Exercise 3: Create Attribute Categories and Product Attributes

Product attributes provide a powerful and flexible way to extend product entities. Product attributes are stored in an aggregate JSON blob on the Product object and are used extensively throughout Industries CPQ and Industries Order Management to:

- Configure product specifications at run-time
- Filter products directly in the Cart at runtime in order to display products that are a best fit for the customer
- Change product pricing when using attribute-based pricing rules
- Map commercial products to technical products in Industries Order Management

> Both fields and attributes are used to store specific information about a product, so when should you use each? Our recommendation is quite simple:
> - If the data element is common across all products in the catalog, such as the product's name, ID, or description, you'll create a field. You need Salesforce administrator privileges to create fields.
> - If the data element is specific to a particular product or class of product, which is most often the case, you'll create an attribute to store this information. You only need access to Vlocity Product Designer to create attributes.

In Shared Catalog, attributes are grouped into **attribute categories**, which appear as headings at runtime in the cart product configuration to help organize different types of attributes. Each attribute you create must correspond to an attribute category, so it's important that you create any new categories *before* configuring a related attribute.

Scenario

Devi has identified two new attributes required for the new InfiWatch 5: Band Type and Connectivity. He thinks it likely that other types of smartwatches might also use these attributes, as well as their own attributes.

To make it easier for customers, Devi would like Infiwave's customers to choose their preferences for band type and connectivity from picklists. Picklists minimize data errors and inconsistencies by limiting the options available to a select set of values.

Goal

- Create an attribute category
- Create product attributes
- Link picklists to product attributes

Tasks

1. Create an attribute category for Wearables
2. Create an attribute for Band Type
3. Create an attribute for Connectivity
4. Review the product attributes in the Wearable attribute category

Time: 10 mins

## Task 1: Create an attribute category for Wearables

It's helpful to have attributes grouped together when you're configuring products at design time and runtime. Therefore, you start by creating a **Wearables** attribute category to group all of the smartwatch attributes.

Instructions

1. From the Vlocity Product Designer navigation menu, select **Vlocity Attribute Categories**.
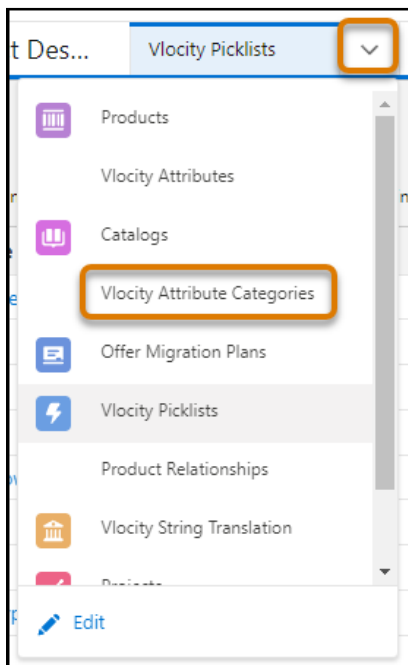
2. Select **New**.
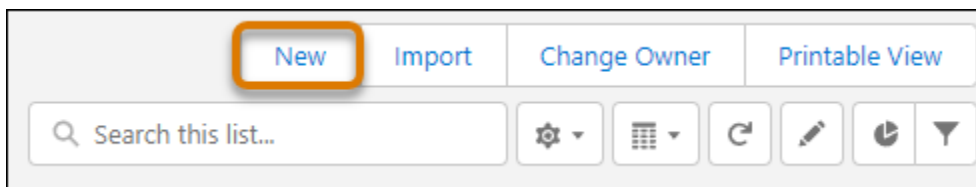
3. On the New Vlocity Attribute Category configuration screen, define the category's properties:

Property	Value	Notes
Name	`Wearables`	This name will be shown as a heading at runtime in the Cart's filter and configuration windows.
Code	`ACAT_WEAR`	This value is required and must be unique. This code is displayed only during design time.
Description	`For wearable product options`	Provides an explanation of the attribute category's purpose and is only shown at design time.
Applicable Types	**Any, Product2**	This value is required for product attributes. Scroll through the Available list and choose the object type, then select the ▶ arrow to move it to the Chosen list.
Applicable Sub Type	**Product Attribute**	This value is required for product attributes. Attributes without this sub-type will not appear in the Attributes tab when configuring an Object Type's layout.
Display Sequence	`40`	This value is required and must be unique. It's used to sequence the attribute category in the Cart's configuration window. Recommend using a 10, 20, 30 sequence to enable easy insertions in the sequence at a later date.

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4. Select **Save**.

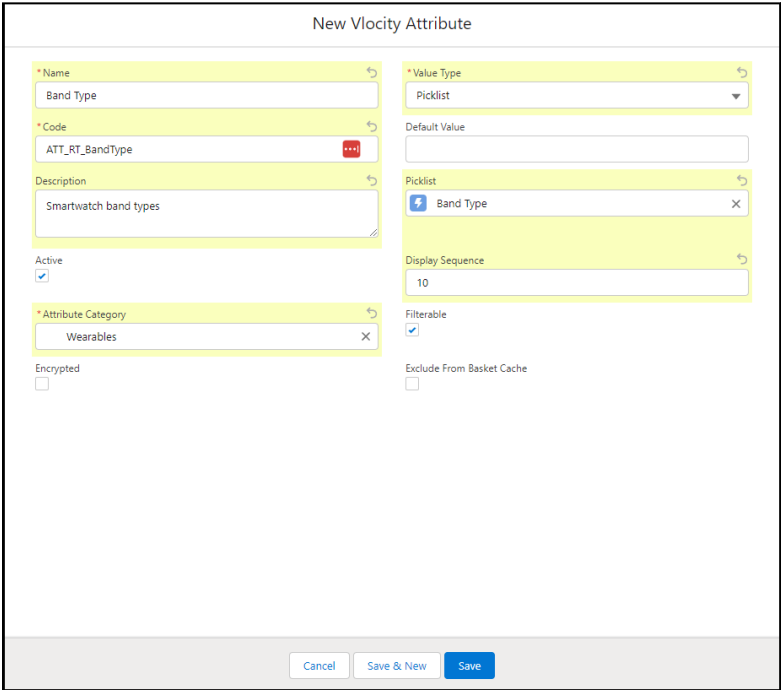## Task 2: Create a product attribute for Band Type

In the previous exercise, you created a Band Type picklist. In this task, you'll create a **Band Type** attribute and connect the picklist you just created. While you can create attributes directly from an attribute category, let's do so from the Vlocity Attributes screen in Product Designer.

1. From the Product Designer navigation menu, select **Vlocity Attributes**.

2. In the Vlocity Attributes list view header, click **New**.

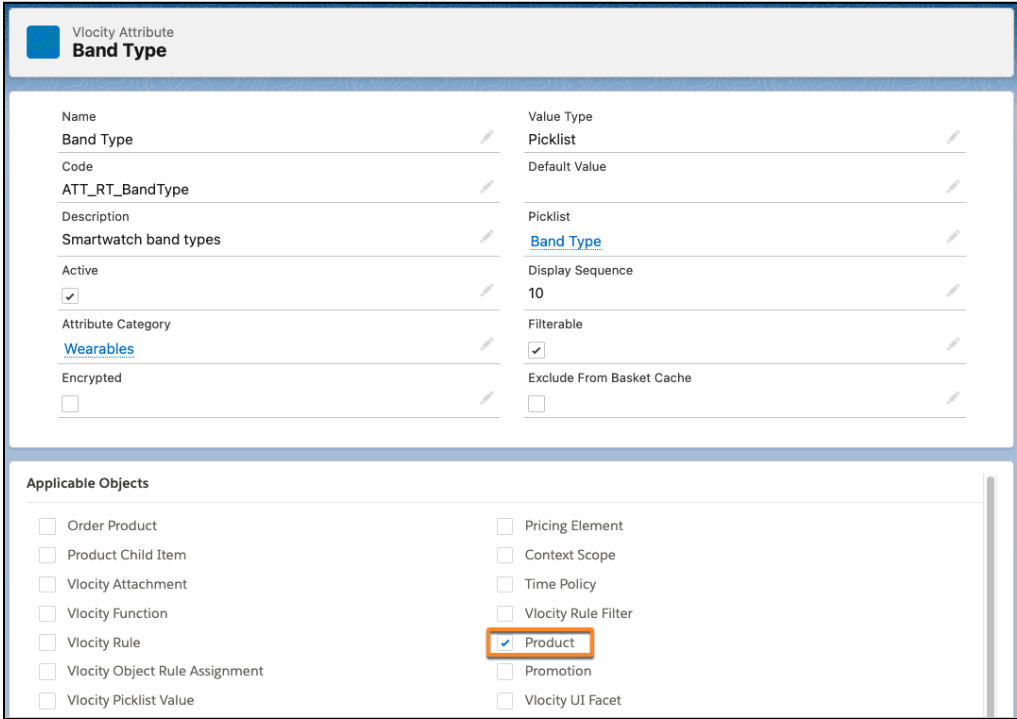3. On the New Vlocity Attribute configuration screen, enter the following information:

Property	Value	Notes
Name	`Band Type`	This value is required and will be visible at run-time in the Cart's configuration window. Attribute names are also used in searches.
Code	`ATT_RT_BandType`	This value is required, only visible at design time, and doesn't need to be unique. We recommend that you make this code unique and follow this format: "ATT_" prefix followed by an alphanumeric value. In addition, you can code the type of attribute by indicating the type of attribute, such as RT for run time, DT for design time, or DC for decomposition (used in Industries Order Management).
Description	`Smartwatch band types`	This value is displayed only at design time and is used to convey the purpose of the attribute.
Active	✔	A selected Active checkbox indicates that the category is currently in use.
Attribute Category	**Wearables**	Use this lookup field to search for and select the applicable category name.

Encrypted	**[leave uncheck]**	The Encrypted checkbox is used to protect personal information and other private data (e.g. a social security number captured as an attribute). This will allow only certain users access to the data.
Value Type	**Picklist**	Use this field to select the data type for the attribute, such as None, Checkbox, Number, Percent, or Text. Since we'll be linking a picklist to this attribute, select Picklist from the dropdown menu. All values will come from the connected picklist.
Default Value	**[leave blank]**	Use this field to enter a value for value types such as Text or Number. Since this attribute uses a picklist, this value isn't used.
Picklist	**Band Type**	Using the lookup field, select the Band Type picklist you created in the previous exercise.
Display Sequence	`10`	This value is required and must be unique. It's used to sequence the attribute category in the Cart's configuration window. We recommend using a 10, 20, 30 sequence to enable easy insertions in the sequence at a later date.
Filterable	✔	Enable this option to allow this attribute to be used to filter products in the Cart.
Exclude From Basket Cache	**[leave uncheck]**	If enabled, this checkbox makes it so the attribute is bypassed in API requests related to pricing or configuration, and is used to improve performance. Only select this checkbox for attributes that do not affect pricing or configuration validity.

4. Select **Save**. A green success message will appear.

5. Make sure that the **Product** object is selected under **Applicable Objects**.
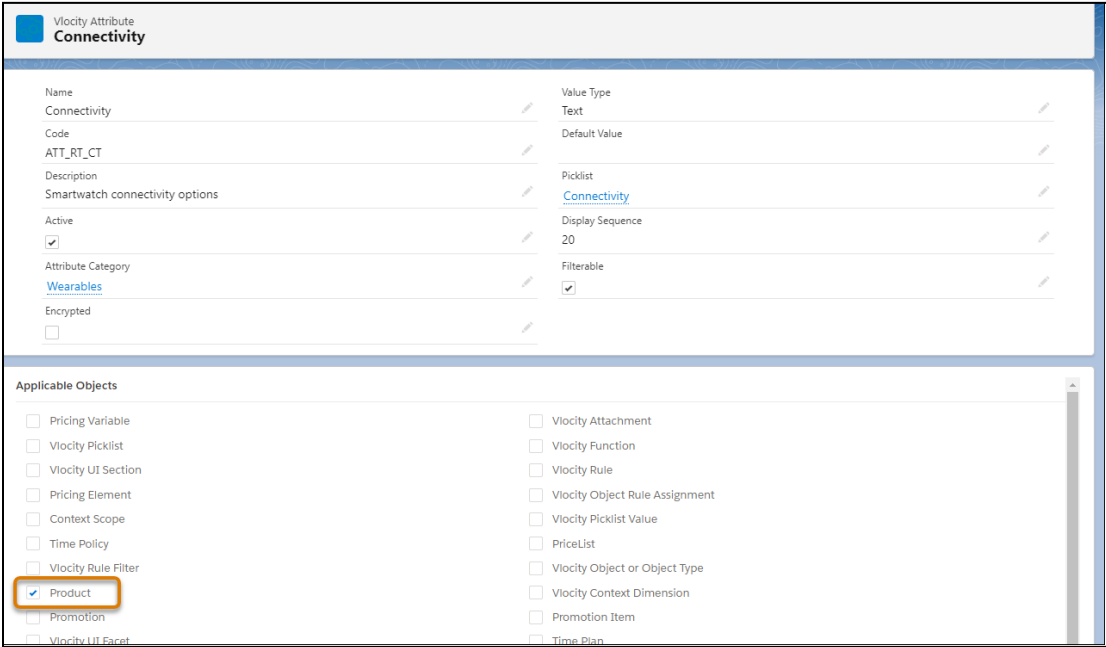
Task 3: Create a product attribute for Connectivity

1. Follow the steps outlined in Task 2 to create a Connectivity product attribute and connect the Connectivity picklist to it.

CONNECTIVITY ATTRIBUTE

Property	Value
Name	Connectivity
Code	ATT_RT_Connectivity
Description	Smartwatch connectivity option
Active	✔
Attribute Category	**Wearables**
Encrypted	**[leave blank]**
Value Type	**Picklist**
Default Value	**[leave blank]**
Picklist	**Connectivity**
Display Sequence	20
Filterable	✔
Exclude from Basket Cache	**[leave blank]**

2. Select **Save** and make sure that the **Product** object is selected under **Applicable Objects**.

Task 4: Review the product attributes in the Wearable attribute category

Now that you've created the Wearables attribute category and associated attributes, let's view the results in Product Designer.

1. From the Vlocity Product Designer navigation menu, select **Vlocity Attribute Categories**.
2. Change the list view to **Recently Viewed** and select the **Wearables** attribute category from the list.
3. On the **Wearables** Attribute Category workspace, notice the newly created **Band Type** and **Connectivity** attributes.

Attributes are powerful entities in Shared Catalog, and contain additional metadata properties that can be set when assigned to an object type or product. You'll learn how to do this in the next few exercises.

Now you're on a roll! You've set up the picklists, attribute categories, and attributes that you'll use to create the smartwatch product. Let's move on to the process of combining them to create a product object type.

Yay! All done!