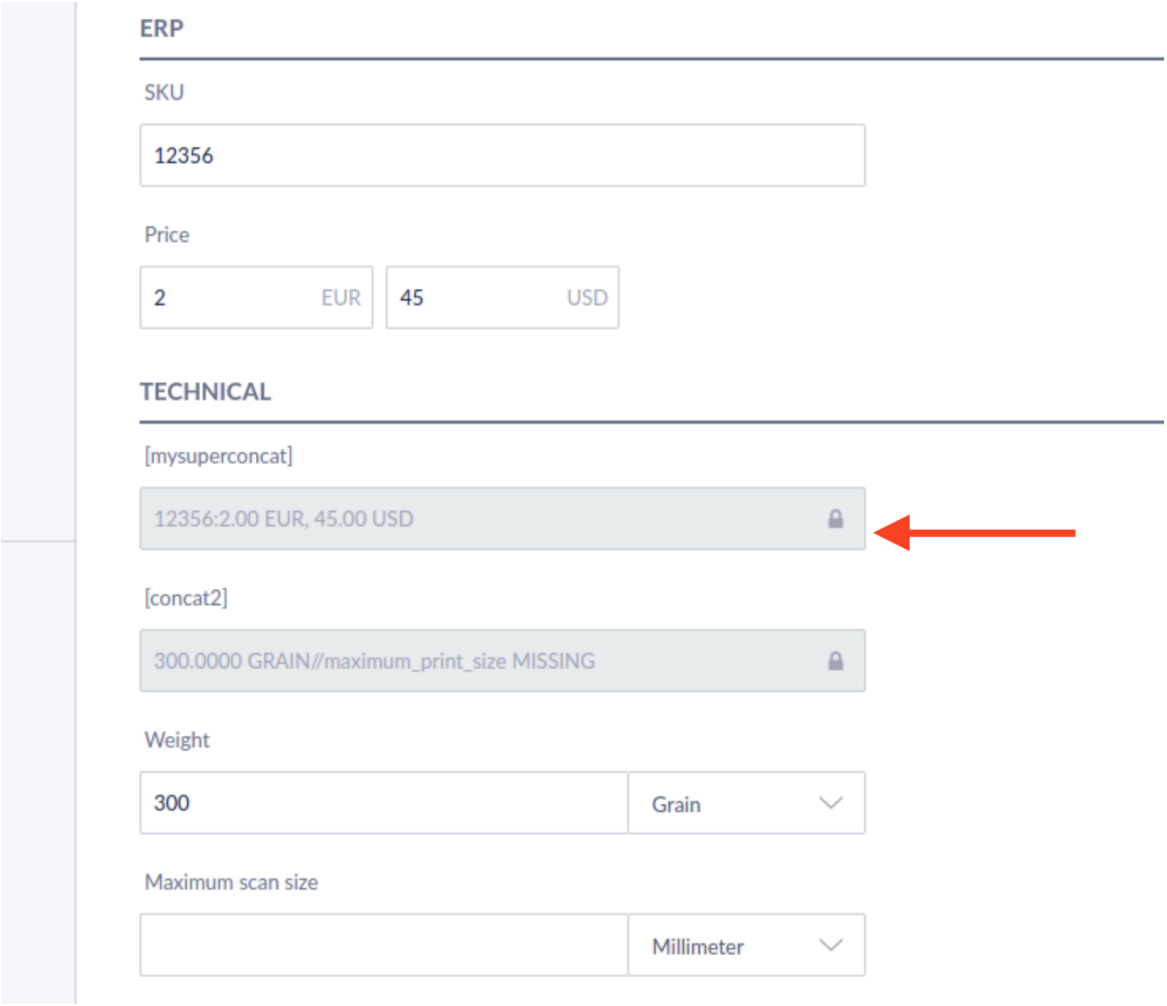
Choose the Concatenated Attributes type:



After giving your new field a Code (required), you can then use the Type Specific Parameters to choose what fields to concatenate and to enter a text string to use as the separator:



Click Save to save your new attribute. In the Settings area, add your newly created attribute to a family. When you add or edit a product in that family, the new concatenated attribute appears:



The concatenated attributes are read-only and automatically populated with their values.

See the PCMT issue with linked source code:

- GitLab issue https://gitlab.com/pcmt/pcmt/issues/44 Creating concatenated fields

Apply multiple classification systems and hierarchies

Akeneo supports any number of classification/categorization systems with an unlimited number of levels, and PCMT comes pre-loaded with standard categories. Learn more:

- See What is a Category documentation from Akeneo
- See PCMT support in Automate loading products from template GFPVAN catalog above

Features for system administrators

Flexible

Can be deployed on-premise or in cloud servers

PCMT uses Akeneo PIM Community Edition so that it can be installed locally for on-promise hosting or deployed to cloud servers. The cloud option allows a SaaS (software-as-a-service) style of support where people can easily start using PCMT with an affordable subscription that covers hosting, support and ongoing updates. Learn more:

- See the PCMT README that includes instruction for local installation
- See the Akeneo README which also has installation instructions
- See Setting Up the PIM documentation from Akeneo for system administrators

Configuration can be exported, saved and imported using simple uploads

Akeneo offers rich support for importing and exporting data and configuration, and PCMT provides additional auto-loaded categories and data. Learn more:

- See Import/Export Data documentation from Akeneo
- See PCMT additional import and export support above in Interoperable with other systems

Easy to define new attributes/fields, group and organize them, and apply validation

Akeneo offers many types of Attributes (fields) and makes it easy to group them in Families and apply validation. Learn more:

- See What is an Attribute documentation from Akeneo
- See Attributes Validation Parameters documentation from Akeneo

Powerful

Schedule jobs to import, export or process data, and track exceptions including data and formatting issues

Akeneo comes with support for scheduled jobs as well as a Progress Tracker dashboard to see the status of every job. Learn more:

- See What is a Job documentation from Akeneo

Secure

Straightforward control of users and role-based permissions

Akeneo comes with the ability to create roles, give permissions to those roles, and assign users into the roles. On the PCMT roadmap we also have plans to add more granular permissions by product family and/or by specific groups of attributes. Learn more:

- See Build Your User Roles documentation from Akeneo
- See PCMT's roadmap plans in the Role-Based Access epic
- See PCMT's roadmap plans for managing password strength and password expiry in the Managing User Creation and Security epic

Log all changes, activities and versions of products and attributes edited

Akeneo and PCMT provide detailed logging of all activity, in addition to PCMT's Draft-Approval feature:

- See section above on how to Make edits, see what's changed, and approve changes

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