

HOW TO CREATE A PACKED BUBBLE CHART

Packed bubble charts are used to display data in a cluster of circles. Dimensions define the individual bubbles, and measures define the size and color of the individual circles.

Packed Bubble charts fall under the **Relationship visual segment**.

The arrangement of the bubbles is out of our control, but we can control how big the bubbles are by placing a measure on Size e.g: Sales

The key to making bubble charts useful is placing the correct fields in the appropriate place on the Marks card, specifically on the Color, Size and Detail shelf.

Packed bubble chart is a means to **show relational value** without regards to axes. The bubbles are packed in as tightly as possible to make efficient usage of space.

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Simple way to read a Packed Bubble Chart:

Larger the size of the circle/bubble greater is the **measure**

When we make use of a measure on color, the color gradient will denote the range of the measure

Typically, the **color** denotes the **dimension** used in the visual

Packed Bubble Charts are good at getting insights at a high level.

They are not helpful for comparing the size of circles/bubbles

Some of the useful points that can be obtained from Packed Bubble Charts:

1. Identifying outliers
2. Identifying similar groups
3. Identifying patterns
 - a) how many similar colored circles/bubbles are present
 - b) how many similar colored bubbles are bigger or smaller

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The basic building blocks for a packed bubble chart are as follows:

Mark type: Circle

Detail: Dimension

Size: Measure

Color: Dimension or Measure

Label(optional): Dimension or Measure

We will go through an example of creating a **Packed Bubble Chart** without using the "**Show Me**" menu.

We will be using the standard Sample Superstore data set.

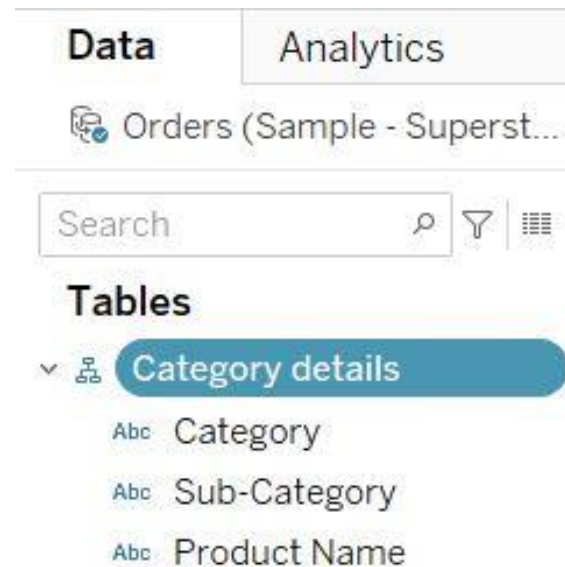
STEPS TO CREATE A PACKED BUBBLE CHART

Step 1: Create a Hierarchy called **Category details** with the below mentioned dimensions

Category

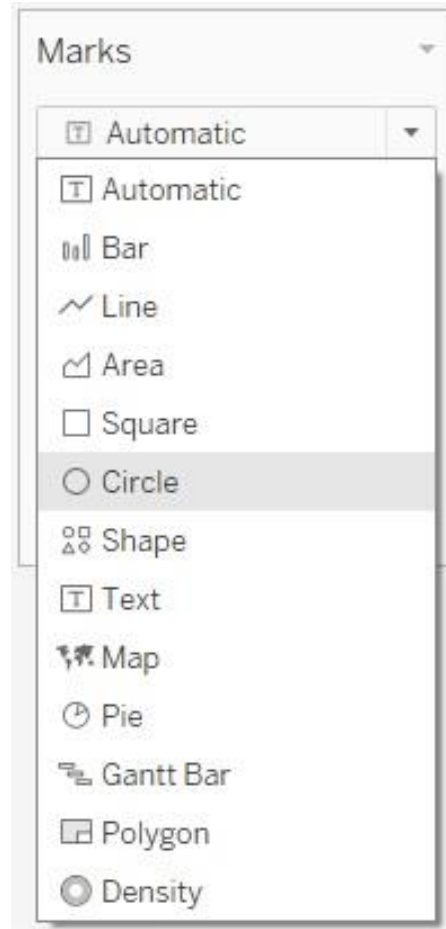
Sub-Category

Product Name



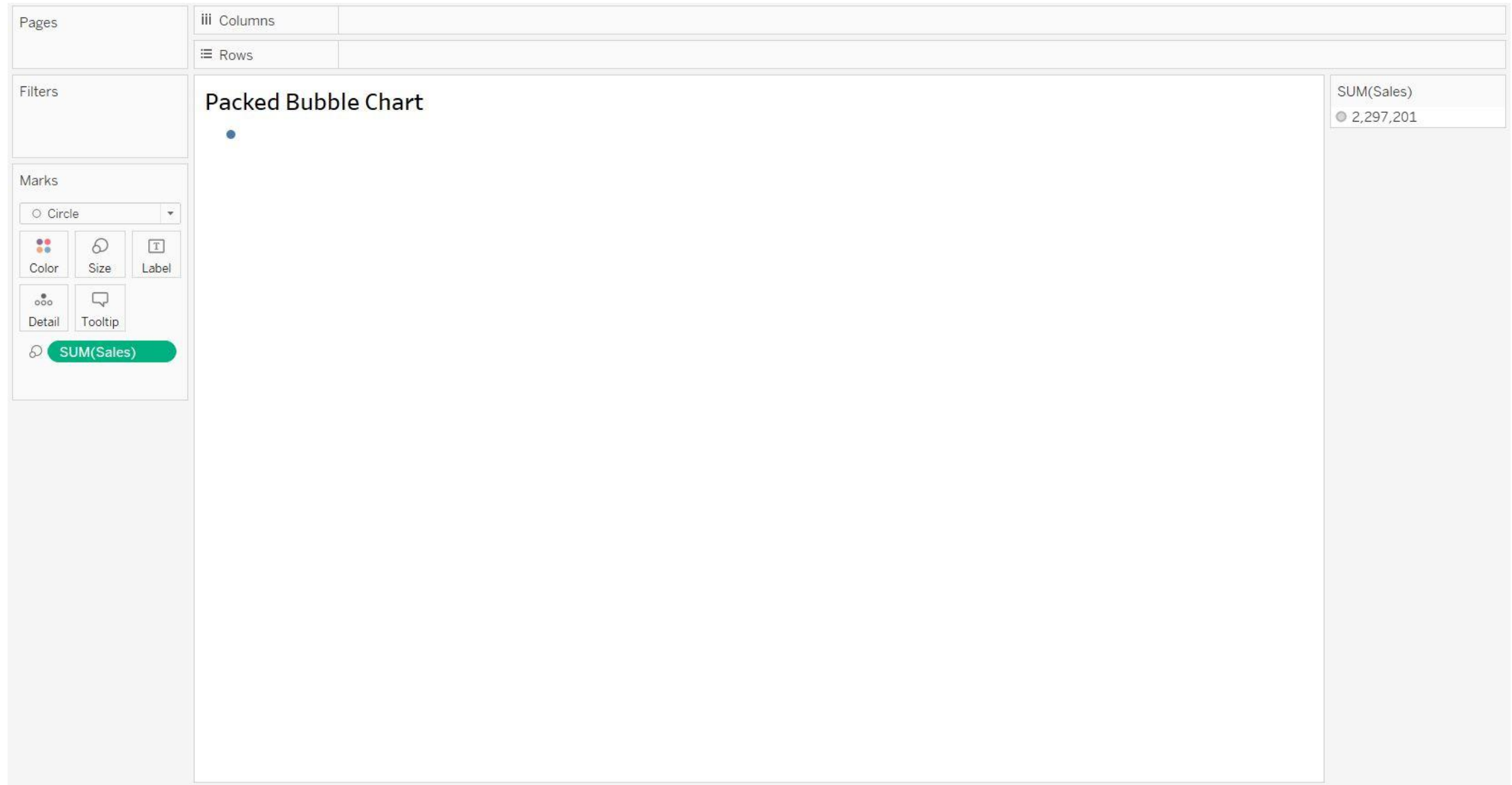
STEPS TO CREATE A PACKED BUBBLE CHART

Step 2: Change the **Mark** type to **Circle**



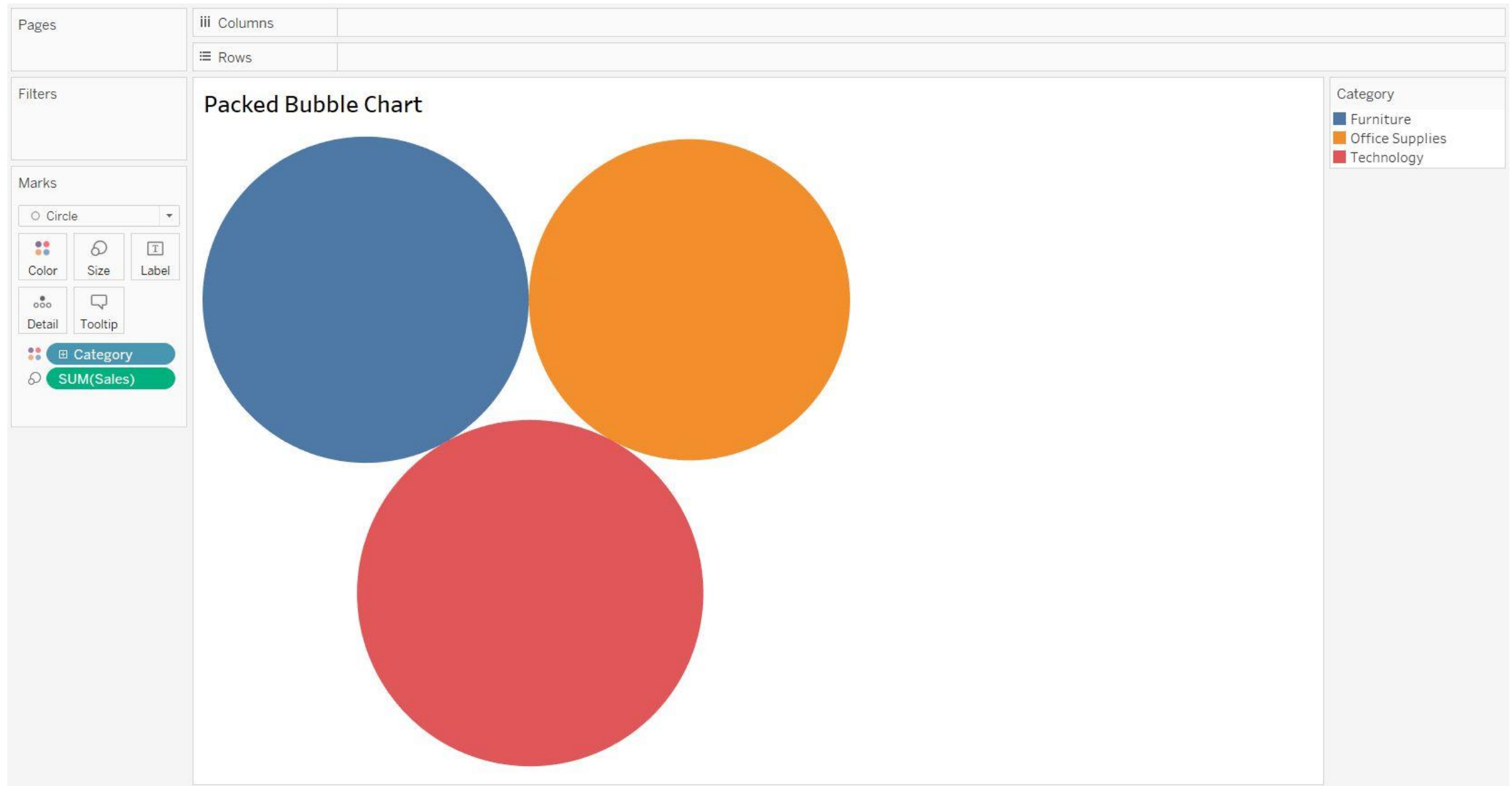
STEPS TO CREATE A PACKED BUBBLE CHART

Step 3: Drag and drop **Sales** to **Size** on **Marks** card



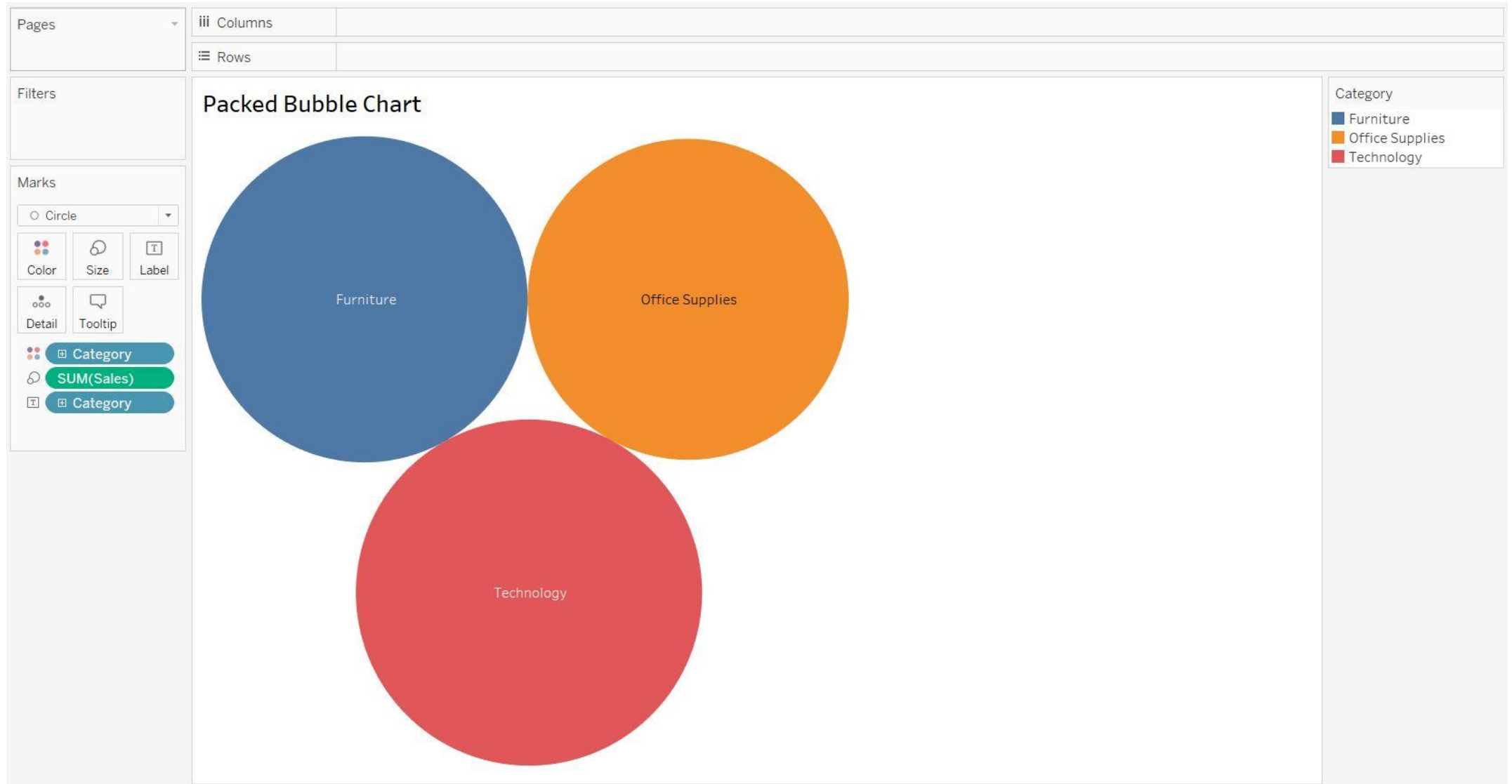
STEPS TO CREATE A PACKED BUBBLE CHART

Step 4: Drag and drop Hierarchy **Category** details to **Color** on **Marks** card



STEPS TO CREATE A PACKED BUBBLE CHART

Step 5: Drag and drop **Category** to **Label** on **Marks** card



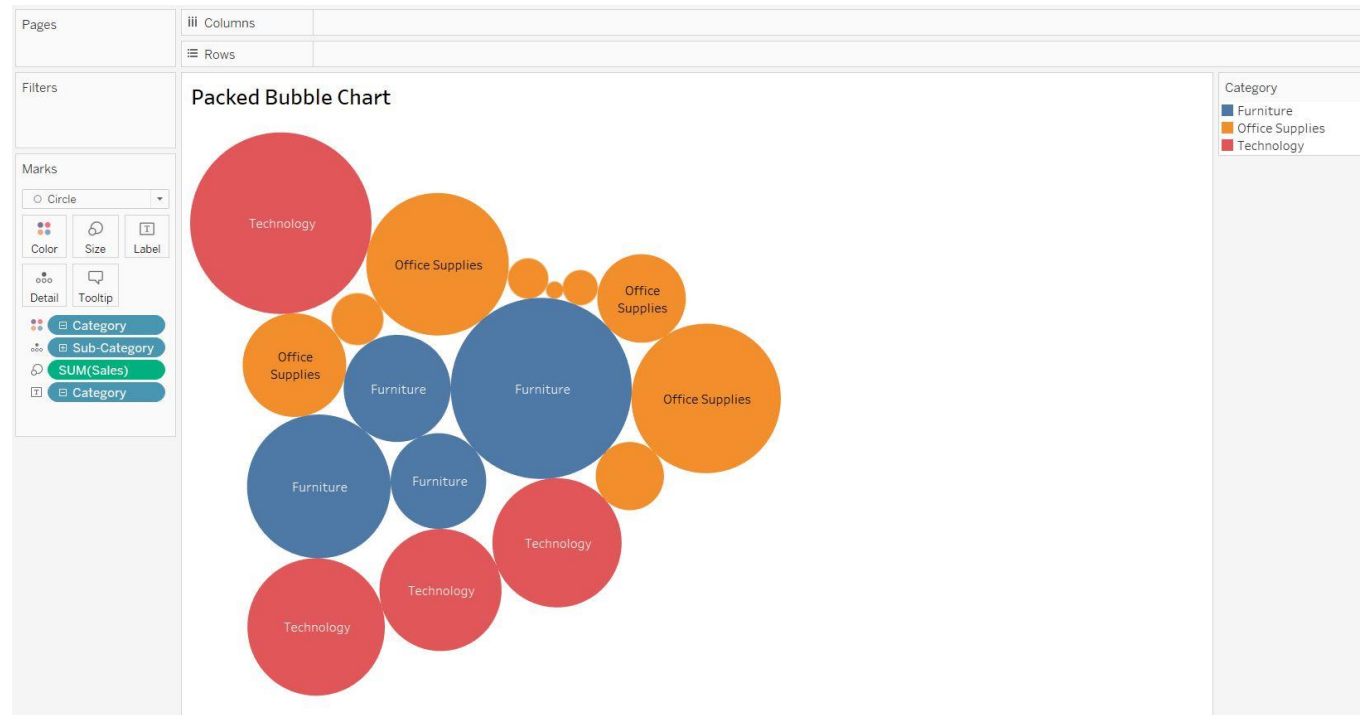
STEPS TO CREATE A PACKED BUBBLE CHART

Step 6: Click on the + near **Category** color pill

We move to one lower level in the Hierarchy i.e., Sub-Category. Now Sub-Category is moved to Detail of the Marks card

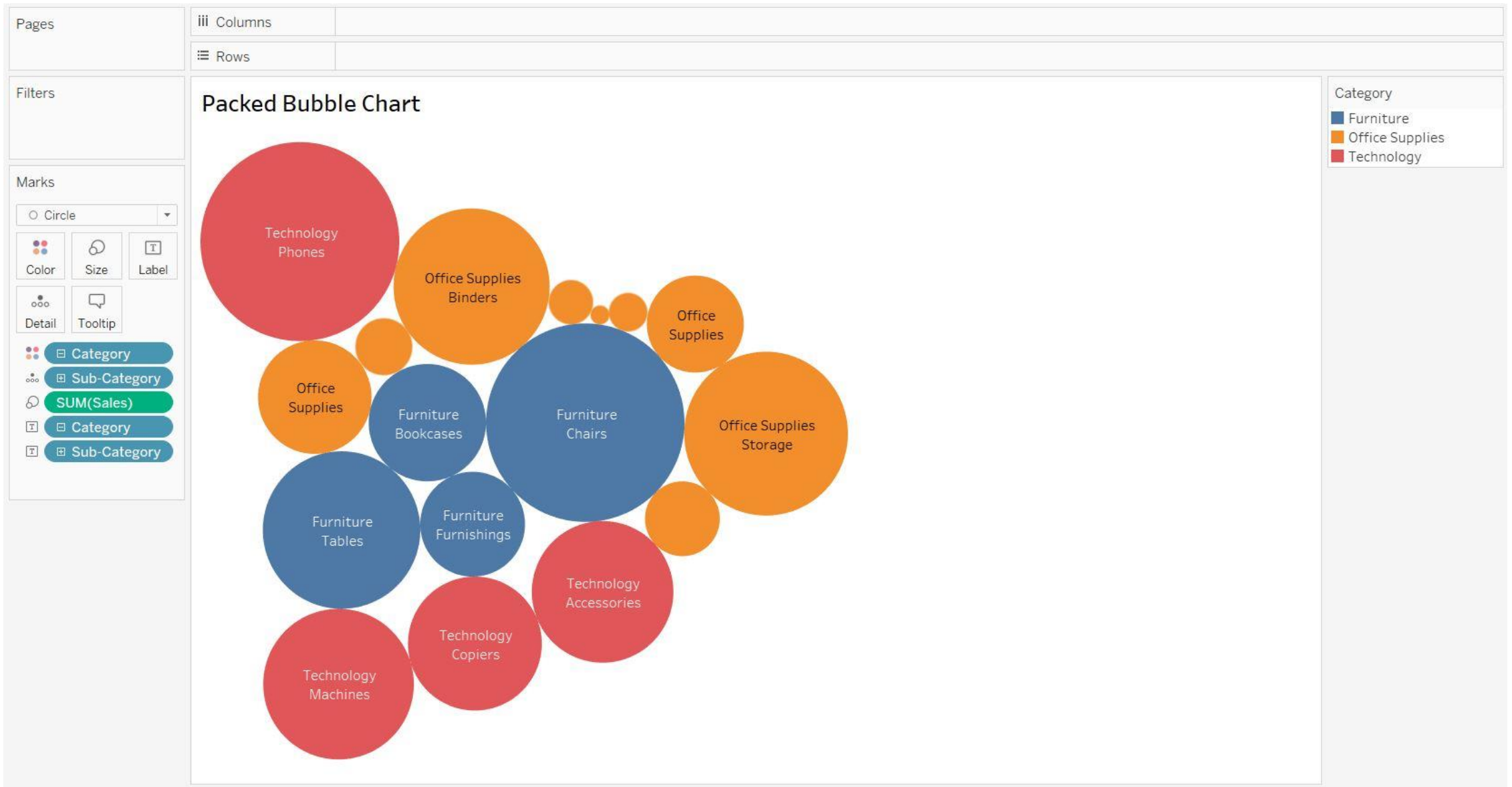
Now we get more information to the first bubble chart i.e., there are more bubbles at the Sub-Category level

Now, we get one bubble per Category and Sub-Category. Note the arrangement of the bubbles. Again, we cannot manually move bubbles around.



STEPS TO CREATE A PACKED BUBBLE CHART

Step 7: Drag and drop **Sub-Category** to **Label** on **Marks** card

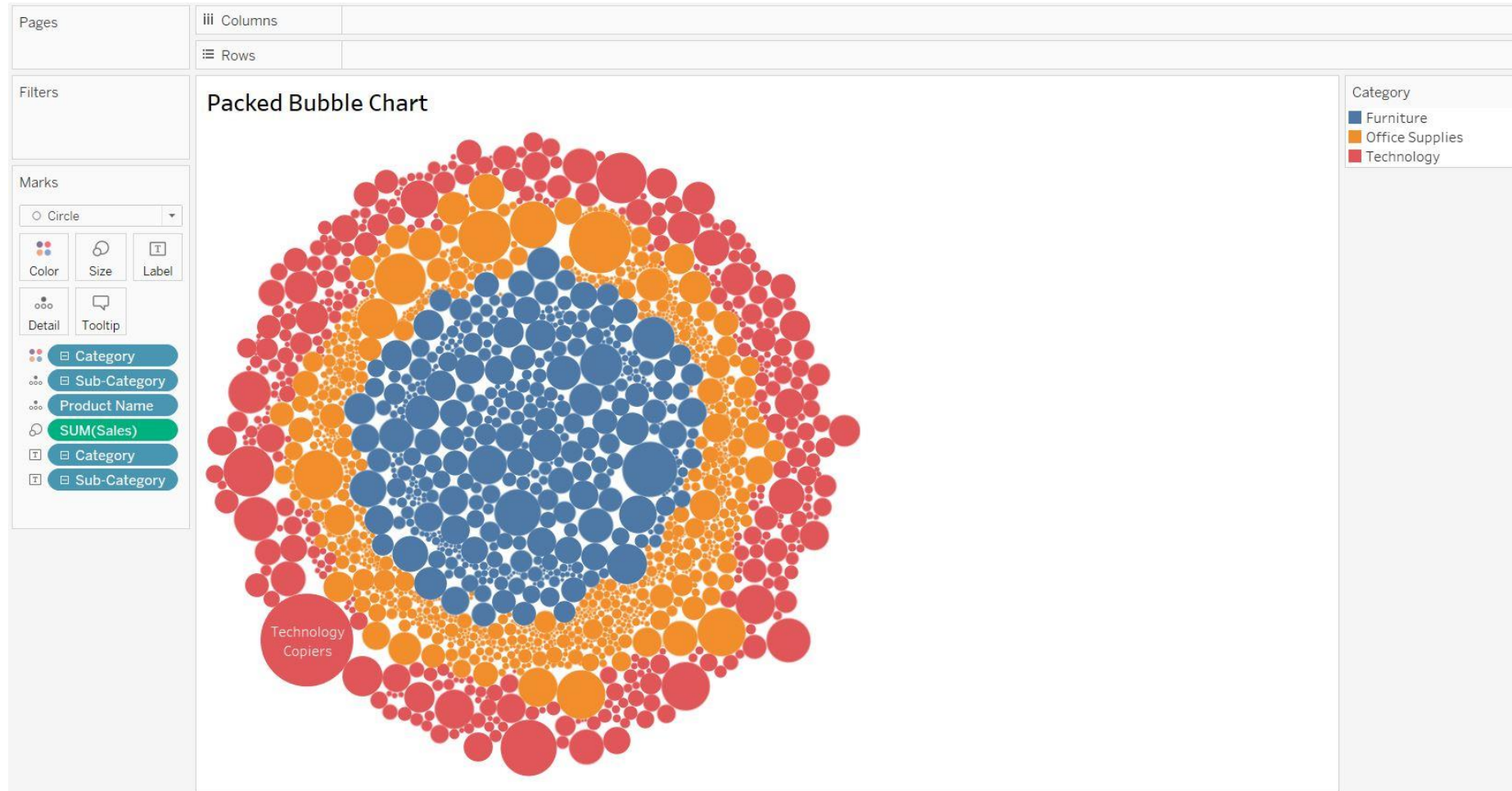


STEPS TO CREATE A PACKED BUBBLE CHART

Step 8: Click on the + near **Sub-Category** detail pill

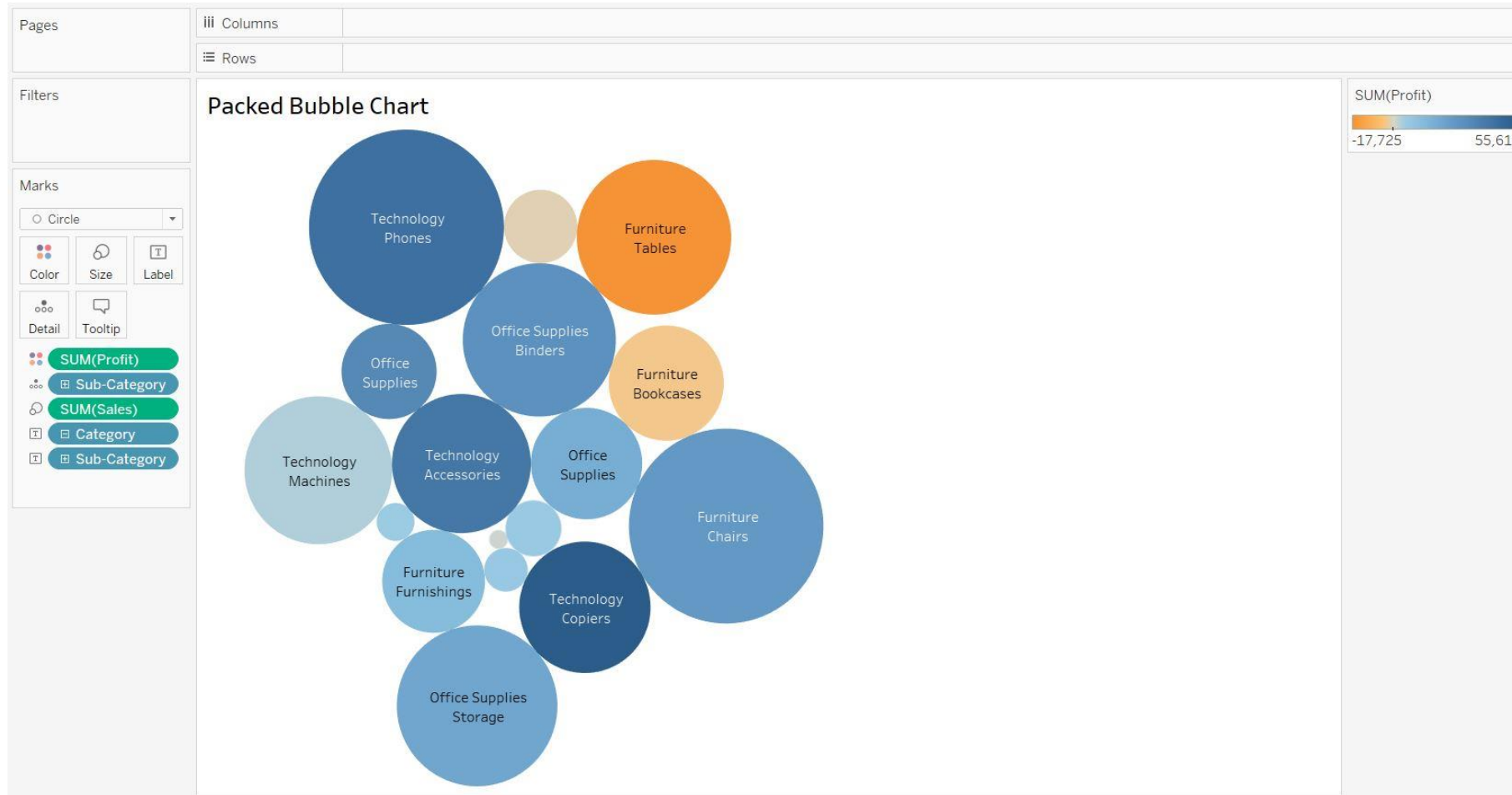
Now we move to **Product Name** level. This will result in more bubbles

Now we get one bubble per Category, Sub-Category and Product Name.



STEPS TO CREATE A PACKED BUBBLE CHART

Step 9: Move back to **Sub-Category** level. Drag and drop **Profit** to **Color** on **Marks** card



The **size of the bubbles** shows the **sales** for different combinations of **Category** and **Sub-Category**.

The **color of the bubbles** shows the **profit**.
The **darker the blue**, the **greater the profit**
The **darker the orange**, the **lesser the profit**.

STEPS TO CREATE A PACKED BUBBLE CHART

Step 10: If required we can create a Calculated Field, **Neg Profit** to show the negative profit with a different color

Neg Profit

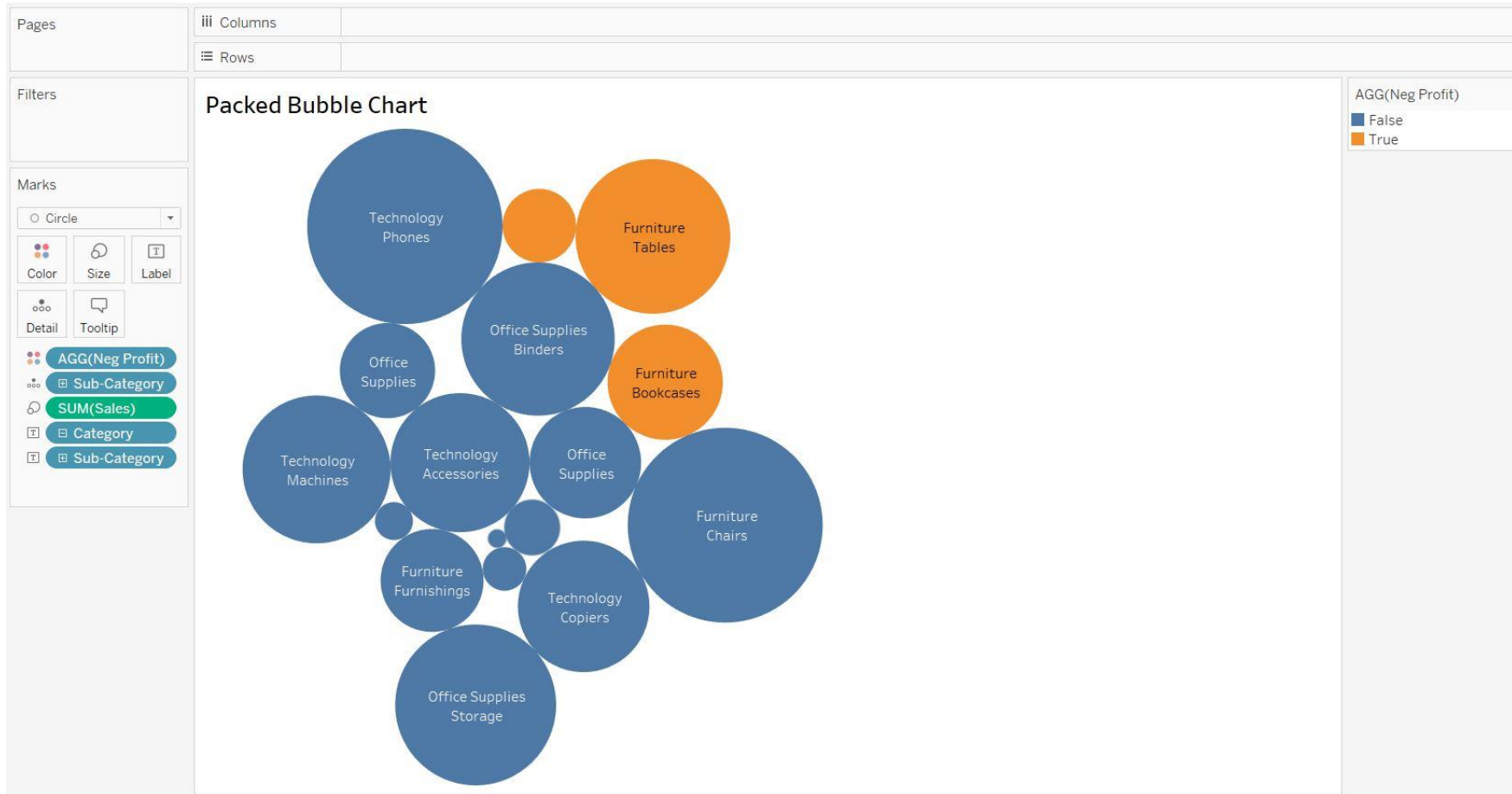
SUM(Profit) < 0

The calculation is valid.

ApplyOK

STEPS TO CREATE A PACKED BUBBLE CHART

Step 11: Drag and drop the calculated field **Neg Profit** to **Colors** on **Mark** card



The combinations of **Category** and **Sub-Category** with **Negative profits** are shown as **Orange bubbles**

The combinations of **Category** and **Sub-Category** with **Positive profits** are shown as **Blue bubbles**

STEPS TO CREATE A PACKED BUBBLE CHART

Step 12: If required we can create a Calculated Field for **Profit Margin**

Profit Margin

×

SUM([Profit])/SUM([Sales])

▶

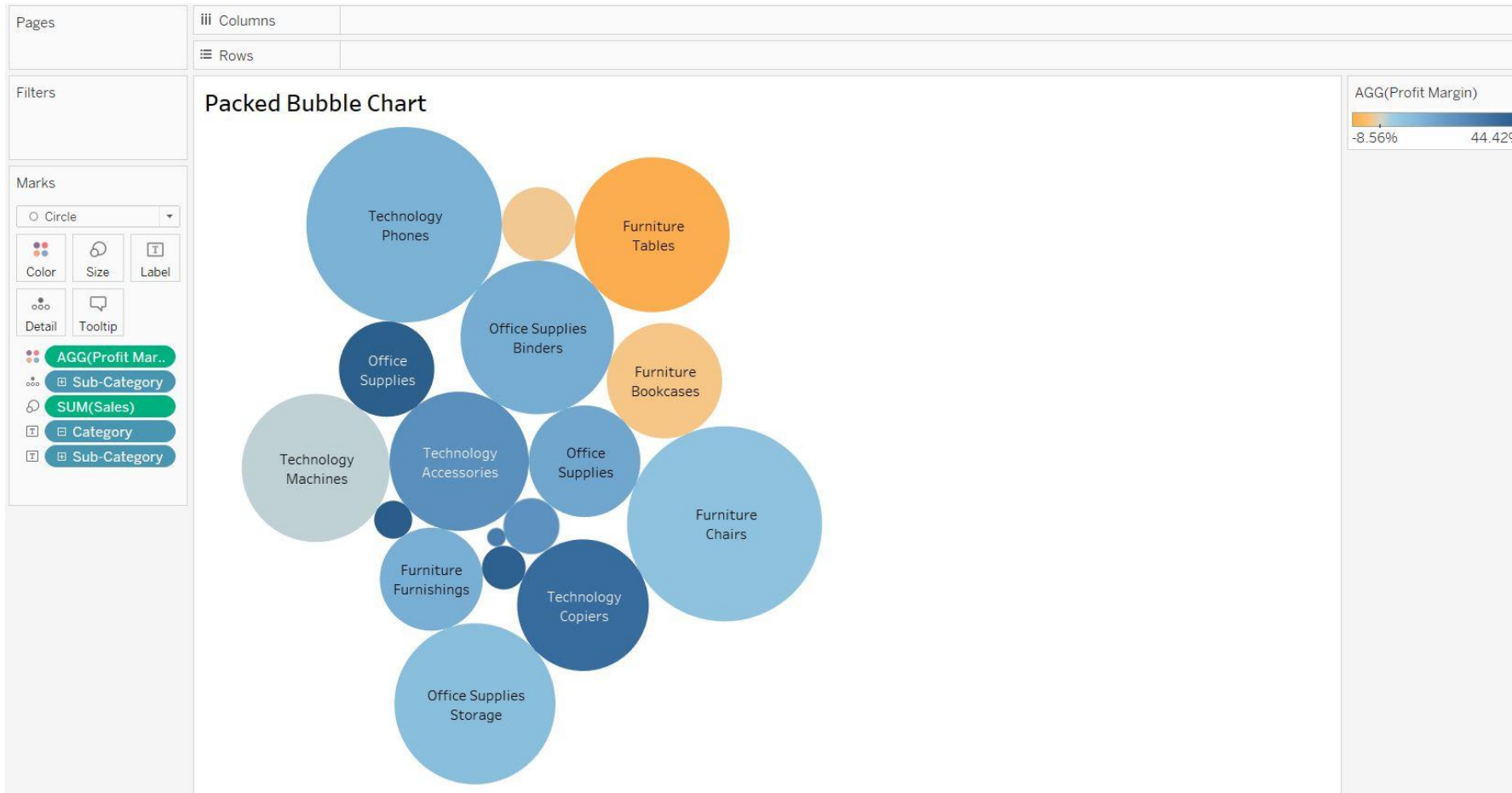
The calculation is valid.

Apply

OK

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Step 13: Drag and drop the calculated field **Profit Margin** to **Colors** on **Mark** card



The **darker the blue**, the **greater the Profit Margin**

The **darker the orange**, the **lesser the Profit Margin**