O'REILLY®

Power BI Bootcamp

Nicolás Lagreste Zucchini

Maria Florencia Hourcouripé

Course Agenda

- **Week 1:** Introduction to Business Intelligence, Power BI and Power Query.
- **Week 2:** Advanced and Interactive Visuals.
- **Week 3:** Calculated measures, columns & custom tables with Power BI Programming Language (DAX).
- **Week 4:** Ways to collaborate and share in Power BI.

About us:

Nicolás Lagreste Zucchini

nico@analyticmood.com
www.analyticmood.com
analytic mood

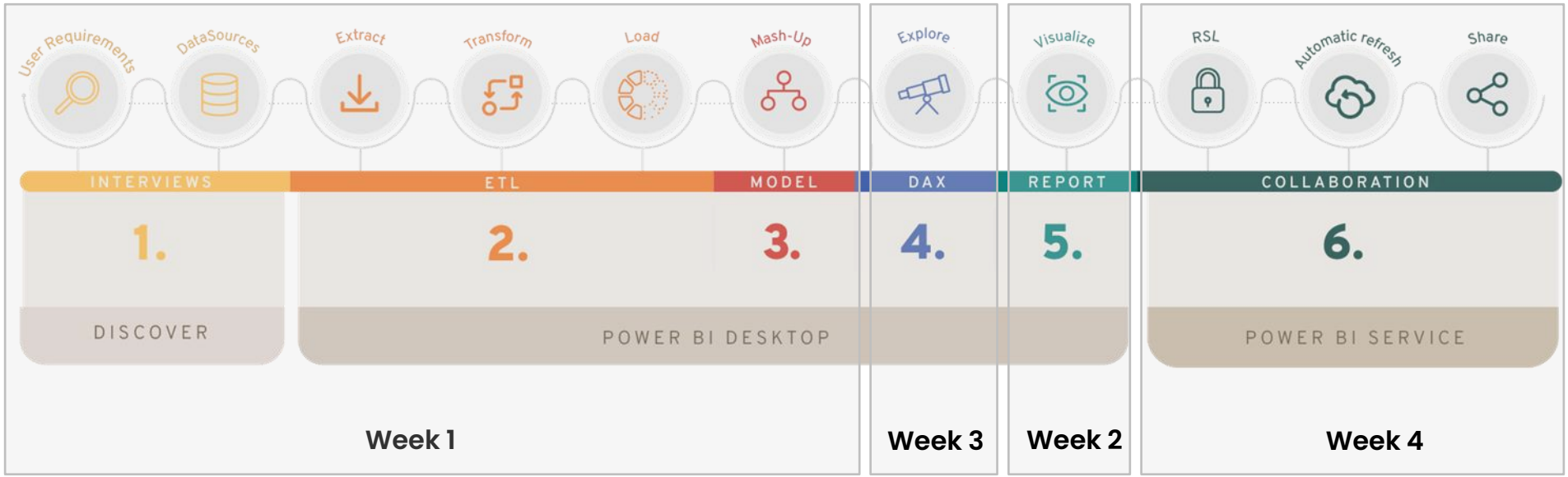
- **Co-founder of Analytic Mood** — Leading data solutions and business strategies.
- **Experienced Data Expert and Business Analyst** — Extensive experience with NTT Data, Kabel, BI Applications, Grupo Solutio and Analytic Mood.
- **Microsoft Power BI Lead** — Oversees the full development cycle from design to deployment.
- **Power BI Community Speaker** — Presented at the latest Power BI Summit, engaging with industry peers.

María Florencia Hourcouripe

flor@analyticmood.com
www.analyticmood.com
analytic mood

- **Co-founder of Analytic Mood** — Pioneering data-driven solutions and strategic innovations.
- **Educational Background** — Holds a Master's degree in "Business Intelligence & Technological Innovation" from EAE Business School.
- **Consultant & Trainer in Microsoft Power BI** — Expert in guiding professionals through Power BI applications and analytics.
- **Power BI Community Contributor** — Recently spoke at the Power BI Summit, sharing expertise with fellow data enthusiasts.

Our Method: Flow of Report Development



Exercise 0.0 – Initial set up

Download the shared .ZIP

- **Option 01 - AnalyticMood Web**

  https://www.analyticmood.com/en/resources

  User: PBIUser

  Pass: Oreilly$2023

NOTE: use the latest version of Power BI Desktop.

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WEEK 02

Advanced and
Interactive Visuals

Week 2: Advanced and Interactive Visuals.

- Identify common types of data visualization and their uses.
- Create an interactive report with Power BI Desktop.
- How to customize those visuals to meet your organization's requirements and to direct the user’s attention to exactly where you want it while helping to make the visual easier to read and interpret.
- You will also learn about how to use key performance indicators (KPIs).
- How to use buttons and other navigation techniques.

Week 2: Advanced and Interactive Visuals.

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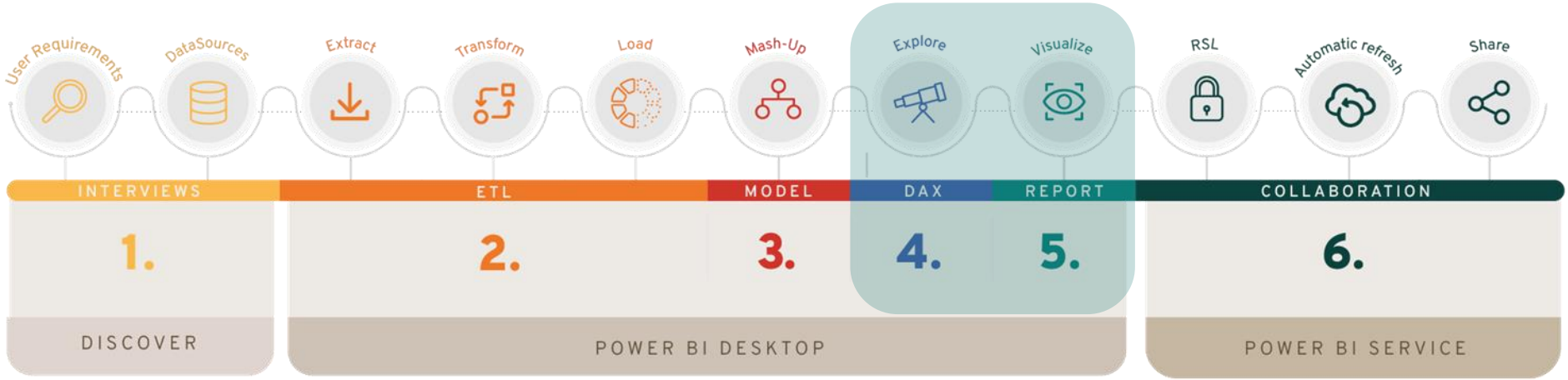
Designing and changing the format of visuals

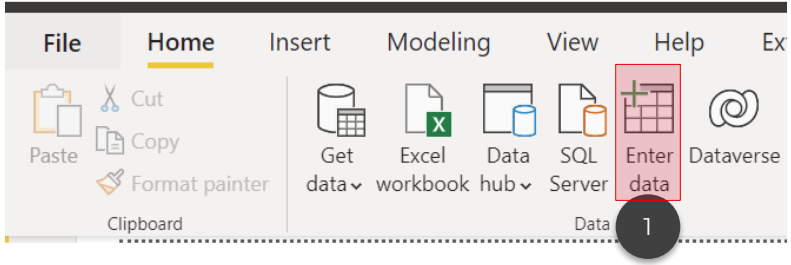
- Demo 1.3:
- How to change the format of fields.
- Design and change the format of visuals.
- Design two pages that contain:
  - Maps, Bar chart, Line chart, Slicers, Pie chart
- Exercise Case 1.3: Designing and changing the format of visuals

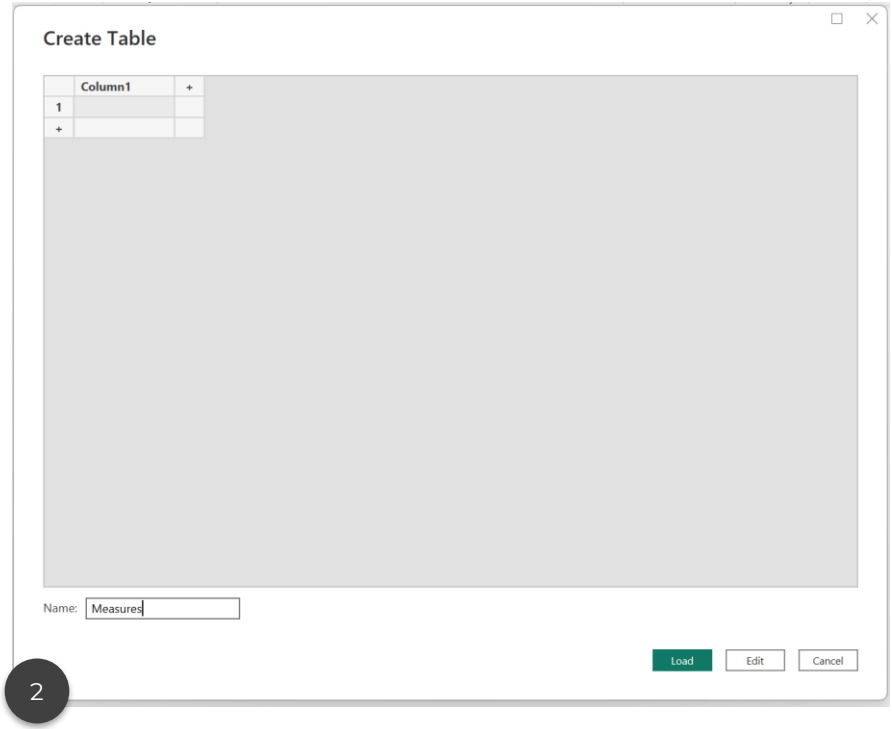
Demo 2.0

Our Method: Flow of Report Development

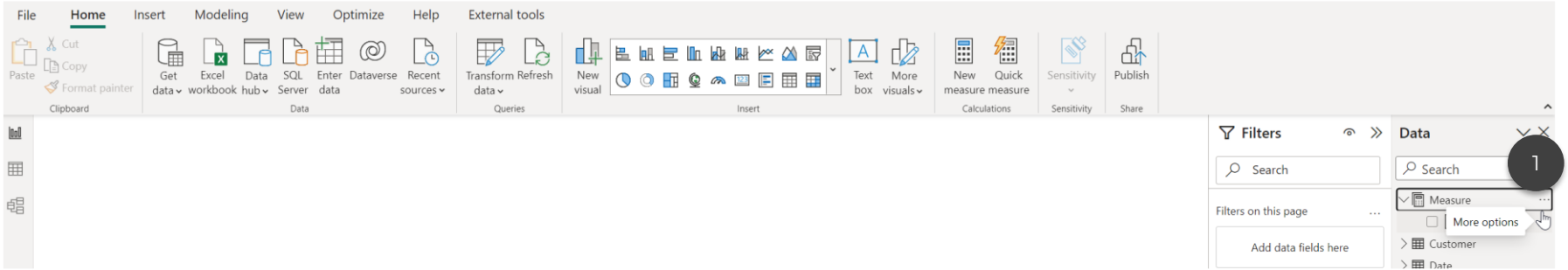


Create Measure table





Measures


File
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External tools
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Copy
Format painter
Clipboard
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Excel workbook
Data hub
SQL Server
Enter data
Dataverse
Recent sources
Data
Transform data
Refresh
Queries
New visual
Text box
More visuals
Insert
New measure
Quick measure
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Share
Filters
Search
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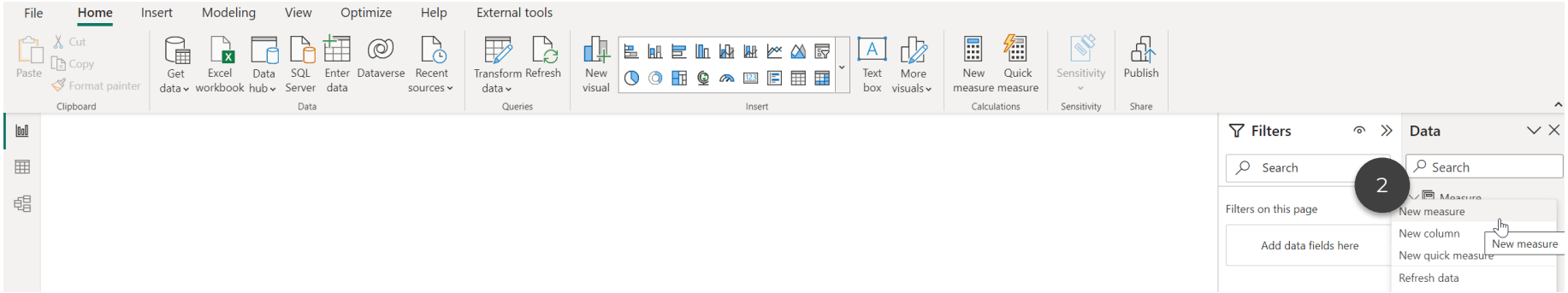
Add data fields here
Data
Search
Measure
More options
Customer
Date
1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Excel workbook
Data hub
SQL Server
Enter data
Dataverse
Recent sources
Data
Transform data
Refresh
Queries
New visual
Text box
More visuals
Insert
New measure
Quick measure
Calculations
Sensitivity
Publish
Share
Filters
Search
Filters on this page
Add data fields here
Data
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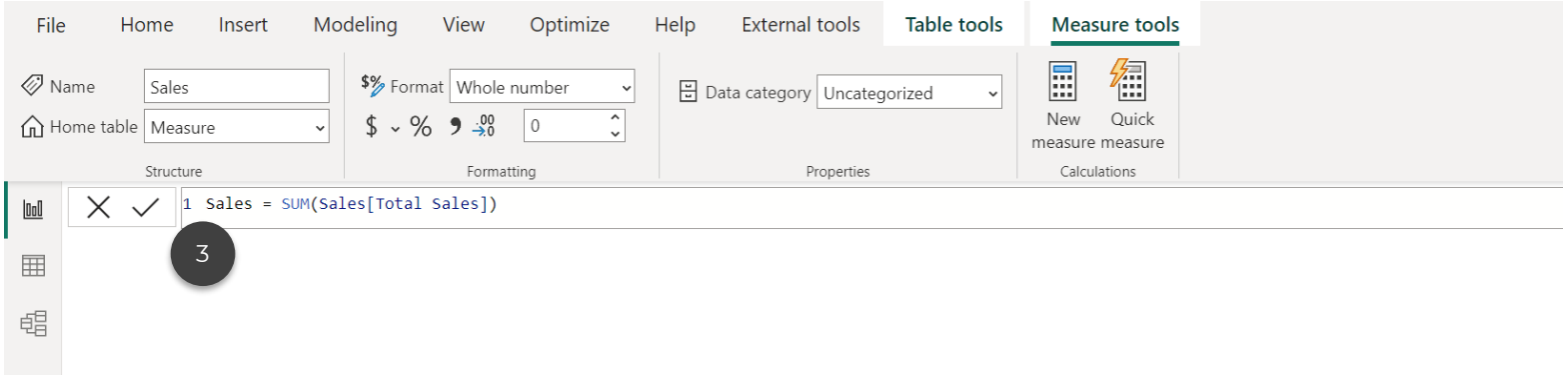
2
New measure
New column
New quick measure
Refresh data
New measure

Measures


File
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External tools
Table tools
Measure tools
Name
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Home table
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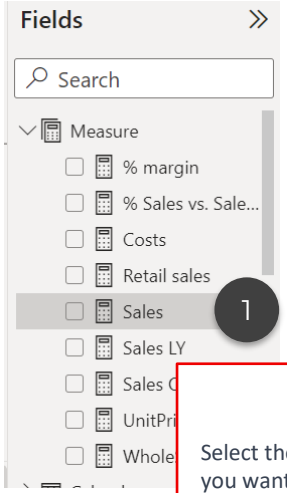
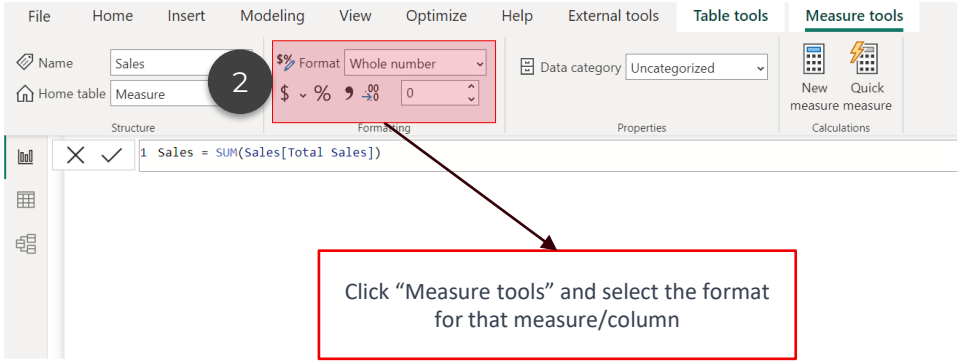
Formatting
Data category
Uncategorized
Properties
New measure
Quick measure
Calculations
1 Sales = SUM(Sales[Total Sales])
3

How to change the format of fields

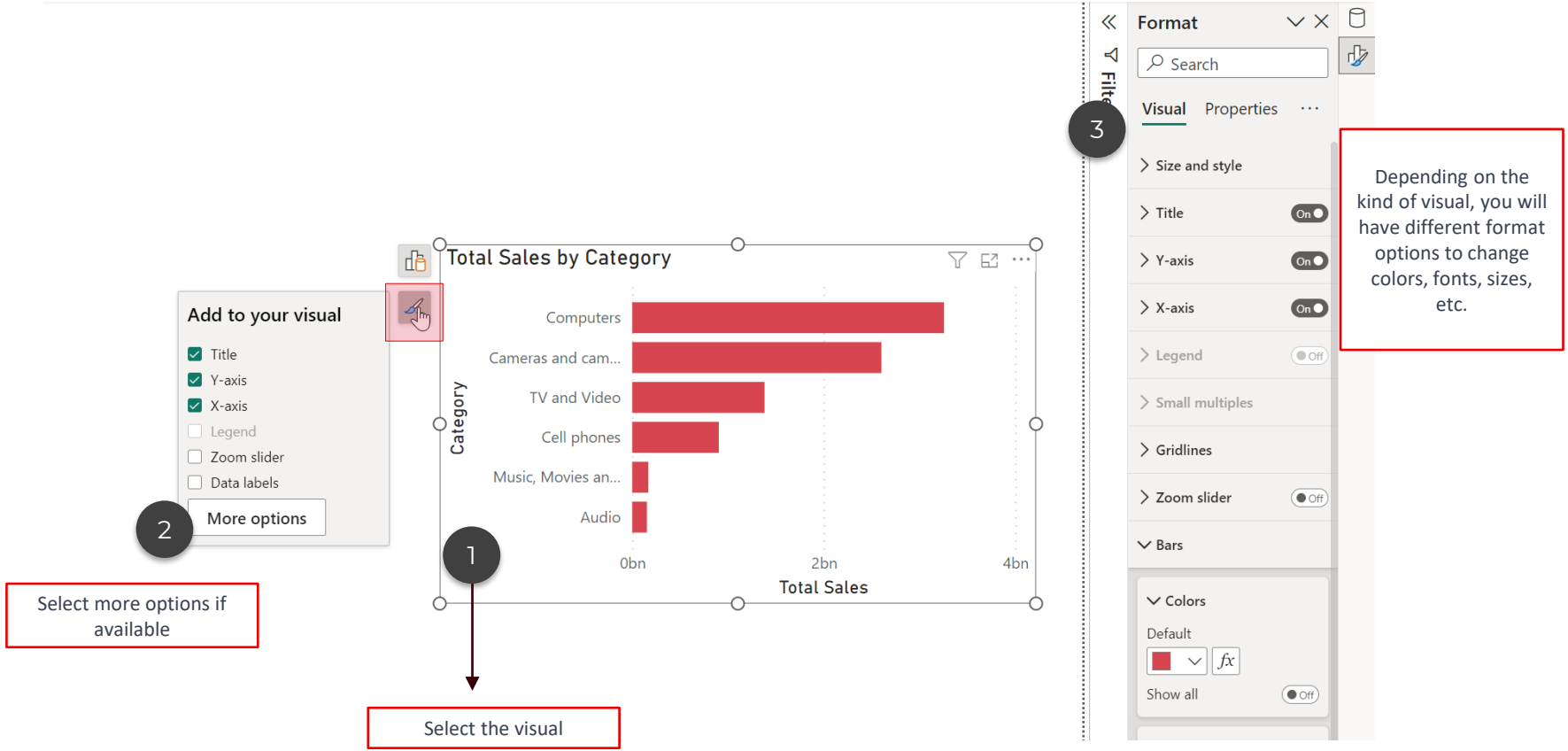


Select the column or measure that you want to change the format, by clicking in the middle of the word.

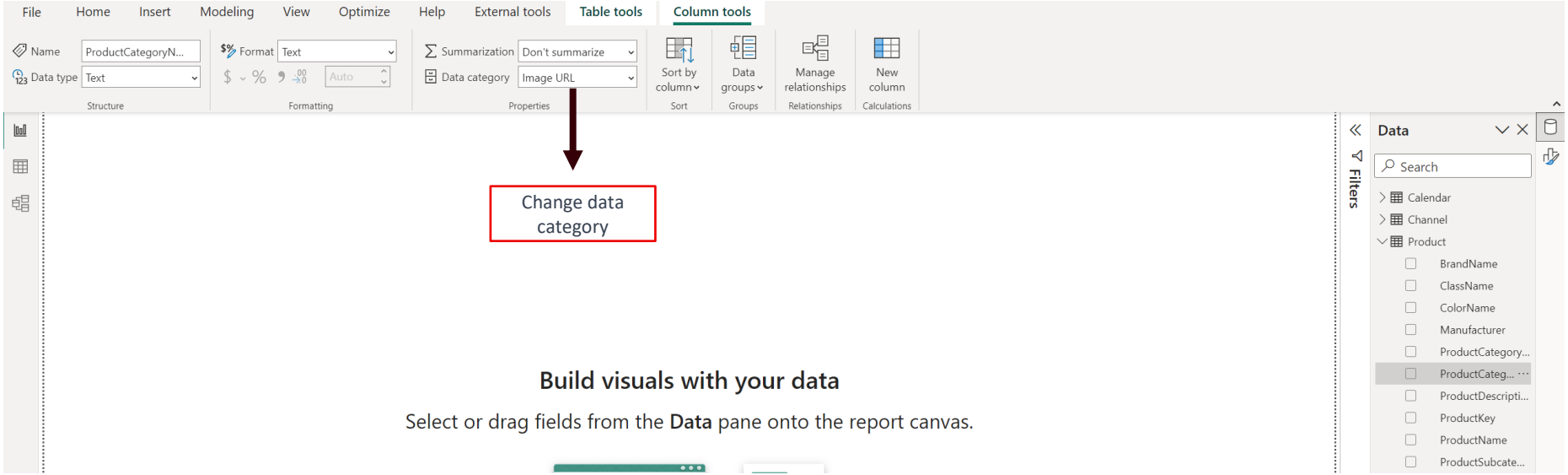


Click “Measure tools” and select the format for that measure/column

How to change the format of visuals



Change data category

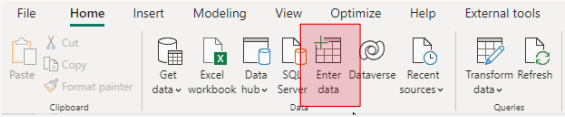


Exercise 2.0

Exercise 2.0. Open the file ***Exercise2.0.pbix*** *(Location: C:\PowerBIBootcamp\Week02\Exercises\Exercise2.0.pbix)*

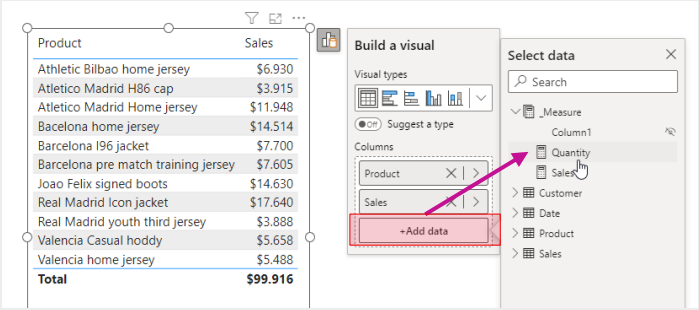
Note: Demo data is different from your data.

1 Create a **"_Measure"** table and two measures: *Quantity* and *Sales*. *(*Let's do this step together)*



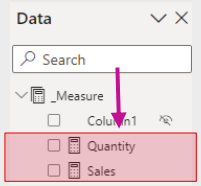
*Slide 73-75

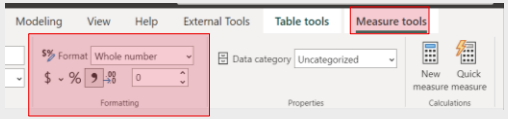
2 Replace the quantity column in the matrix with the **MEASURES** "Quantity" and "Sales" ("_Measure" table).



3 Display the format of the **measures**:

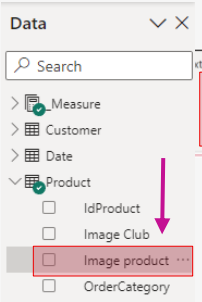
- Quantity with commas as thousands separator.
- *Sales* to currency.

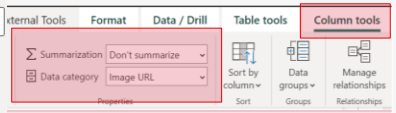




Product	Quantity	Sales
Athletic Bilbao home jersey	99	$6.930
Atletico Madrid H86 cap	135	$3.915
Atletico Madrid Home jersey	206	$11.948
Bacelona home jersey	177	$14.514
Barcelona I96 jacket	100	$7.700
Barcelona pre match training jersey	117	$7.605
Joao Felix signed boots	77	$14.630
Real Madrid Icon jacket	180	$17.640
Real Madrid youth third jersey	54	$3.888
Valencia Casual hoddy	82	$5.658
Valencia home jersey	112	$5.488
Total	**1.339**	**$99.916**

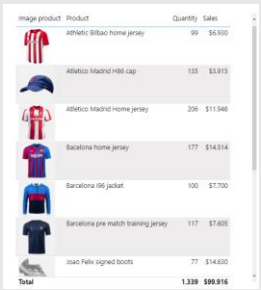
4 In the **Products table**, assign the columns of the **Image product** and **Image Club** to the data category: *Image Url.*

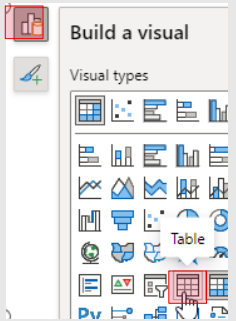




5 Add this column (**Image product**) to the matrix.

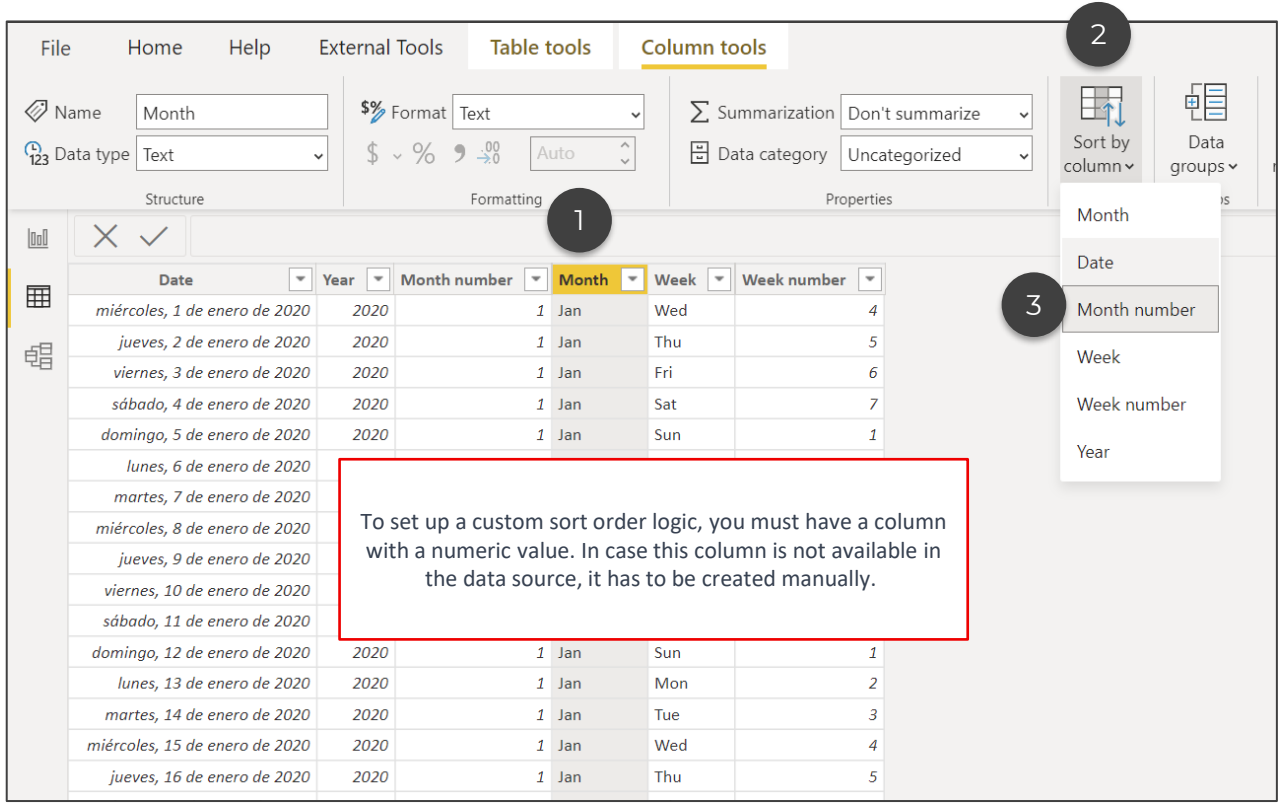
Change the matrix to a table visual.



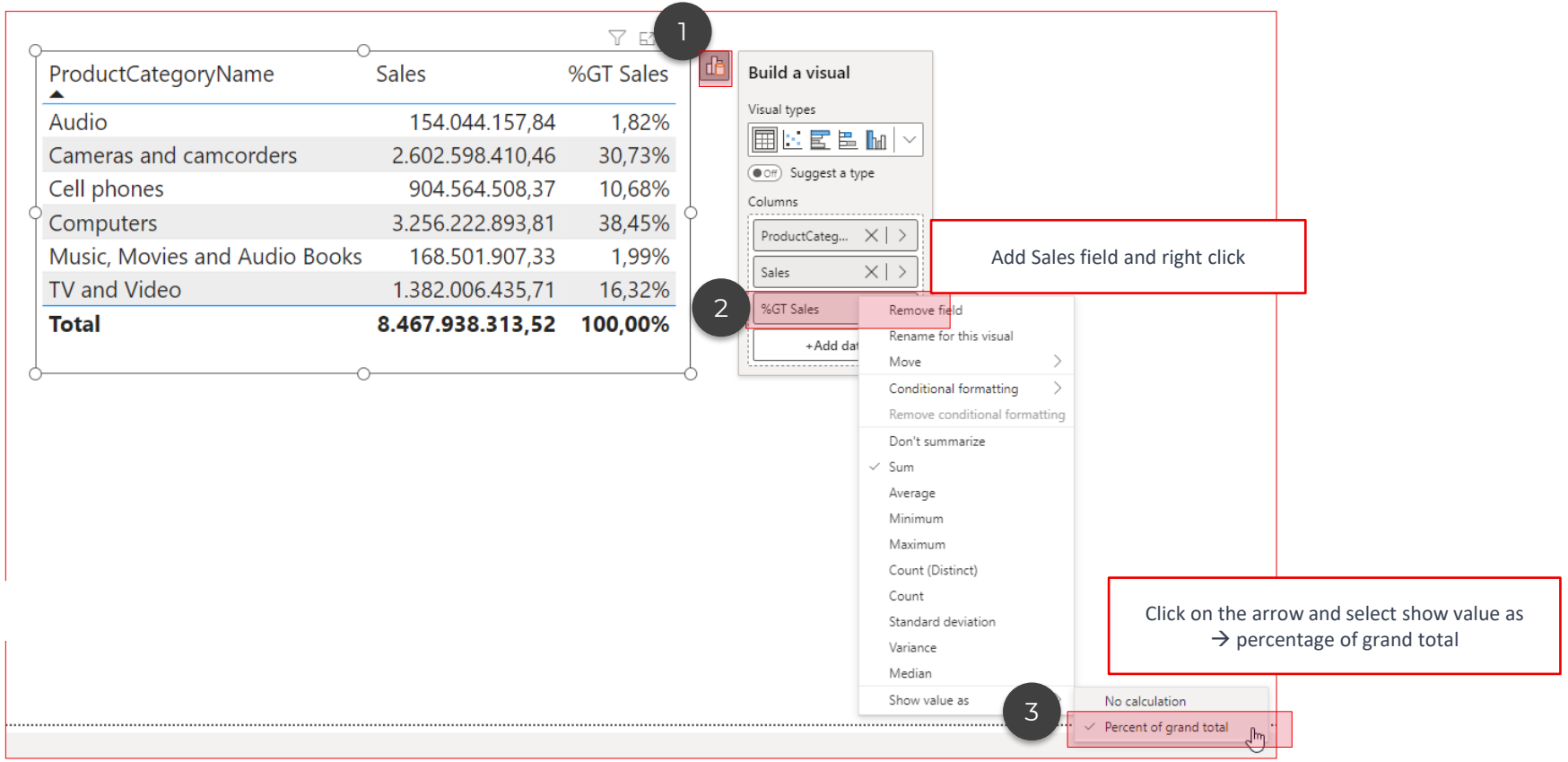


Demo 2.1 & 2.2

Sort by column



Show value as percent of grand total

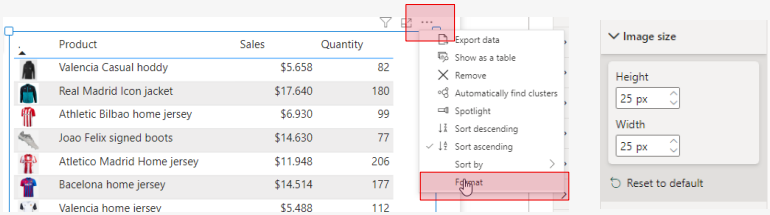


Exercise 2.1

Exercise 2.1: Creating visuals. Open the file *Exercise2.1.pbix*

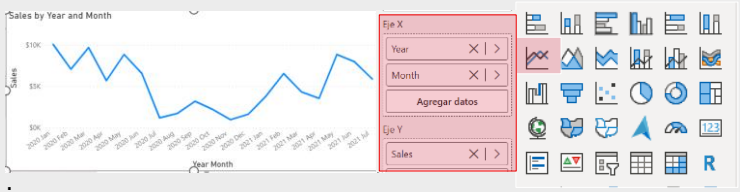
1

Adjust the **size of the image** within the existing table by making it smaller (**25x25**)

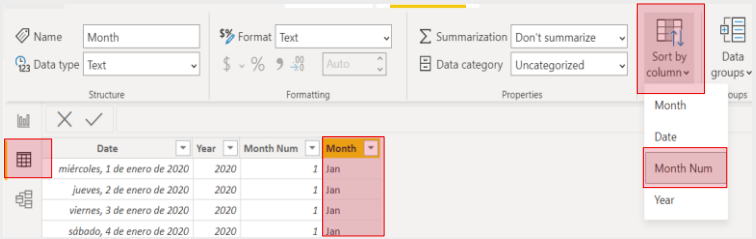


2

Insert a **line chart** that displays **sales trends by year and month.**



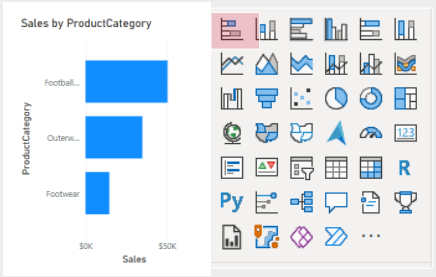
Ensure **the 'month' column is sorted according to 'month num'.**



3

Create a bar chart illustrating sales by product category.

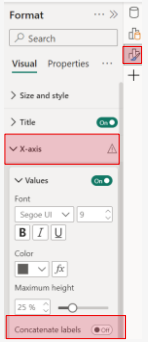
Utilize the 'Sales' measure for accurate representation.



4

Modify the **line chart's format** as follows:

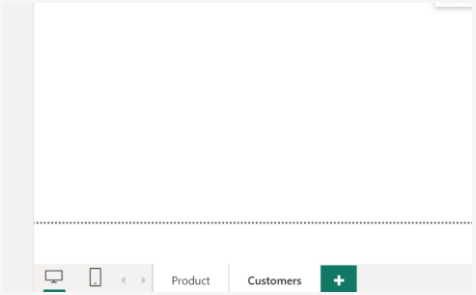
- Navigate to Format / Visual / X-Axis/ Values.
- **Deselect the 'Concatenate labels' option.**



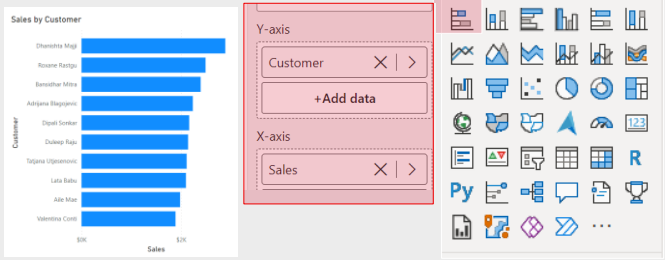
Exercise 2.2

Exercise 2.2: Creating a New Page and Visuals. Open the file *Exercise2.2.pbix*

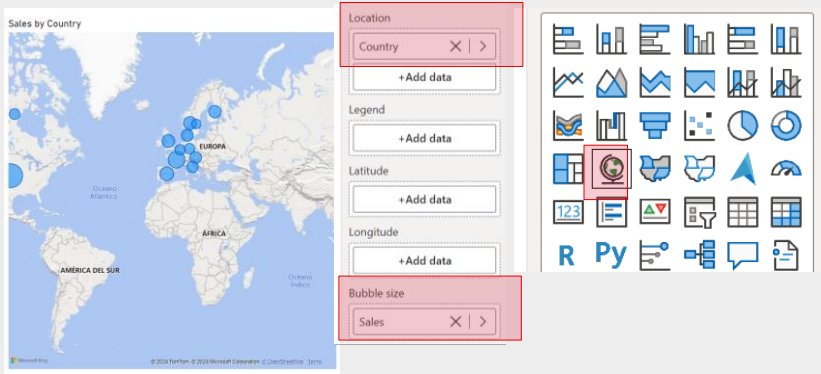
1 Rename the current page to **"Products"** and then create a new page titled **"Customers".**



2 On the **"Customers"** page, add a bar chart to visualize **sales** by **customers**:



3 On the **Customers** page, create a map to display **sales** by **country**:



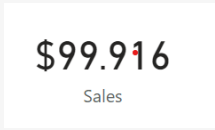
4 On the **Customers** page, insert a **card** visual.

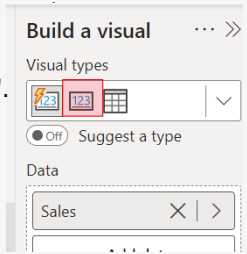
Add measure **Sales.**

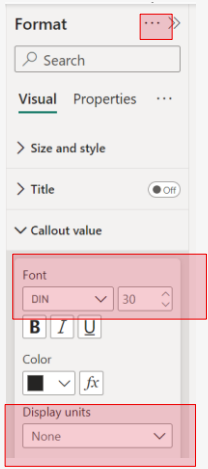
Navigate to Format / Visual / Callout Values / Values.

Set the **font size** to 30.

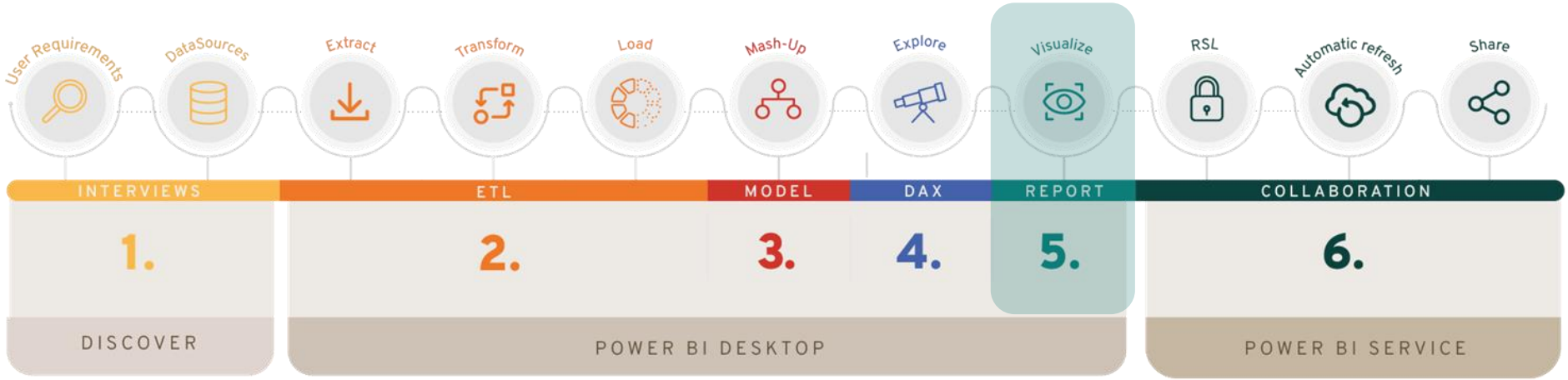
Set the **display units to 'None'**.





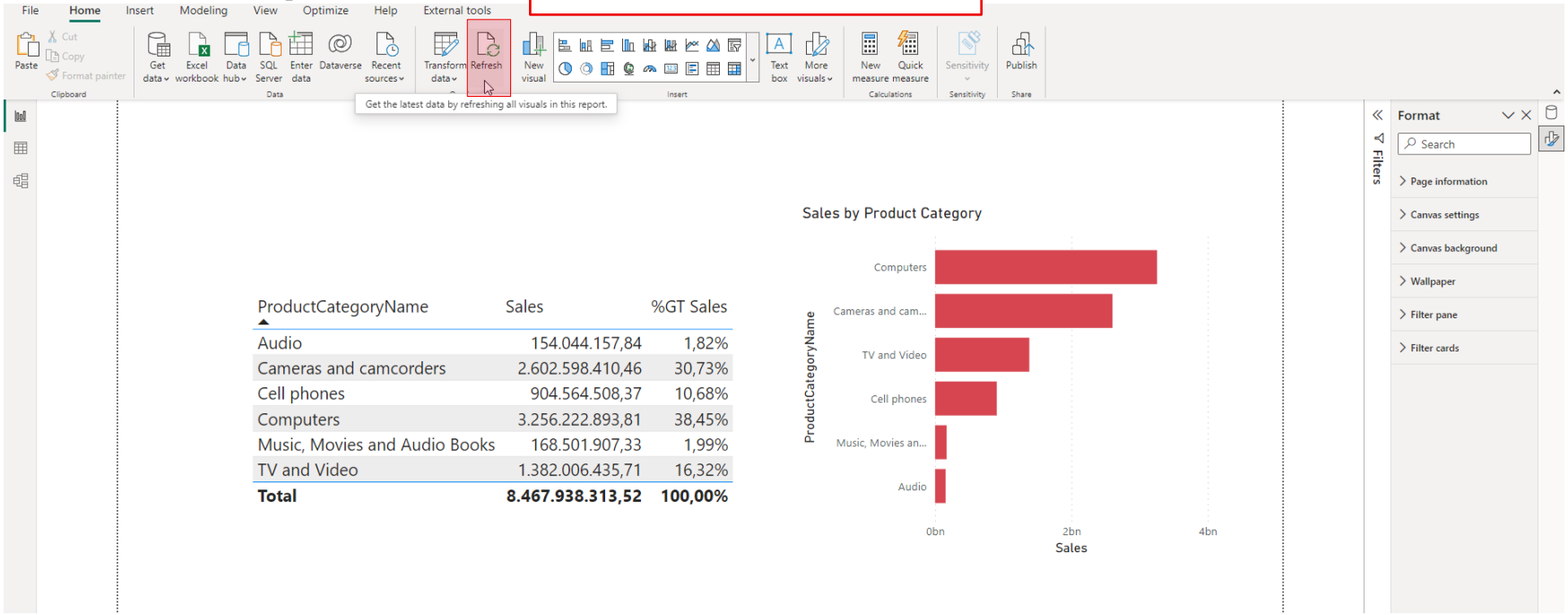


Our Method: Flow of Report Development



Refresh Report

Click here to refresh reports (pbi conects to datasources, refreshes steps in Pquery and then the visuals)



ProductCategoryName	Sales	%GT Sales
Audio	154.044.157,84	1,82%
Cameras and camcorders	2.602.598.410,46	30,73%
Cell phones	904.564.508,37	10,68%
Computers	3.256.222.893,81	38,45%
Music, Movies and Audio Books	168.501.907,33	1,99%
TV and Video	1.382.006.435,71	16,32%
Total	**8.467.938.313,52**	**100,00%**

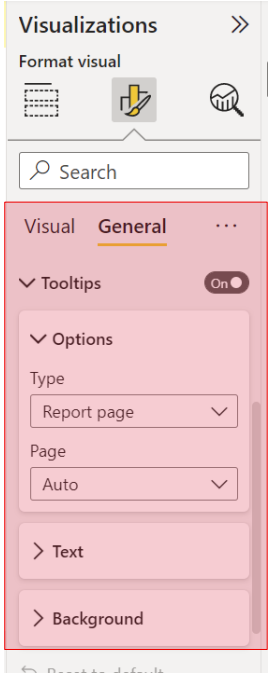
Designing and Personalizing Tooltips

- Demo 2.1
- Add a visual to Power BI;
- Design a tooltip and a personalized tooltip.
- Exercise 2.1: Designing and Personalizing tooltips
- Q&A

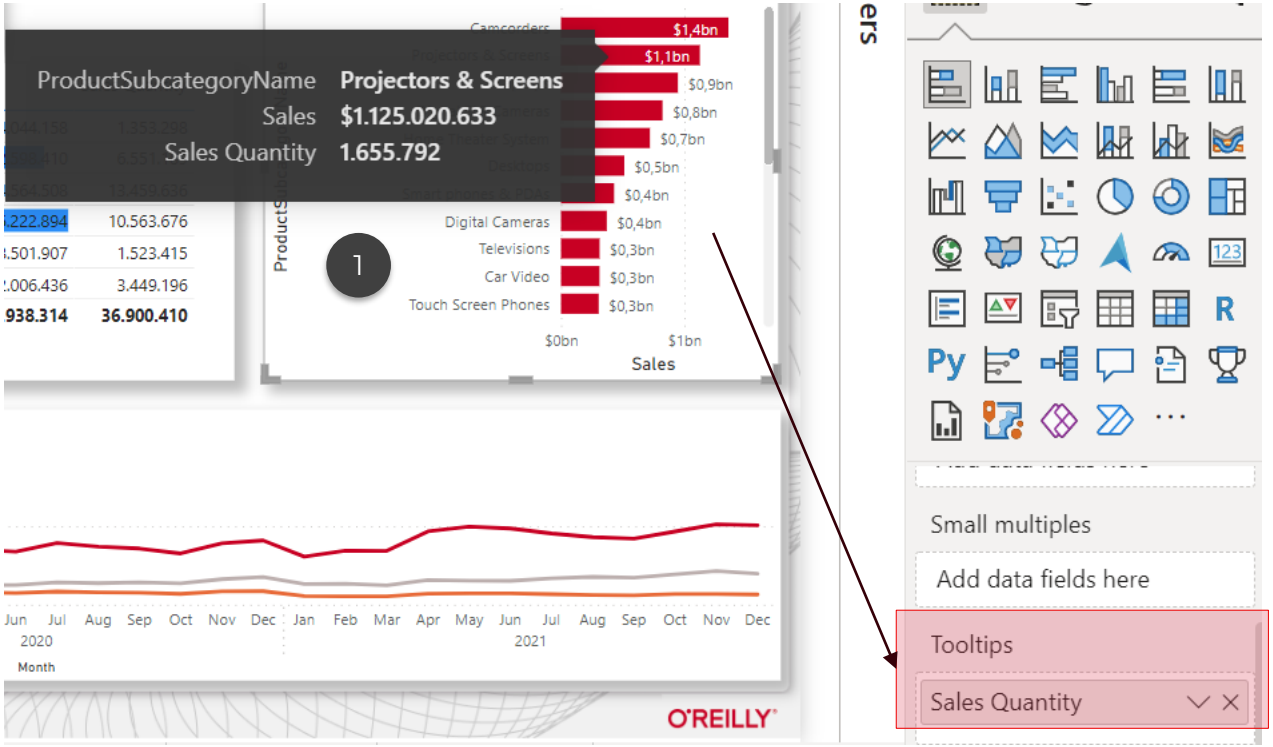
Demo 2.3

Change format of Tooltips

It is possible to change the format of the tooltips in the following options.



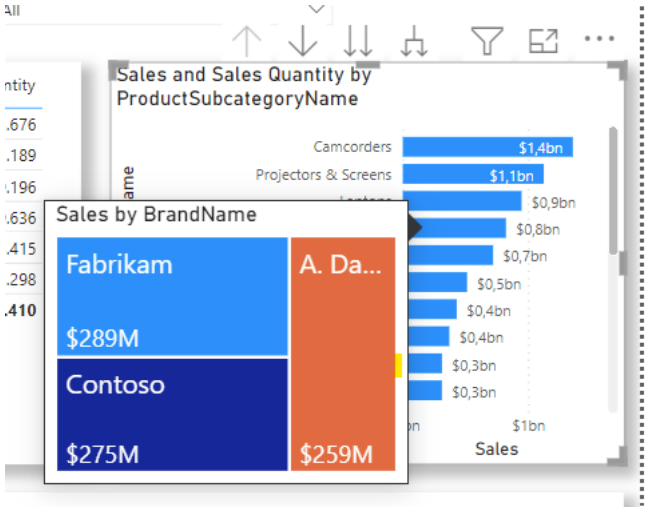
Tooltips



It is possible to show a simple chart with only one measure and then add extra info in the tooltip.

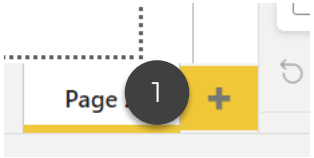
Personalize Tooltips

- What if you need to analyze the brand's sales by each subcategory?

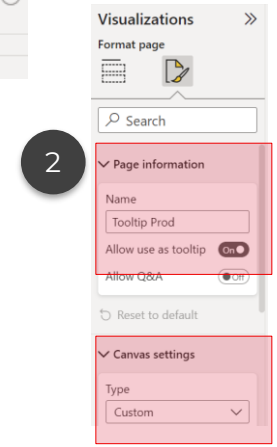


You can design your personalize tooltips on another sheet.

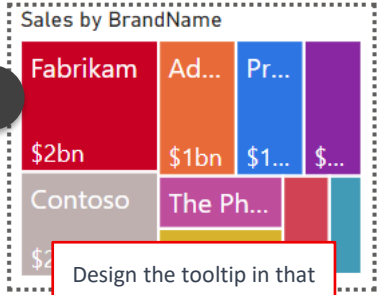
Personalize Tooltips



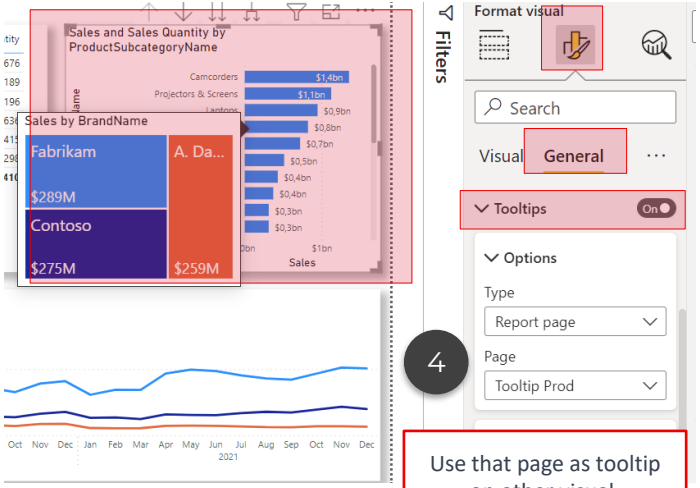
Add a new page



Change format of page



Design the tooltip in that new page



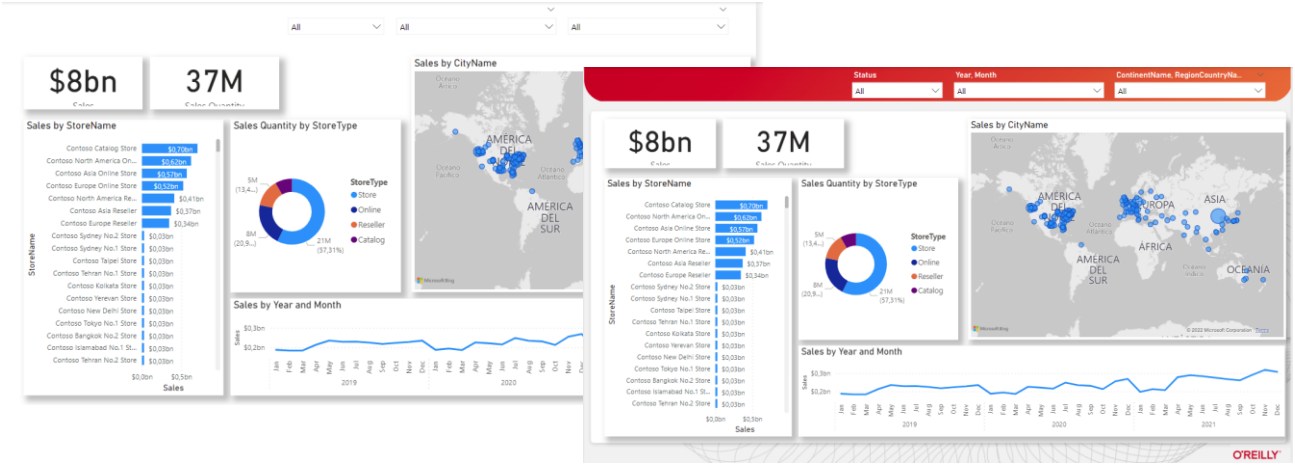
Use that page as tooltip on other visual.

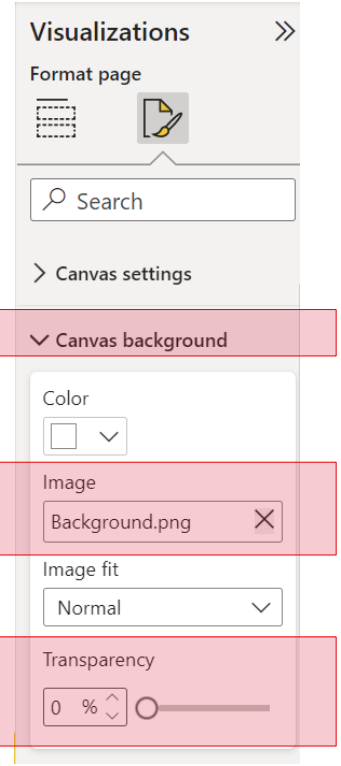
Adding Backgrounds and Navigating Reports

- Demo Case 2.2
- Add a background to both pages of the report.
- Create buttons to navigate the report.
- Exercise Case 2.2
- Q&A

Adding a background to reports

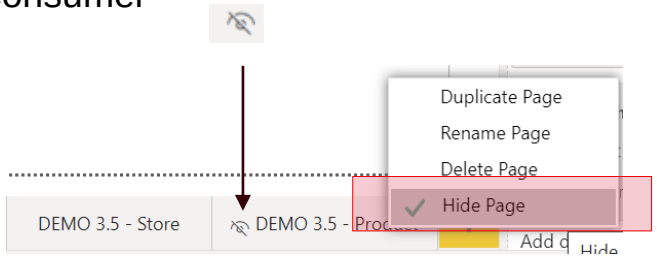
- To add a background to the report, select the Format icon from the Visualizations panel. Drop down the Background Page option and click on Add Image.
- Browse your local folder or network environment for the desired image and then click on OK.
- You can create your own background it using figma, canva, power point, etc

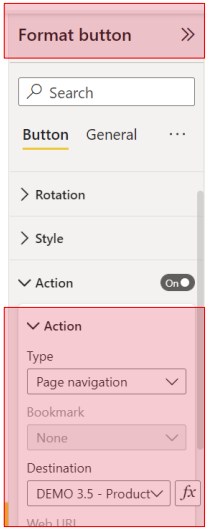




Hide pages from reading mode

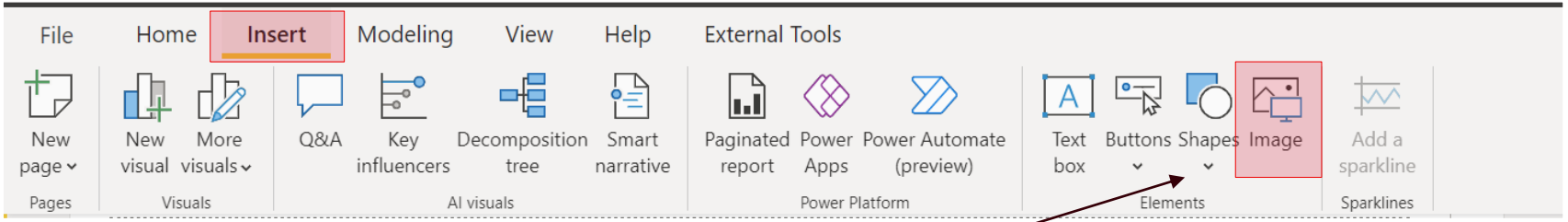
- A report author can hide a page from the view of the report consumer until the report is accessed via a page navigation action.
- In Power BI Desktop A report author can hide a page from the view of the report consumer





- But in the service of Power BI that page won't be shown until the page is accessed via a page navigation action.

Add Images

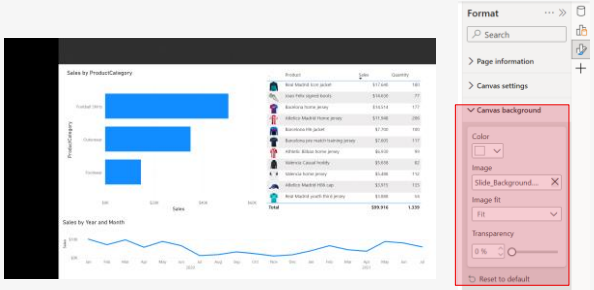


Corporate images or the company logo can be added to make the report more attractive from the following option.

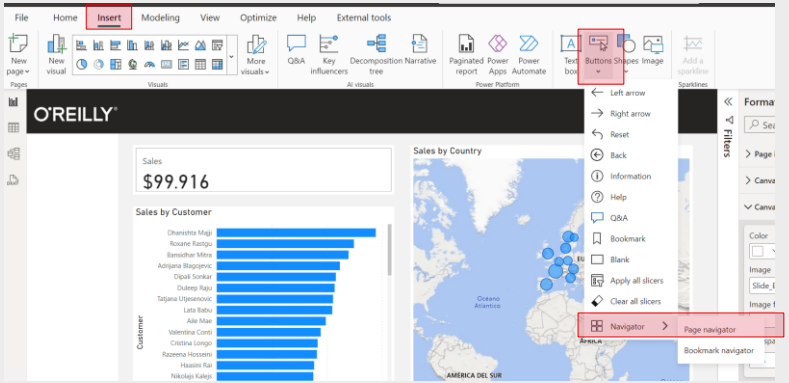
Exercise 2.3

Exercise 2.3: Enhancing Visual Appeal with Backgrounds and Navigation. Open the file ***Exercise2.3.pbix***

1. For both "Product" and "Customers" pages, update the canvas background:
   - **Click on the canvas** to select it.
   - Format / **Canvas background** / add **“Slide_Background”** image from “PowerBIBootcamp\Session02\Visual Gallery...”
   - **Image fit =“Fit” / Transparency to 0%.**



2. Enhance page navigation by adding a **Page Navigator** in both pages.



Note: Use 'Ctrl + click' to test the navigation functionality of the buttons.

3. Hide Customers page.

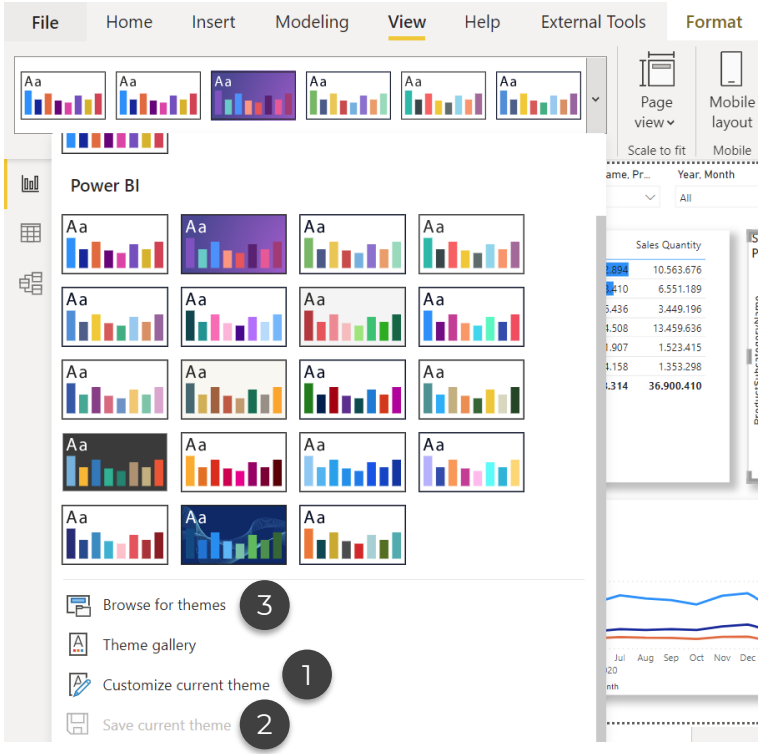
Change the Theme of your Report

- Demo Case 2.3
- Show how to edit the current theme, export or import a new one.
- Exercise Case 2.3

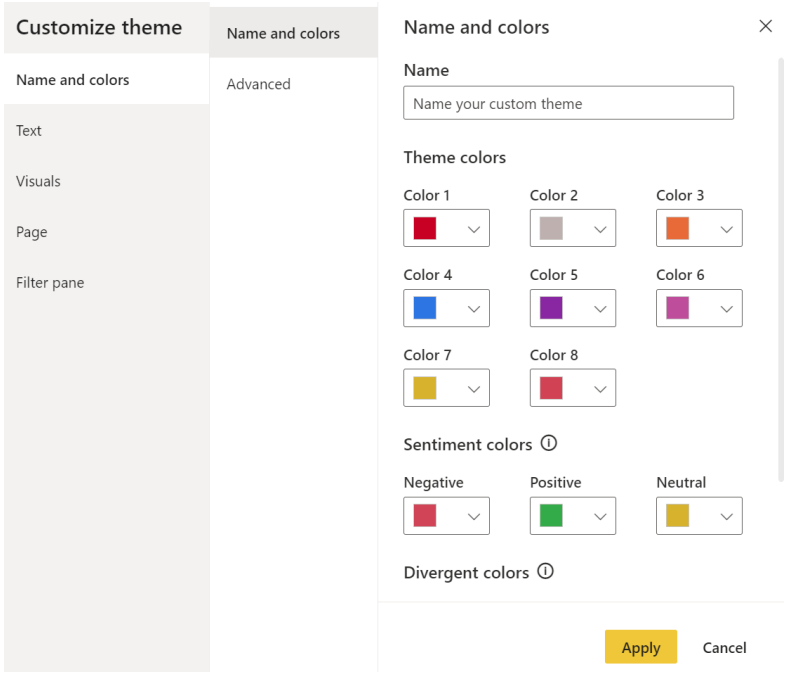
Demo 2.4

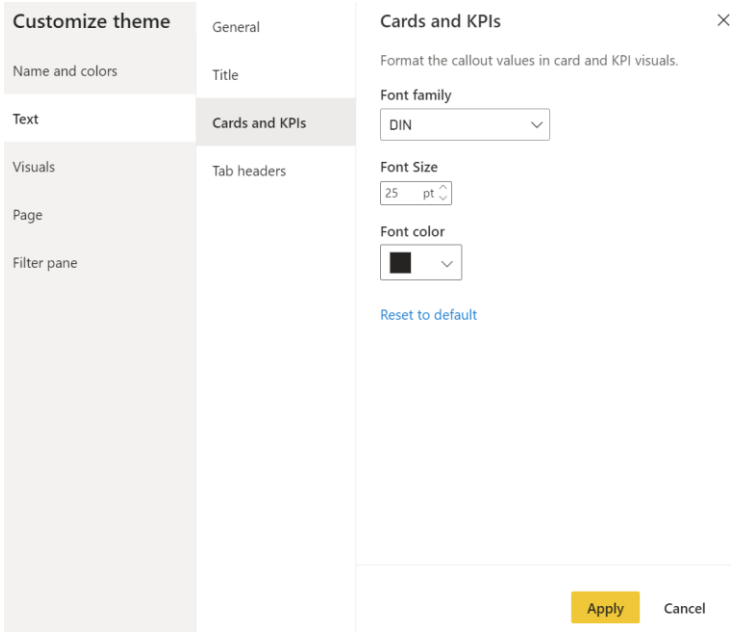
Create your own theme

- In the “View” tab there is a default pre-selected theme and all visuals in the report use those colors, fonts and sizes.
- If you want to create your own theme for your company, click on “Customize current theme”.
- After that, you will be able to save that theme and share it with your colleagues to use it in all your Power BI Files.



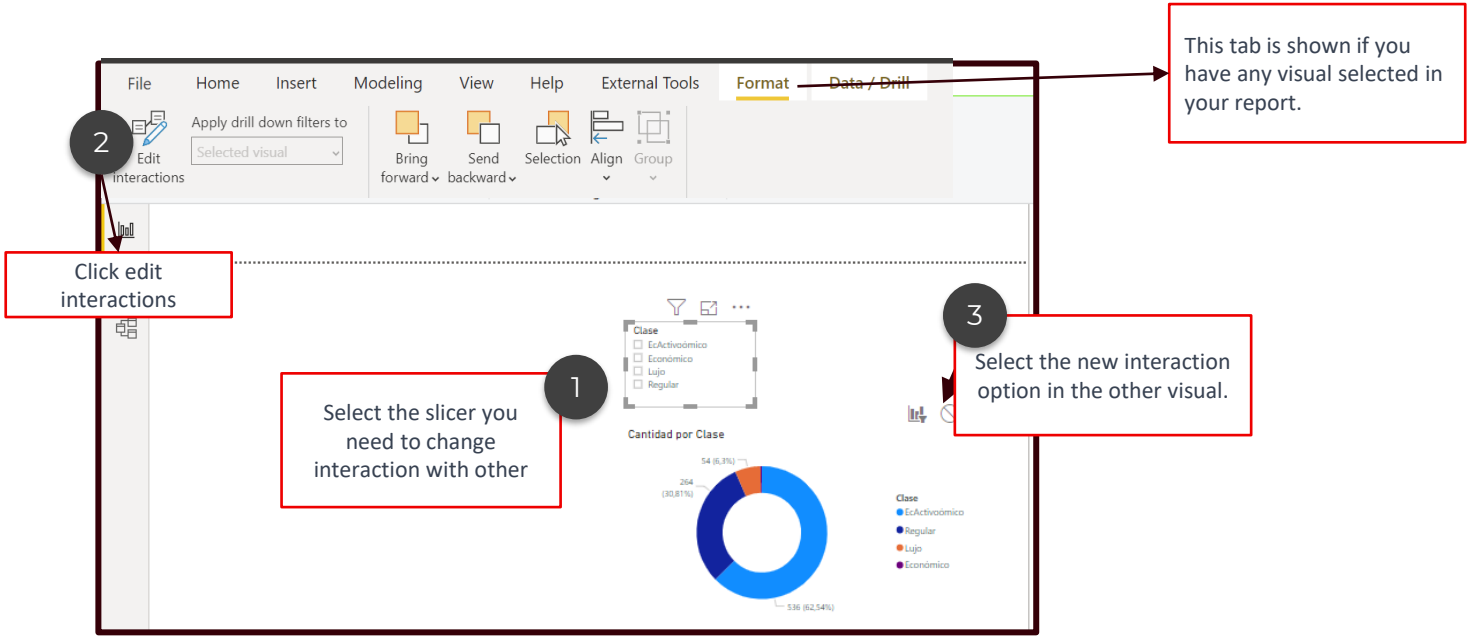
Customize current theme



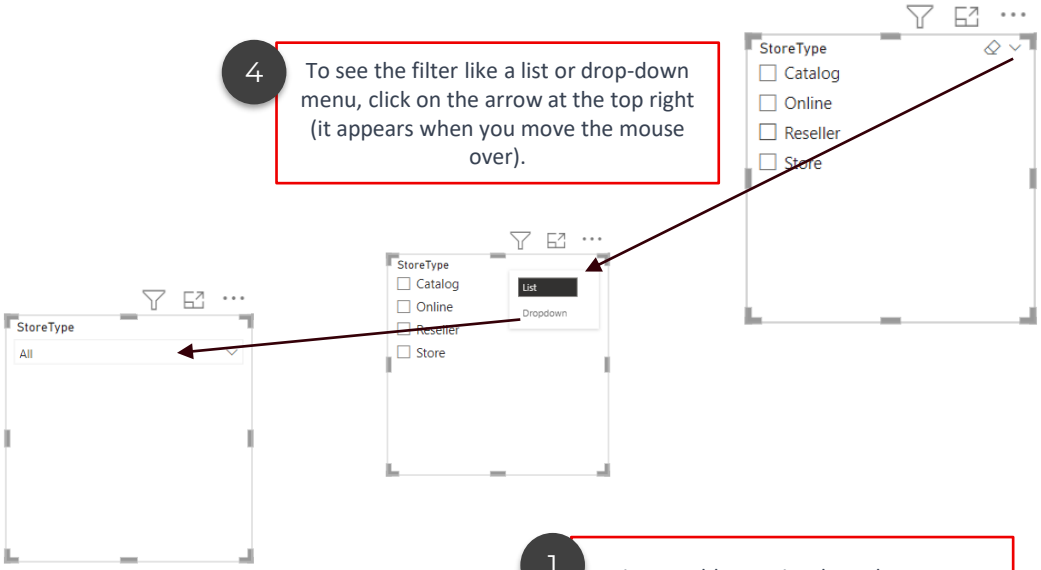


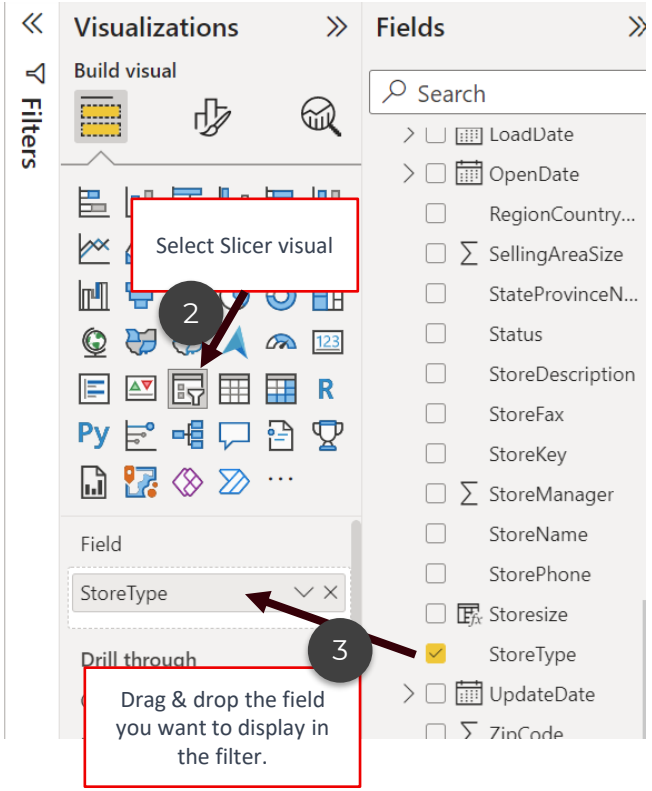
Edit interactions

- Use visual interactions to exclude some page visualizations from being affected by others.

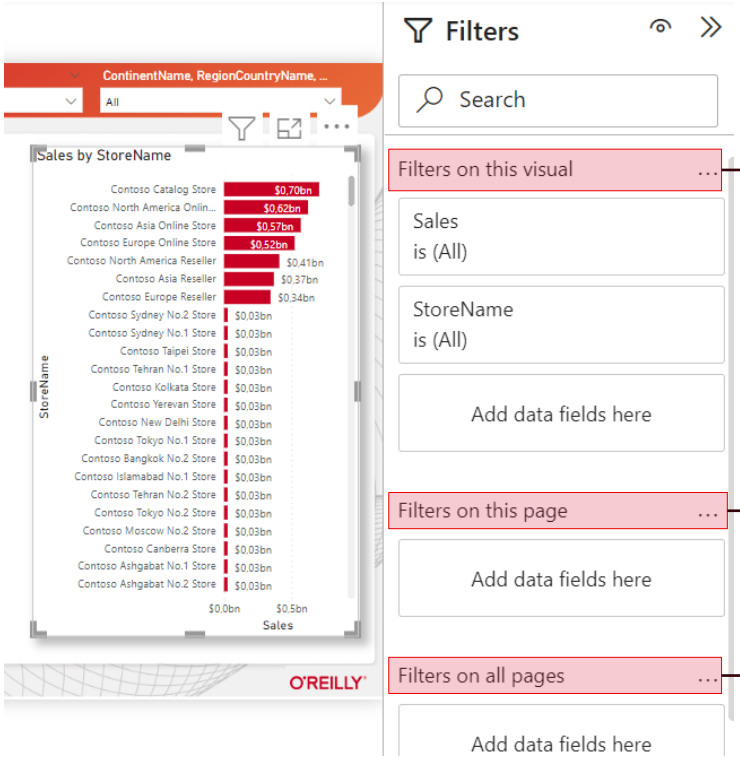


Slicers


4
To see the filter like a list or drop-down menu, click on the arrow at the top right (it appears when you move the mouse over).
StoreType
Catalog
Online
Reseller
Store
StoreType
Catalog
Online
Reseller
Store
List
Dropdown
StoreType
All
1
Tip: To add new visuals to the report, remember to first click the report canvas.


Filters
Visualizations
Build visual
Select Slicer visual
2
Field
StoreType
Drill through
3
Drag & drop the field you want to display in the filter.
Fields
Search
LoadDate
OpenDate
RegionCountry...
SellingAreaSize
StateProvinceN...
Status
StoreDescription
StoreFax
StoreKey
StoreManager
StoreName
StorePhone
Storesize
StoreType
UpdateDate
ZipCode

Filter pane



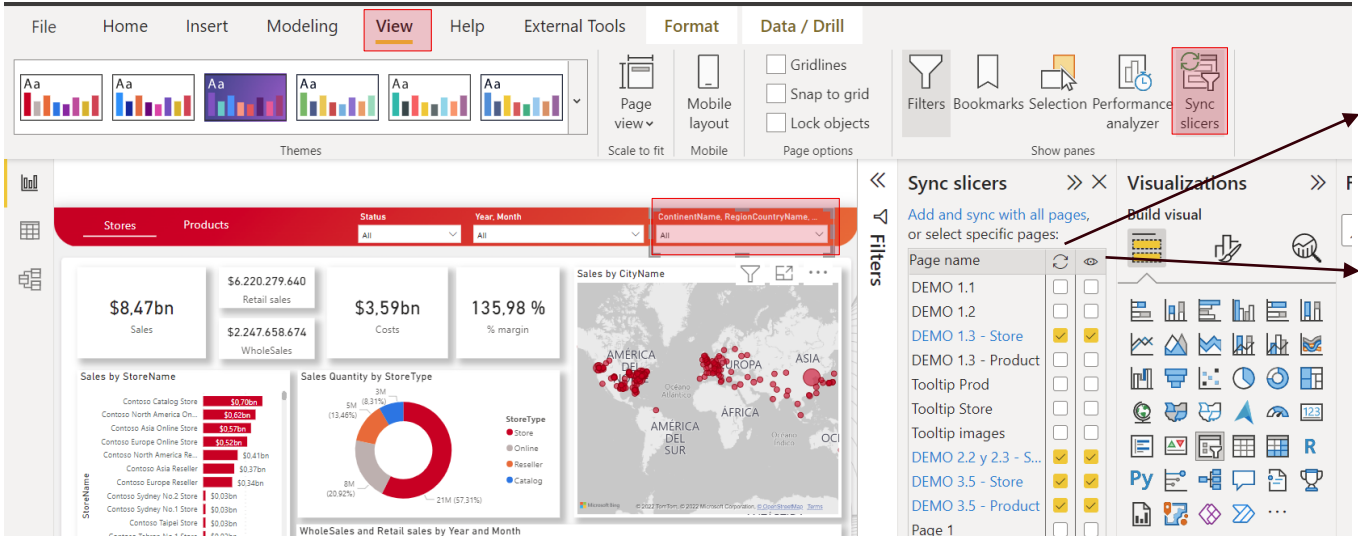
Add filters to the selected visual element. Delete some products or make a top 5 to display only the most or least sold products.

Add filters to the page

Add filters to the report

Sync slicers

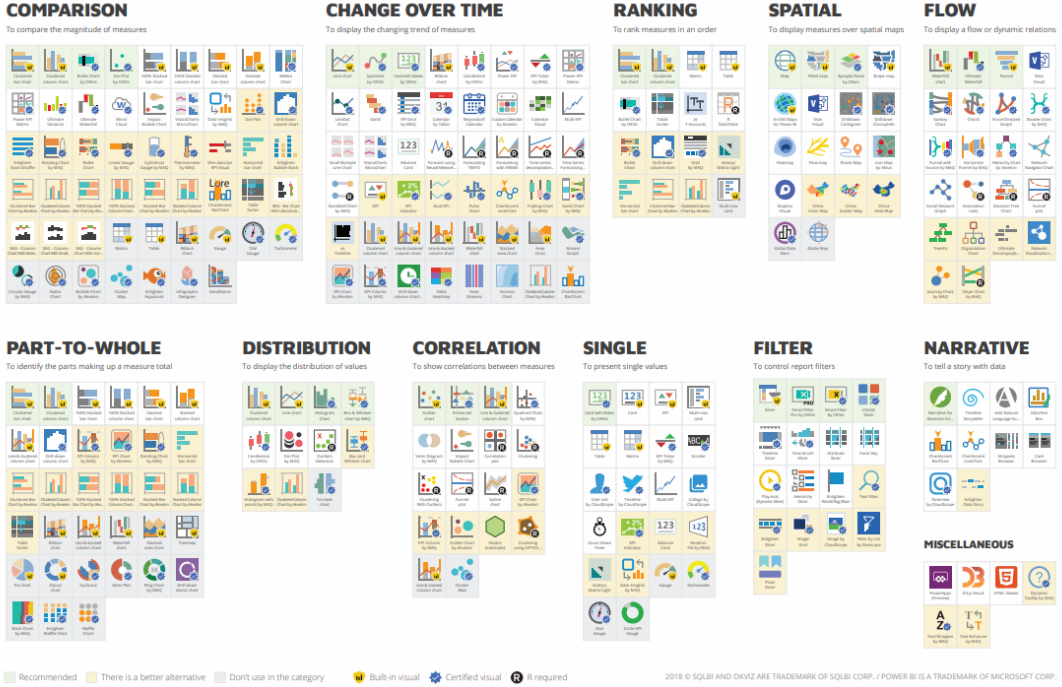
- You can sync a slicer and use it on any or all pages in a report.



With the Sync slicers pane, you can sync the Continent slicer to these pages, so that slicer selections on any page affect visualizations on all pages.

If you sync a slicer to a page but don't make it visible on that page, slicer selections made on the other pages will still filter the data on the page.

Visual Reference

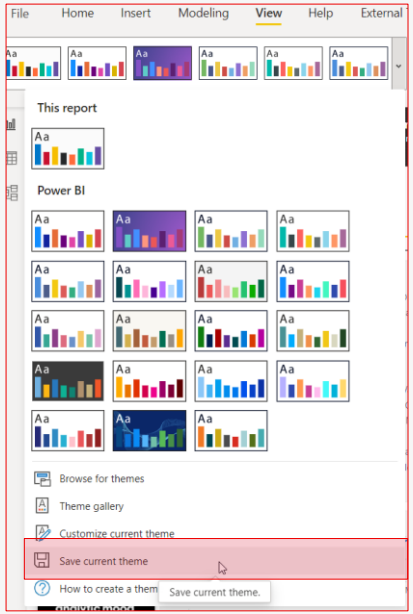


https://www.sqlbi.com/wp-content/uploads/visuals-reference-sep2018-A3.pdf

Exercise 2.4

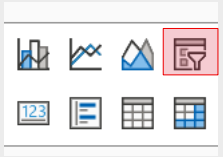
Exercise 2.4: Change theme and add slicers. Open the file ***Exercise2.4.pbix***

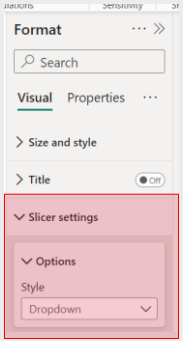
1 Change the current theme by importing one from the folder:
Visual gallery → VisualTheme.json
(Location: “C:\PowerBIBootcamp\Week02\Visual Galery\VisualTheme.json“)



2 On the **"Product"** page, add slicers for the following categories:

1. Slicer:

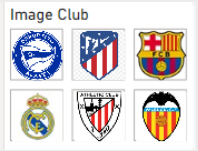




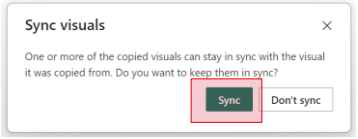
- Season (Slicer settings = **Dropdown**)
- Date (Slicer settings = **Between**)
- Product (Slicer settings = **Dropdown**)

2. Slicer (New):

- Image Club



3 Duplicate all slicers to the **"Customers"** page and ensure they are synchronized across both pages.



Poll

If there is more than one visual on a Power BI page, which of the following is true?

- All visualizations should be different
- Interacting with one visual may filter the others
- You can't have more than one visual on the same Power BI page
- The maximum number of visualizations is 10 per page.

Q&A

- Write your questions in the chat so that we can answer them and discuss them together.

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