



Getting Started with Tableau



STORYTELLING FUNDAMENTALS - OVERVIEW

Importance of data storytelling

- Building your narrative
- Unlocking insights

The components of an impactful story

- Know your audience – speak their language
- Tell one story at a time
- Simple is better than complex

Visual best practices

- The Power of patterns and images
- Visual best practices
- Focus your audiences attention

Presenting your story

- Types of stories
- Practice and feedback

Why data visualization tools are powerful?

Intuitive & Fast

instantly makes sense and it is fast because our brains are great at identifying patterns, *but only when data is presented in a tangible format*

Flexible

the world is densely connected, so as long as there is an interesting relationship in your data somewhere, you will find value in graph visualization.

Insightful

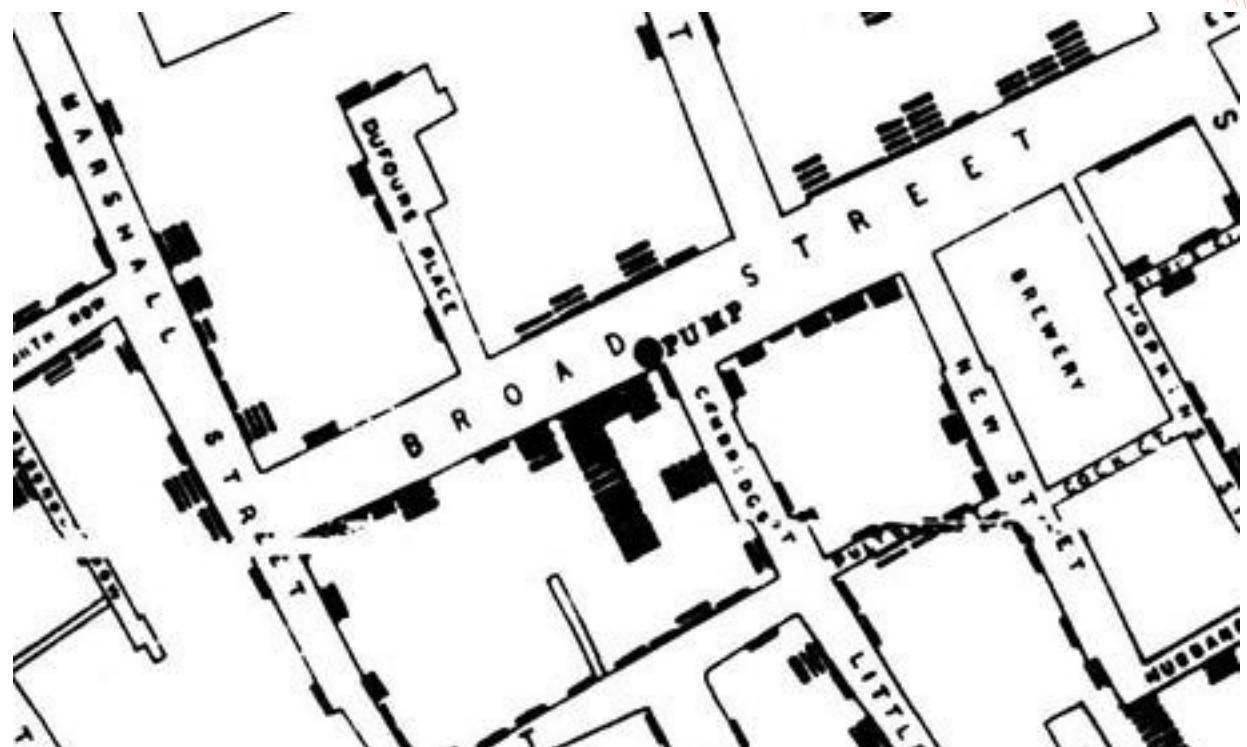
Exploring data interactively allows users to gain more in-depth knowledge, understand the context and ask more questions, compared to static visualization or raw data

The Surviving Maps

1854 cholera epidemic spread in Soho (London)

A method of tallying the death counts drawn as lines parallel to the street, at the appropriate addresses

An evident concentration around the water pump on Broad Street, which helped find the cause of the infection.



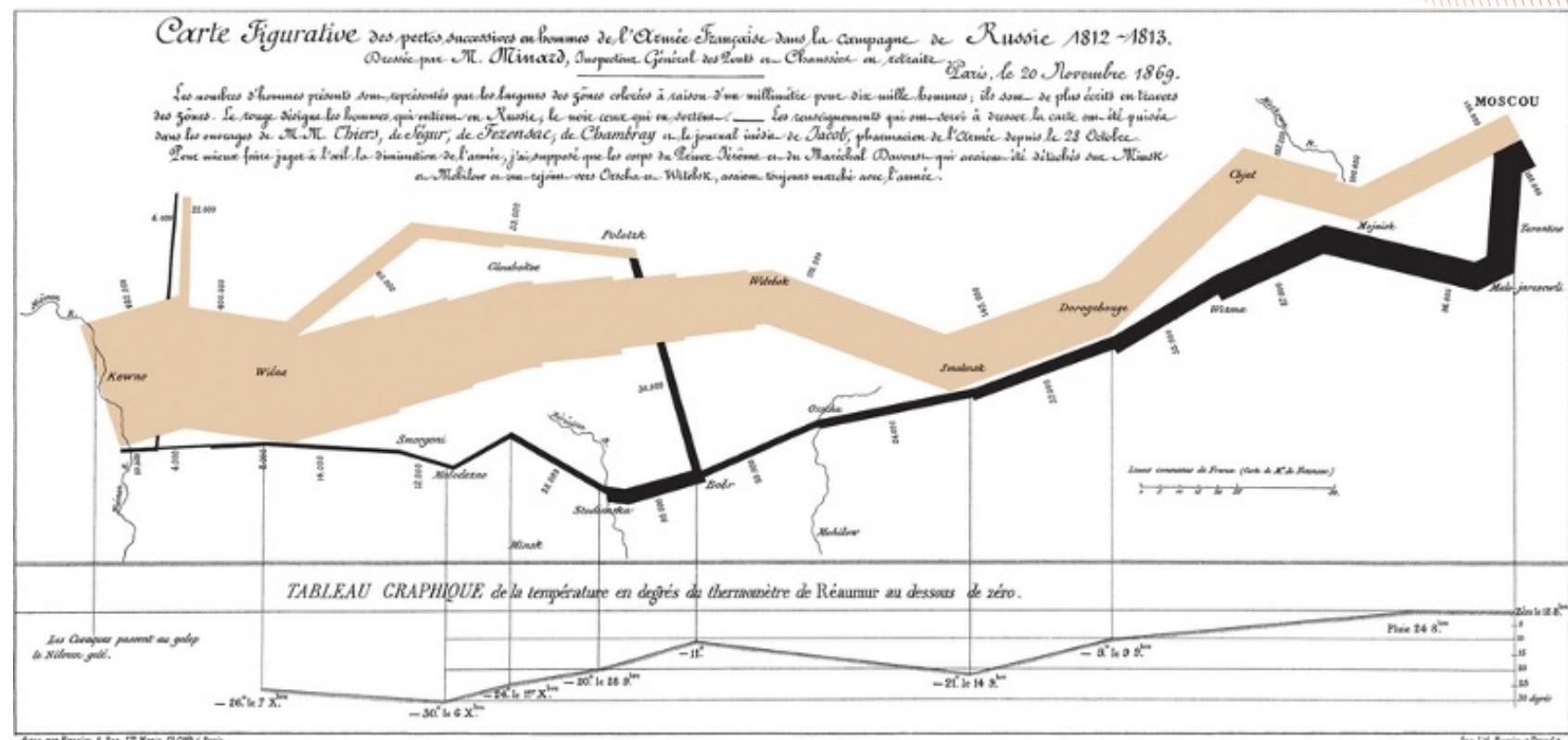
Map of Napoleon's Russian Campaign (1812)

Known as one of the “best statistical drawings ever created”
This classic lithograph dates back to 1869 and represents the earliest beginning of data journalism

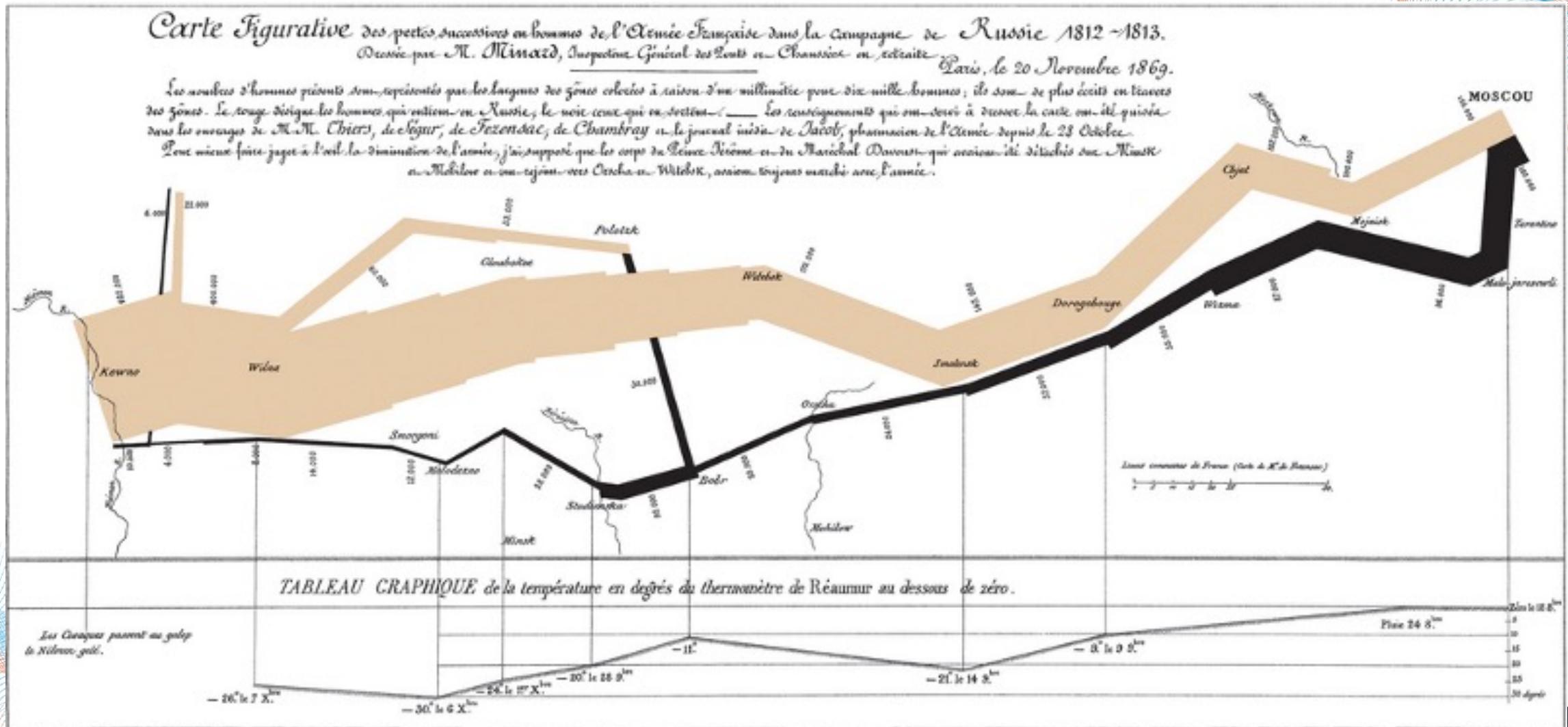
Illustrates the dramatic loss of the army over the advance on Moscow and the following retreat

Displays for Napoleon's Army

- Number of man
- Their movements
- Weather temperatures they encountered along the way



Map of Napoleon's Russian Campaign (1812)



Imprimé par Rappin, 3, Rue S^e Marais, 1^r G^e de Paris.

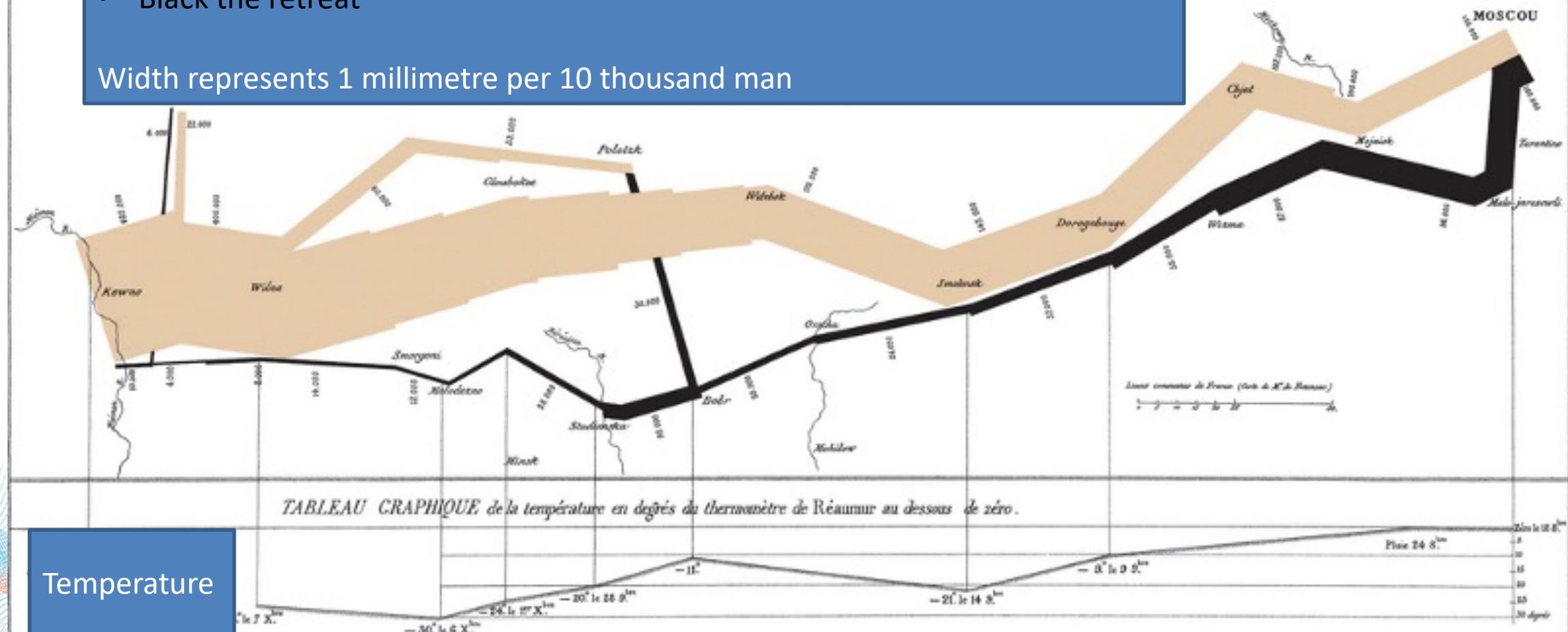
Dep. Litt. Régional et Universel.

https://mschermann.github.io/data_viz_reader/introduction.html#contemporary-visualists

Map of Napoleon's Russian Campaign (1812)

- Red represents mans movement to Moscow
- Black the retreat

Width represents 1 millimetre per 10 thousand man



From "The Commercial and Political Atlas"

Comparison
between
exports and imports
to and from
England and
Denmark/Norway

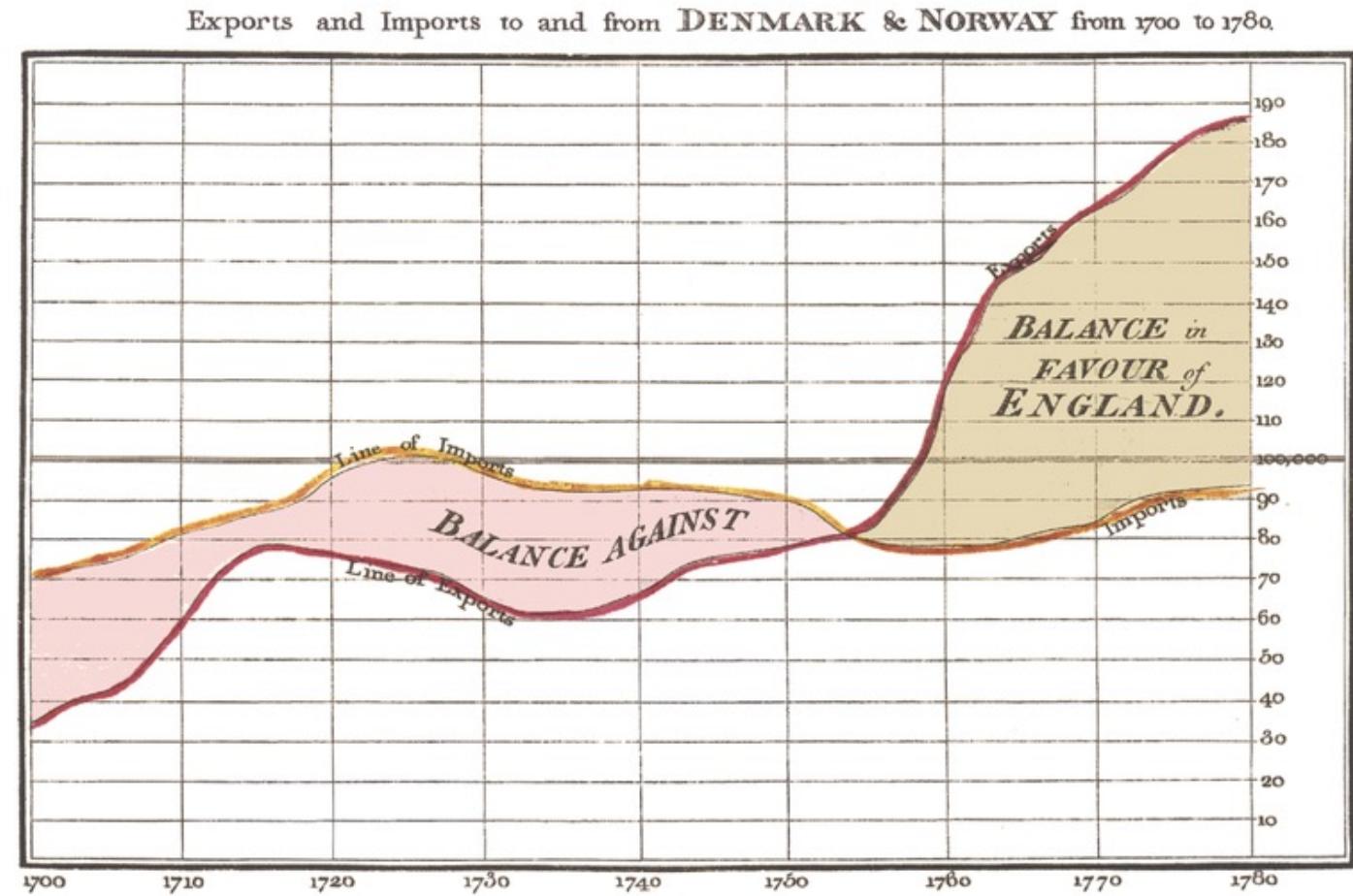
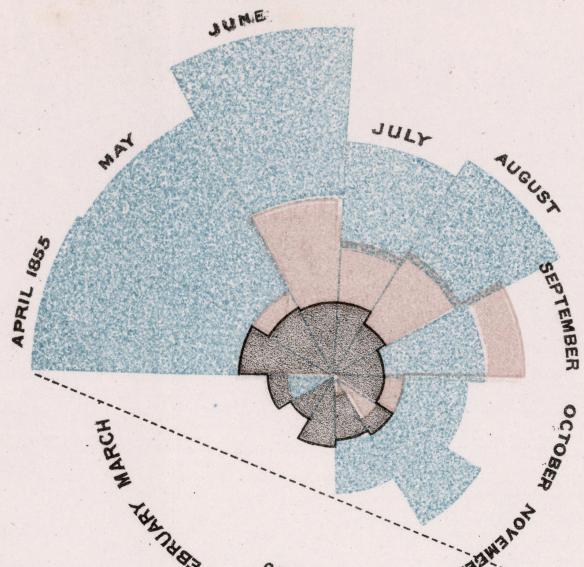


DIAGRAM OF THE CAUSES OF MORTALITY
IN THE ARMY IN THE EAST.

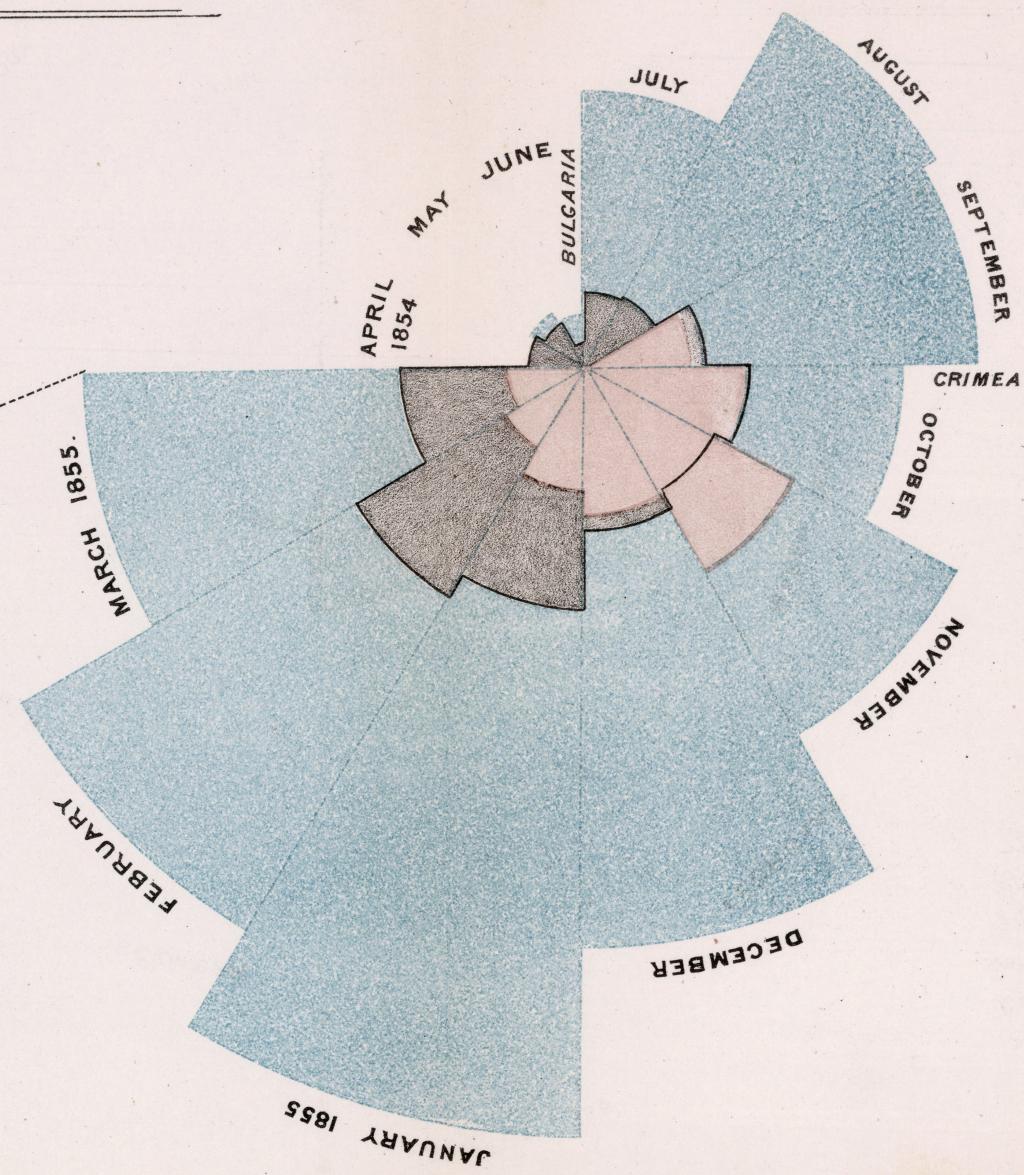
2.

APRIL 1855 TO MARCH 1856.



1.

APRIL 1854 TO MARCH 1855.



The Areas of the blue, red, & black wedges are each measured from the centre as the common vertex.

The blue wedges measured from the centre of the circle represent area for area the deaths from Preventable or Mitigable Zymotic diseases; the red wedges measured from the centre the deaths from wounds; & the black wedges measured from the centre the deaths from all other causes.

The black line across the red triangle in Nov^r 1854 marks the boundary of the deaths from all other causes during the month.

In October 1854, & April 1855, the black area coincides with the red; in January & February 1855, the blue coincides with the black.

The entire areas may be compared by following the blue, the red & the black lines enclosing them.

VISUAL BEST PRACTICES: CHART SELECTOR GUIDE

Specific Value



Show the raw number prominently displayed



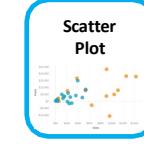
Display trends over a period of time for a single category



Shows comparisons among discrete categories and sub-categories



Plots one or more series of values over multiple quantitative variables



Shows the relationship between two variables



Shows a hierarchical part-to-whole relationship



Shows a part-to-whole relationship across categories



Displays the data distribution through quartiles



Shows geographic data using shading on a country or state basis to indicate relationships

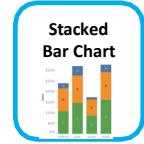
Comparison



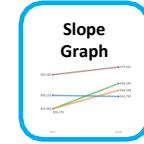
Show the exact values and compare pairs of related values



Display trends over a period of time for multiple categories



Shows comparisons among discrete categories and sub-categories



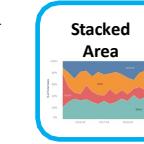
Compares a data point, typically between two points in time



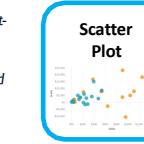
Shows relational value without regards to axes



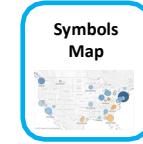
Shows a part-to-whole relationship



Shows a part-to-whole relationship over a period of time



Shows the relationship between two variables



Shows geographic data using a symbol plotted over a longitude and latitude

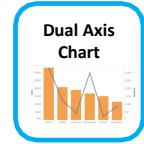
Relationship



Show the exact values and use color to convey relative magnitude



Shows comparisons among discrete categories



Show the relationship between two variables with different magnitudes and scales



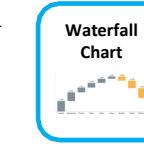
Compares data against historical performance or pre-assigned thresholds



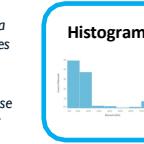
Shows the relative frequency of words in our data



Shows a part-to-whole relationship



Shows how a value changes by various factors that either increase the value, or decrease it



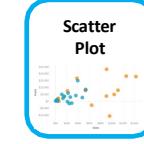
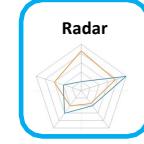
Show the underlying shape of a set of continuous data

Composition

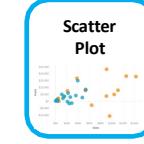


Compare values by encoding the marks with color and size

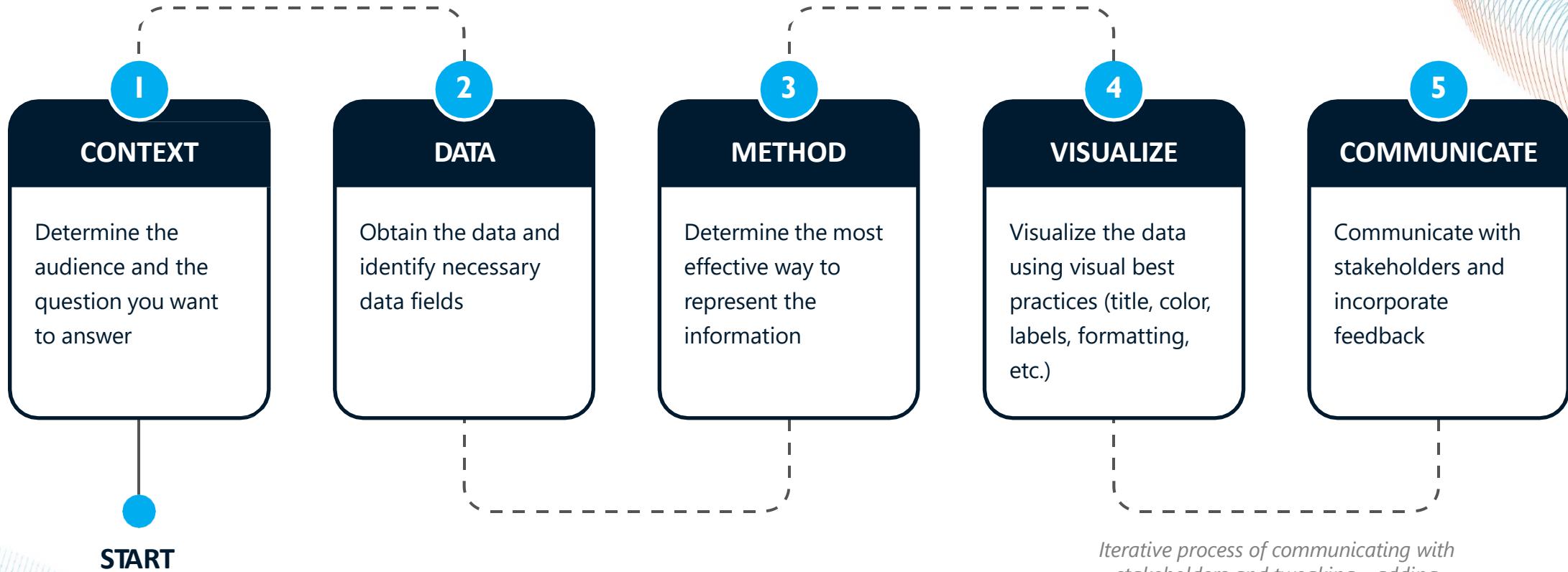
Distribution



Geographic



VISUAL BEST PRACTICES: PROCESS



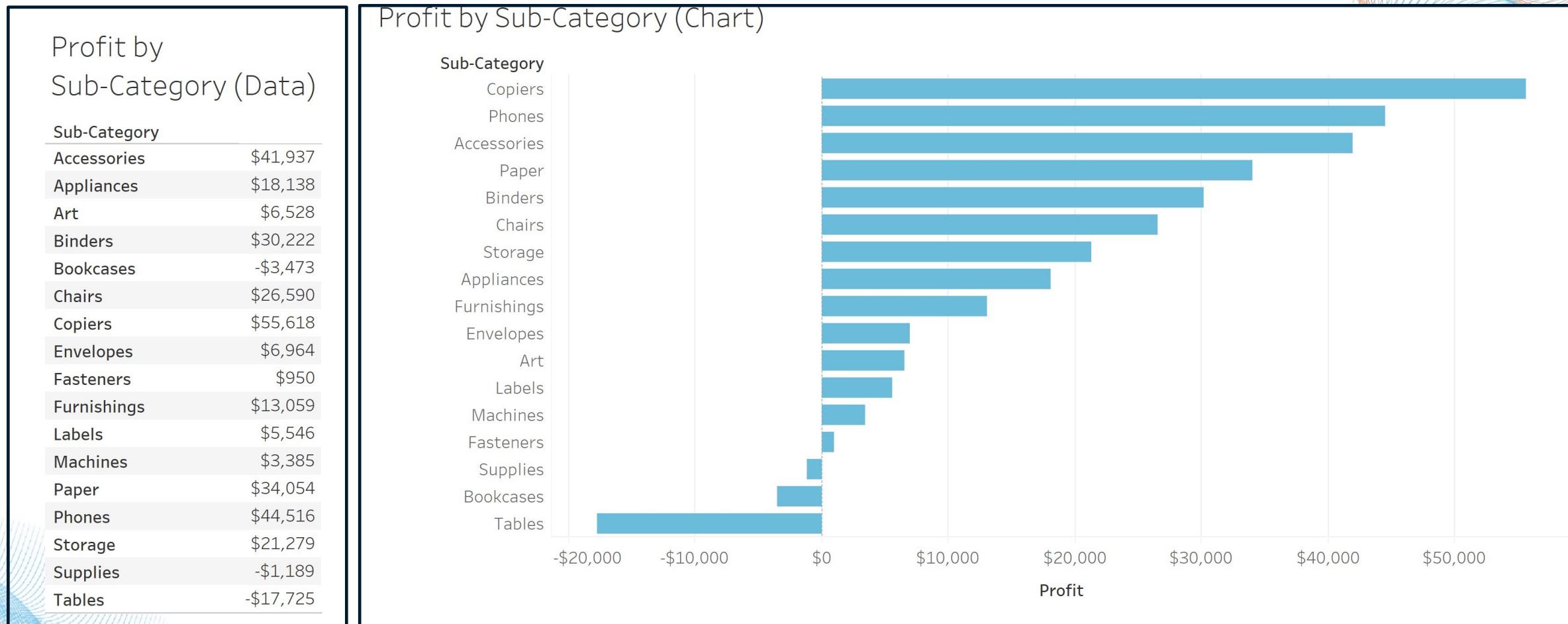
Iterative process of communicating with stakeholders and tweaking - adding filters, adding special views, etc.

IMPORTANCE OF DATA STORYTELLING: EXAMPLE (DATA)

Profit by Sub-Category (Data)

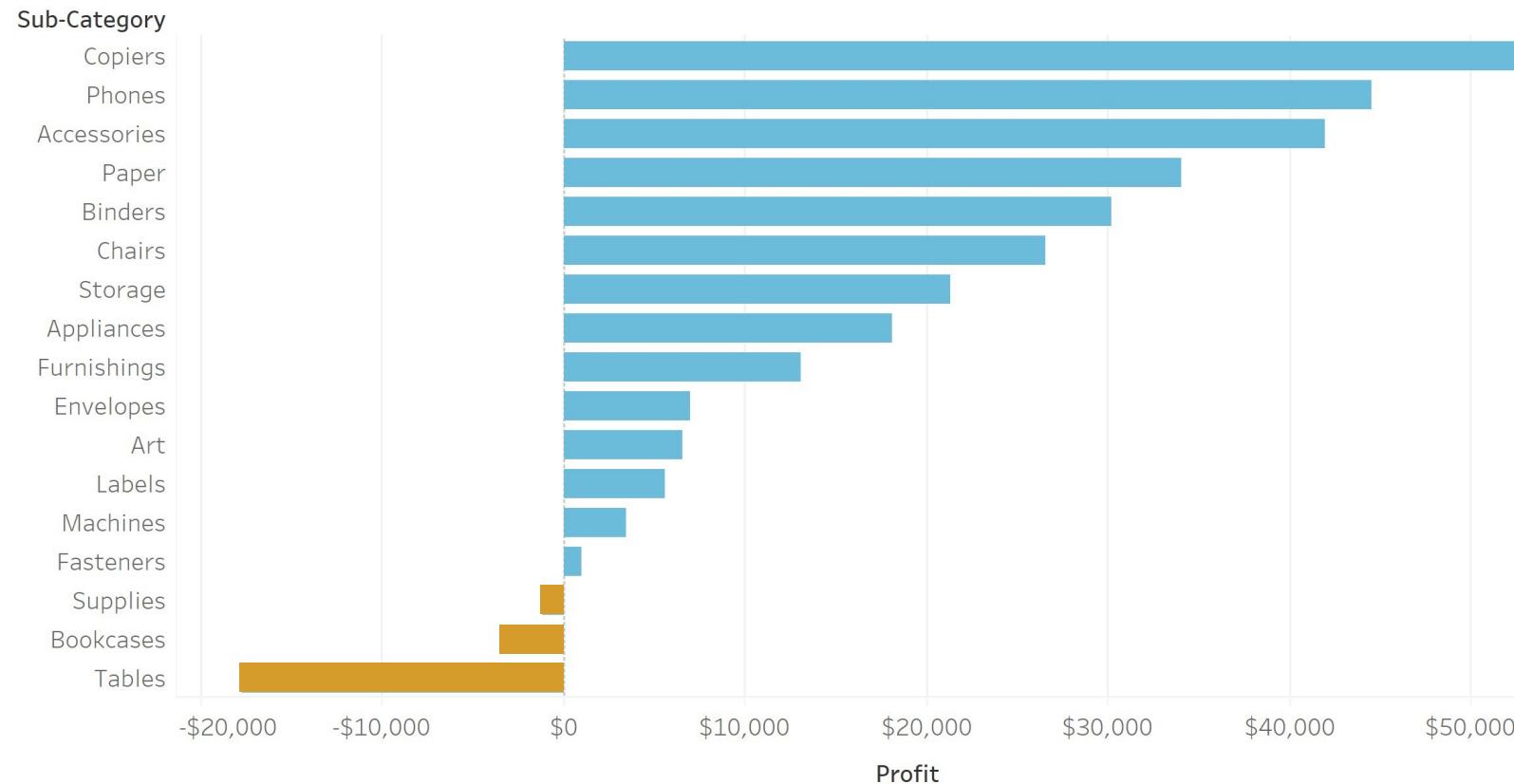
Sub-Category	Profit
Accessories	\$41,937
Appliances	\$18,138
Art	\$6,528
Binders	\$30,222
Bookcases	-\$3,473
Chairs	\$26,590
Copiers	\$55,618
Envelopes	\$6,964
Fasteners	\$950
Furnishings	\$13,059
Labels	\$5,546
Machines	\$3,385
Paper	\$34,054
Phones	\$44,516
Storage	\$21,279
Supplies	-\$1,189
Tables	-\$17,725

IMPORTANCE OF DATA STORYTELLING: EXAMPLE (DATA VISUALIZATION)

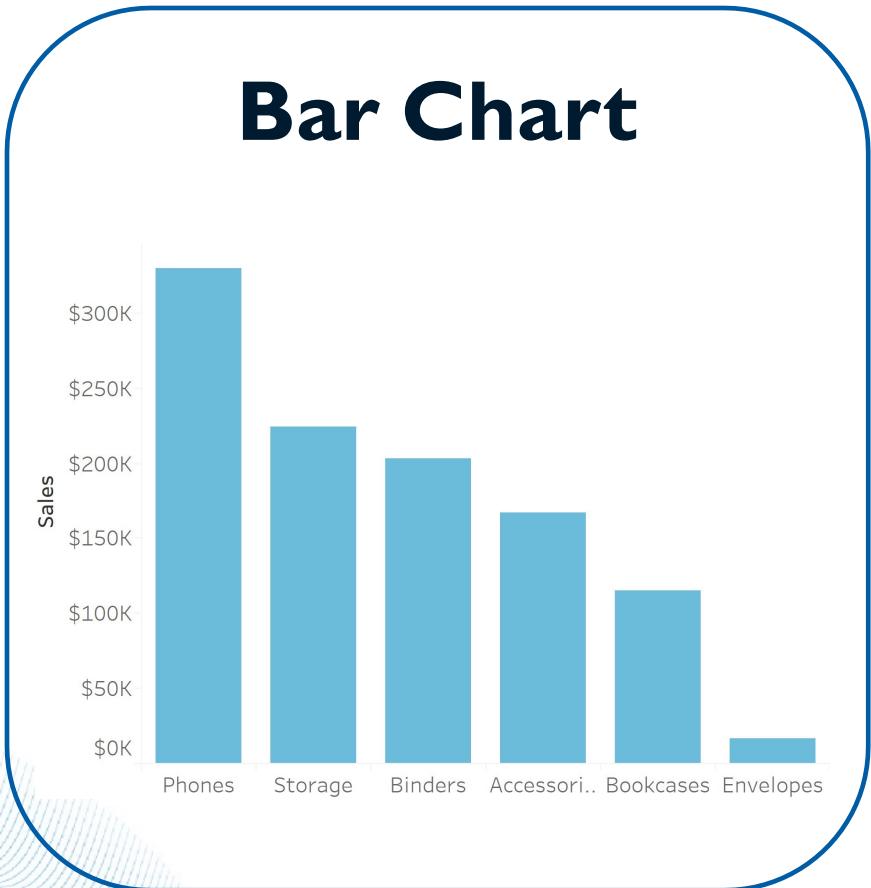


IMPORTANCE OF DATA STORYTELLING: EXAMPLE (DATA STORY)

Tables, Bookcases, and Supplies have the lowest profit levels across all product sub-categories



VISUAL BEST PRACTICES: CHART SELECTOR GUIDE EXAMPLE #1



Best Practices

- ✓ Sort your data either from greatest to smallest or the other way around - to help your audience spot the differences.
- ✓ Avoiding using different colors for each bar as it will confuse your audience
- ✓ Use a horizontal bar chart for displaying many categories or if you're using lengthy data labels.
- ✓ Sometimes it makes sense to add data labels directly on the bars
- ✓ Maintain a zero baseline.
- ✓ Ensure there is enough space between the bars.
- ✓ The bar thickness needs to be appropriate for the visualization.
- ✓ Avoid 3D bar charts because they can distort the perception of the data.

VISUAL BEST PRACTICES: CHART SELECTOR GUIDE EXAMPLE #2

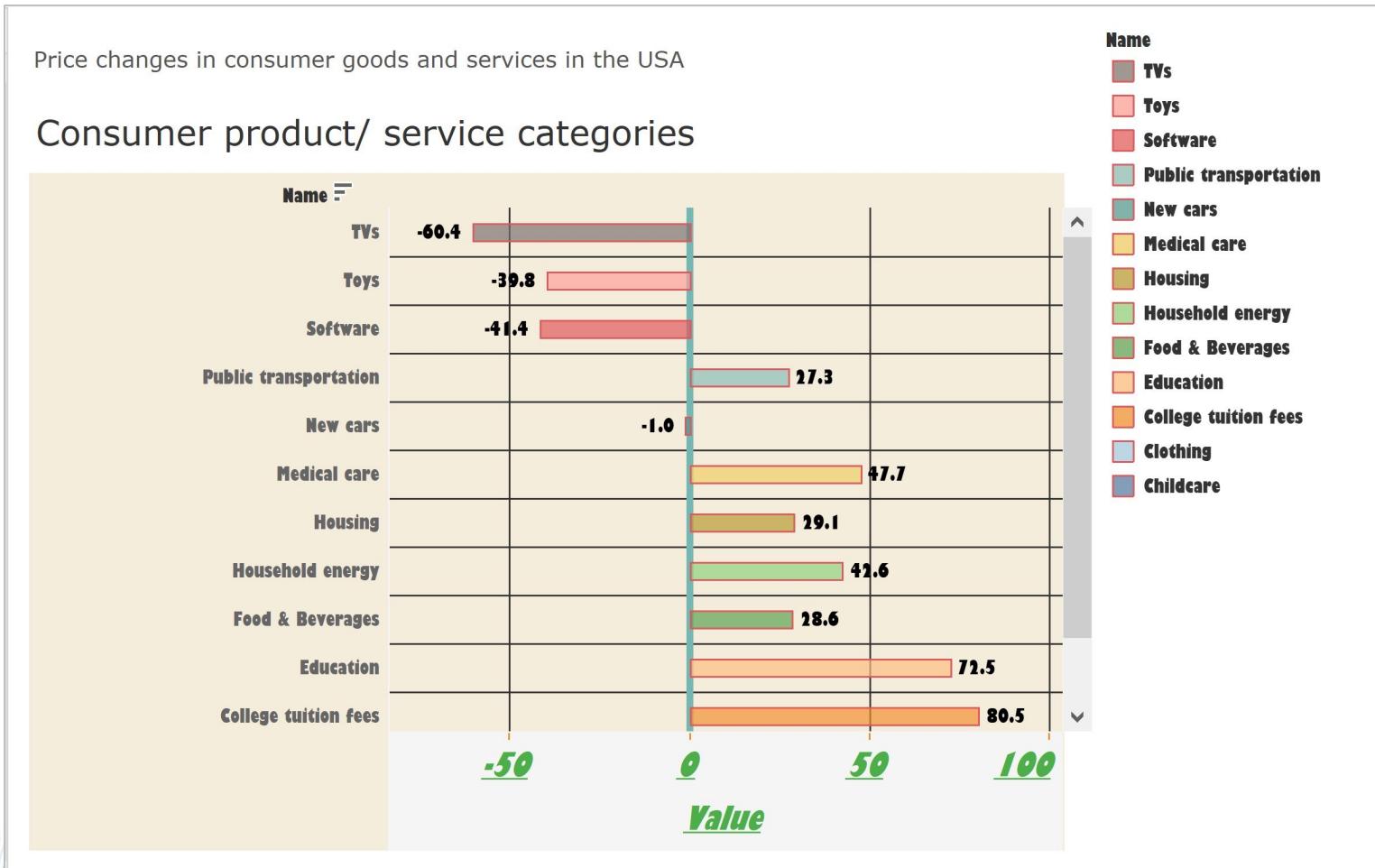
Scatter Plot



Best Practices

- ✓ Formatting the marks in the view can really help in making your scatter plots stand out. You can use color to identify different categories in the view.
- ✓ Make the mark a bit transparent - this allows the audience to see what's behind the marks.
- ✓ Reduce overlapping marks and see more individual plots.
- ✓ Independent variables need to be placed on the x-axis and dependent variables on the y axis.
- ✓ Consider including a trend line to define the correlation.
- ✓ Use custom shapes in place of the typical circles that you are likely familiar with, as applicable

VISUAL BEST PRACTICES: BEFORE

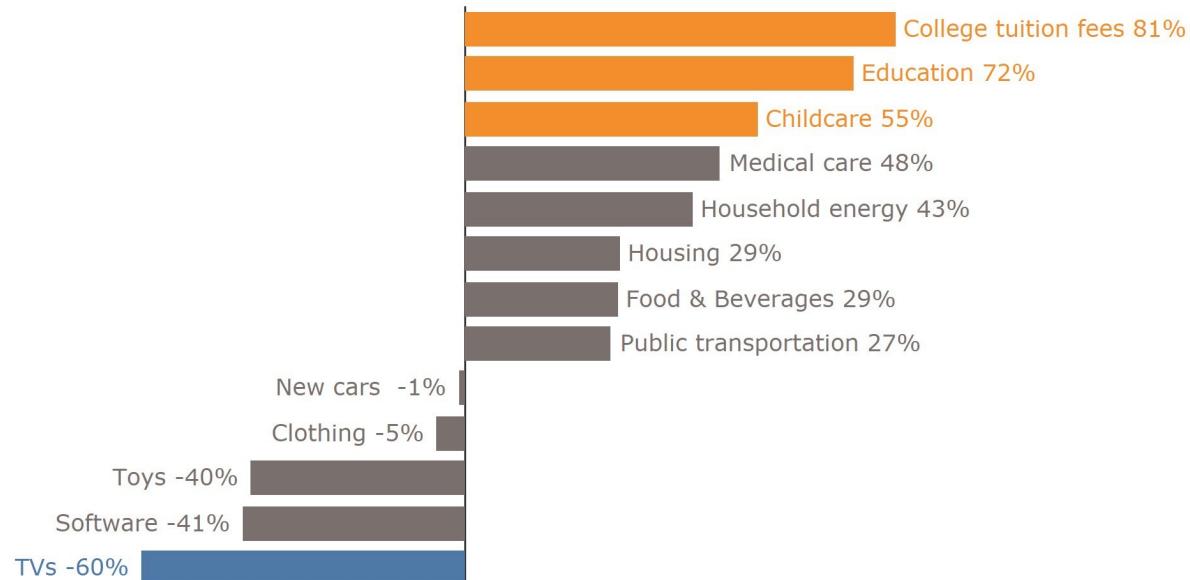


VISUAL BEST PRACTICES: AFTER

Price changes in consumer goods and services in the USA

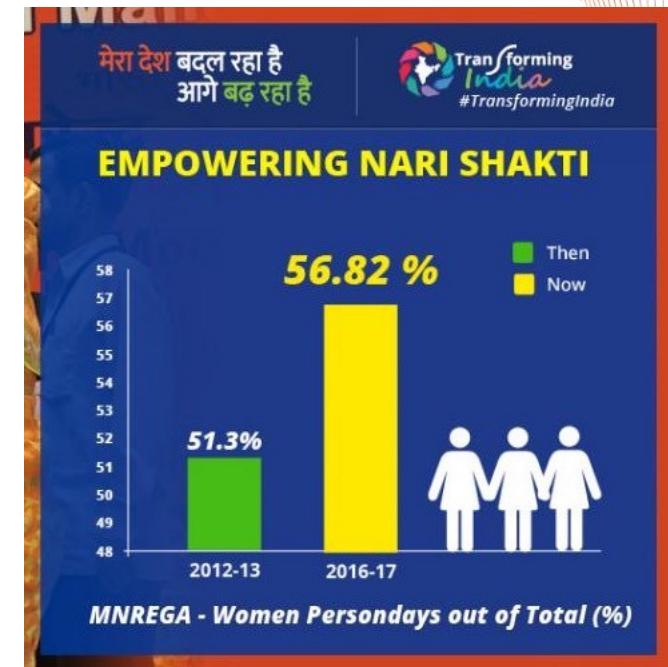
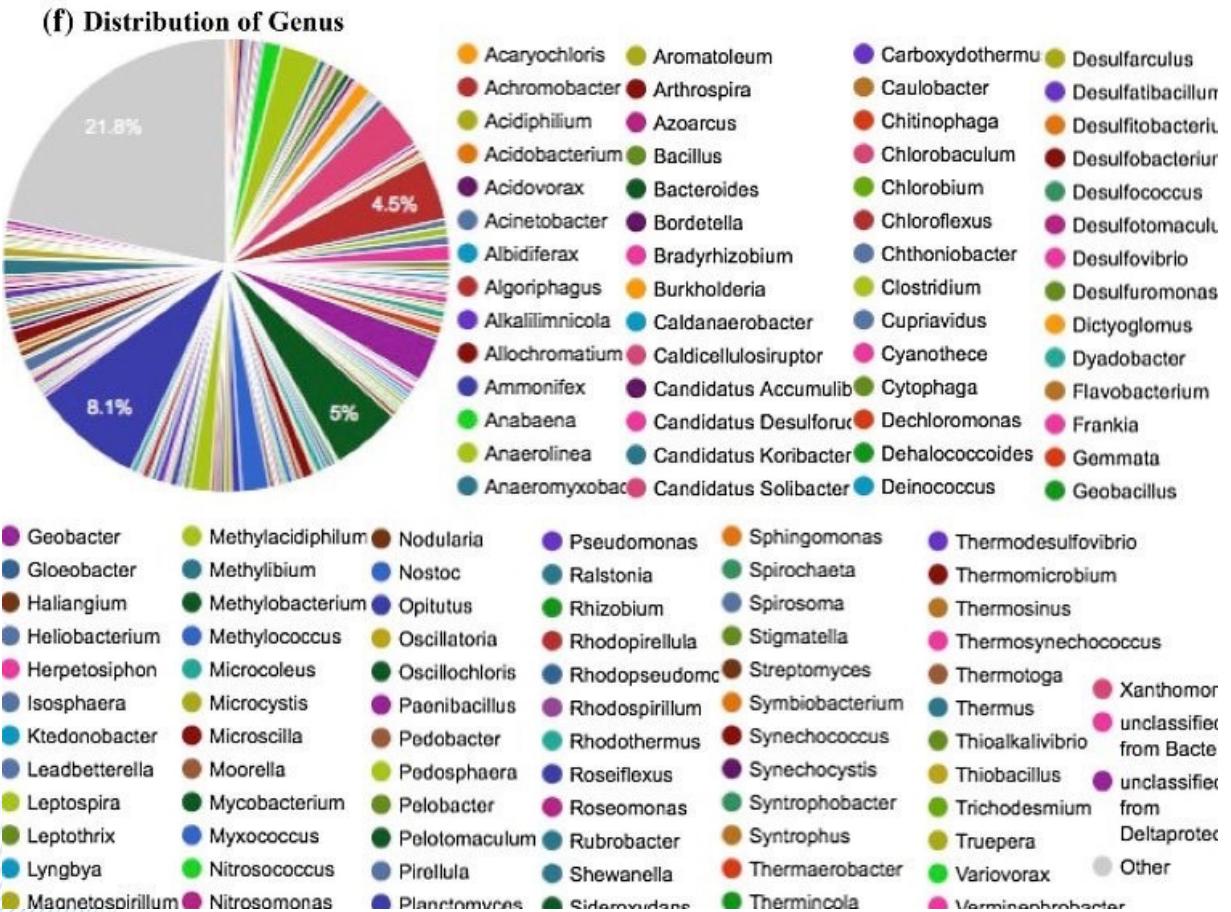
Price change is measured as the average percentage change since 1997 - 2017

Consumer product/ service categories that **increased in price by over 50%** and **decreased in price by over 50%**

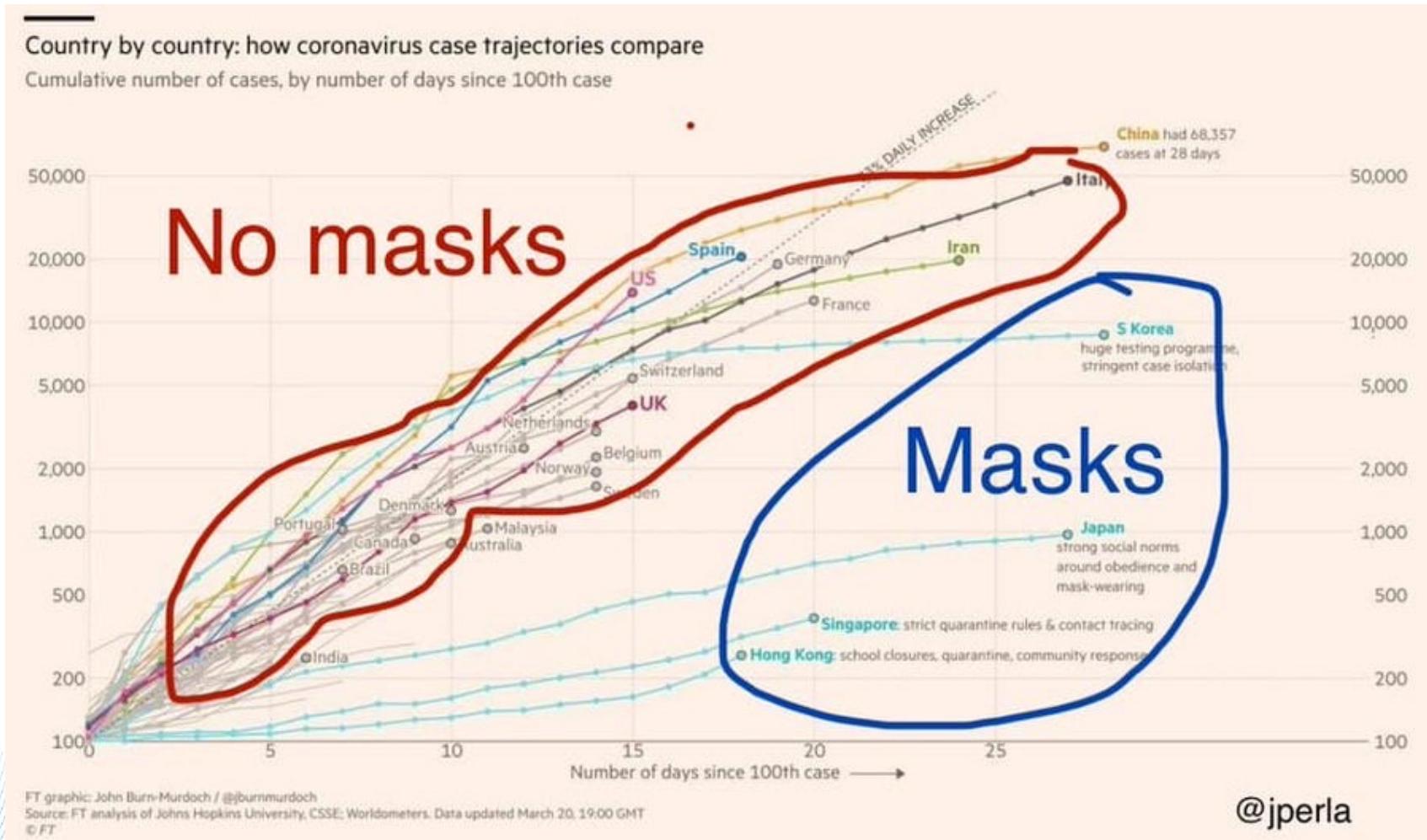


Source: <https://ourworldindata.org/grapher/price-changes-in-consumer-goods-and-services-in-the-usa-1997-2017>

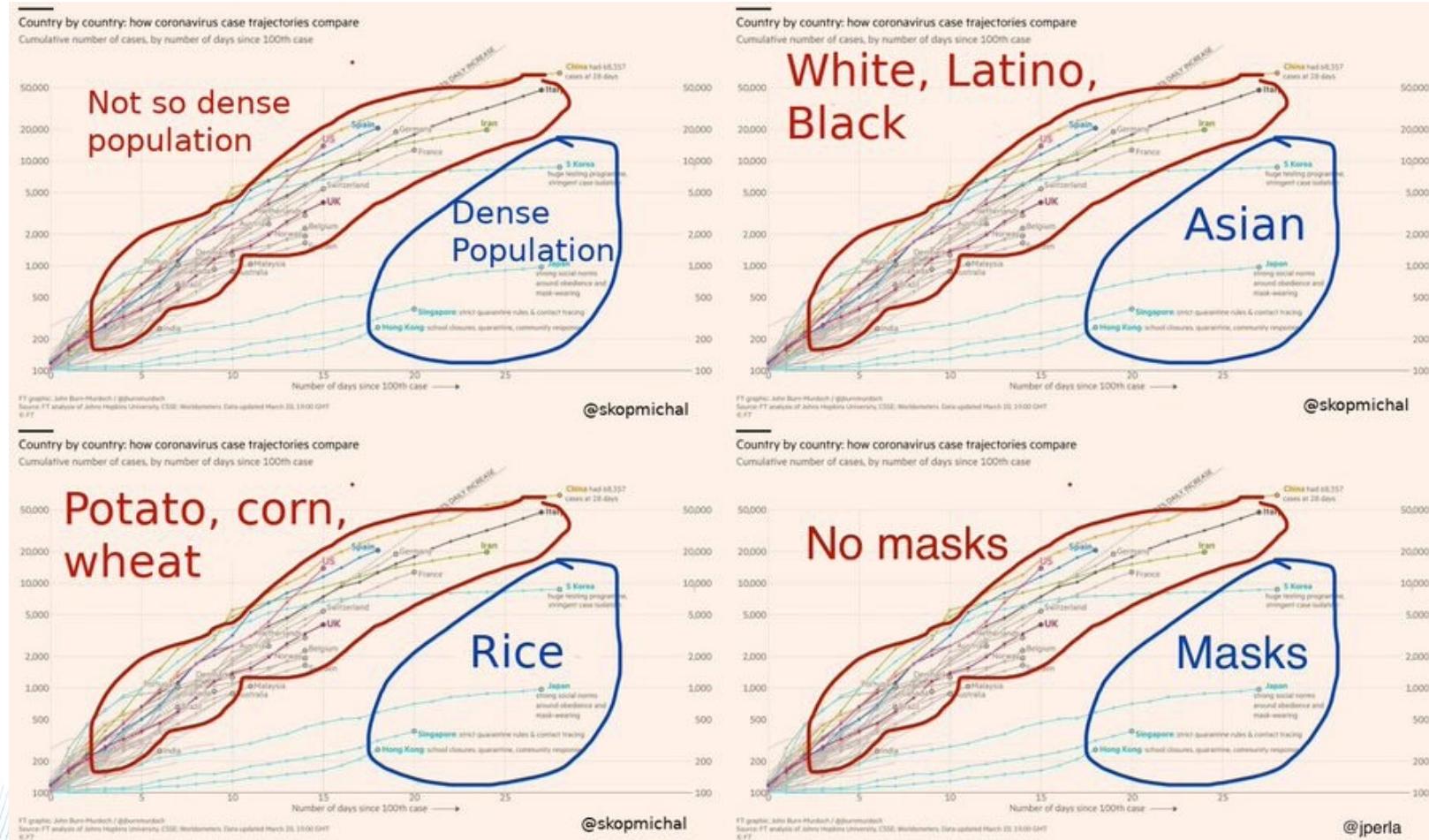
VISUAL BEST PRACTICES: WHAT NOT TO DO



VISUAL BEST PRACTICES: EXAMPLES (CORRELATION)



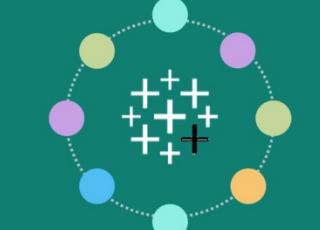
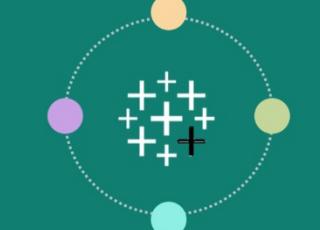
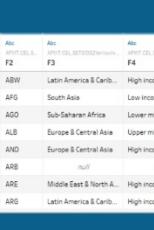
VISUAL BEST PRACTICES: EXAMPLES (CORRELATION)



PRESENTING YOUR STORY: TEST YOUR VISUALS

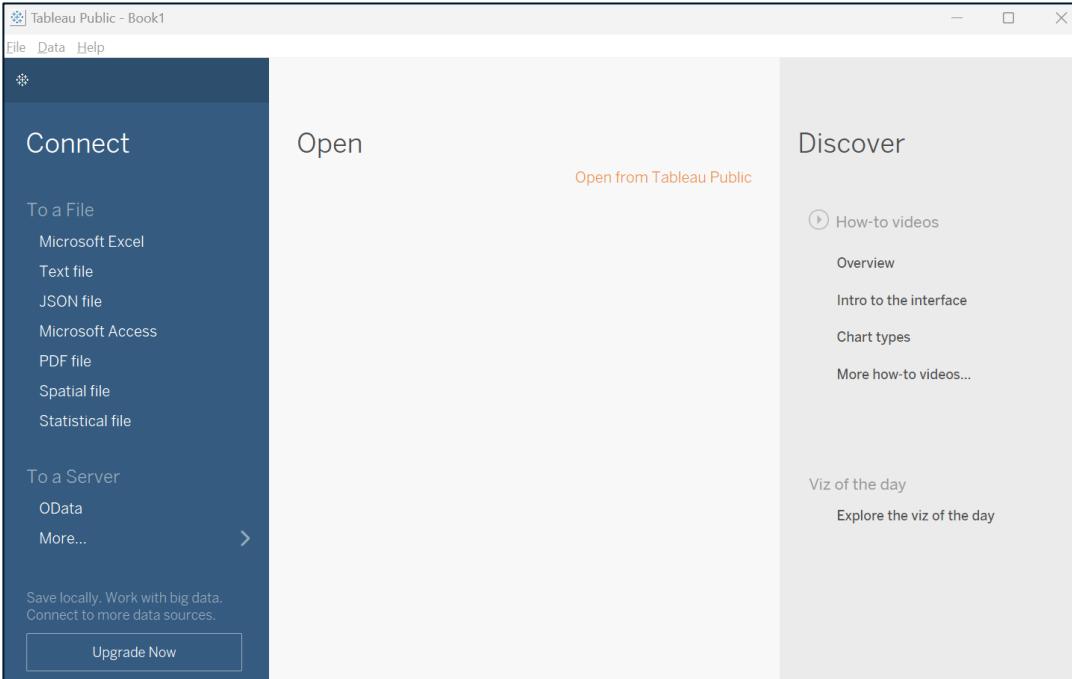
- D Will the audience understand the goal of the visualization in less than 30 seconds?
- D Is the language used appropriate for your audience?
- D Does the flow and sequence of the objects support the goal?
- D Are the included objects the best choices for the goal?
- D Is it clear on how to interact with the visualization (if it's interactive)?

Tableau Desktop vs Public vs Reader

Tableau Desktop  <p>You can create beautiful visualizations using this App.</p>	Tableau Public  <p>You can create beautiful visualizations using this App.</p>	Tableau Reader  <p>You cannot create/edit visualizations using this App.</p>	Tableau Desktop  <p>Nobody can see your reports unless provided with an access.</p>	Tableau Public  <p>All the Reports are public once they're published.</p>	Tableau Reader  <p>Nobody can see your reports unless provided with an access.</p>
Tableau Desktop  <p>All listed data sources can be connected to using this App.</p>	Tableau Public  <p>Only Excel and text files can be connected to using this App.</p>	Tableau Reader  <p>Does not need to connect to a Data Source.</p>	Tableau Desktop  <p>Unlimited Rows of Data can be Stored, Processed & Shared.</p>	Tableau Public  <p>1 Million Rows of Data can be Stored, Processed & Shared.</p>	Tableau Reader  <p>Unlimited Rows of Data can be Read in Static View.</p>
<p>https://www.edureka.co/blog/tableau-desktop-vs-tableau-public-vs-tableau-reader/</p>					

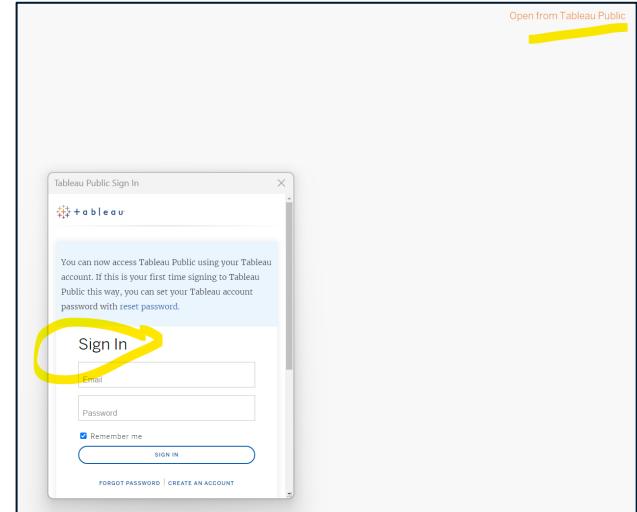
Walkthrough Tutorial

Tableau Public

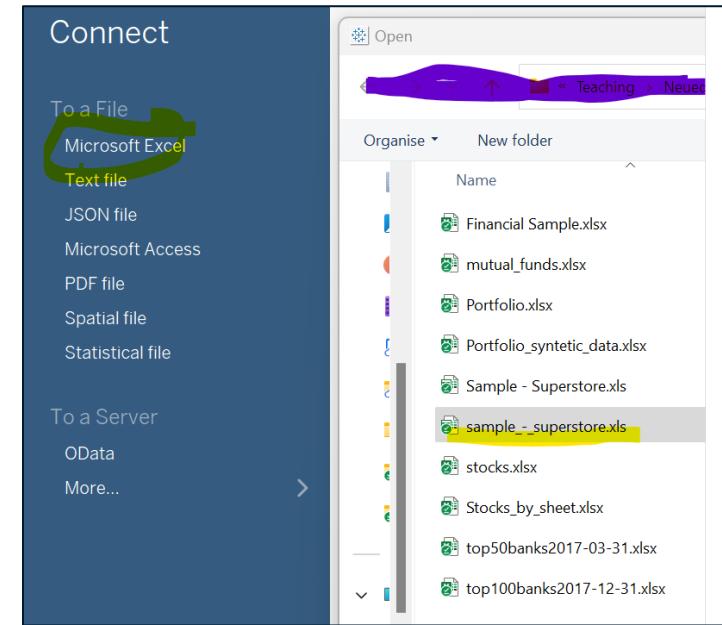


<https://www.tableau.com/products/public/download>

Sign-in



Load Data



What are Parameters?

A parameter is a value that can be changed by the user interacting with a view, rather than your visualizations using a constant value

Parameters gives users control over the visualization

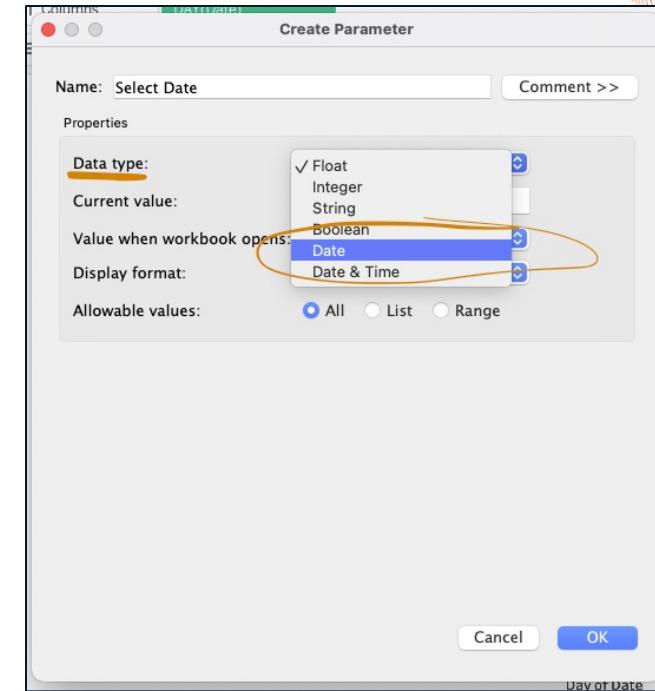
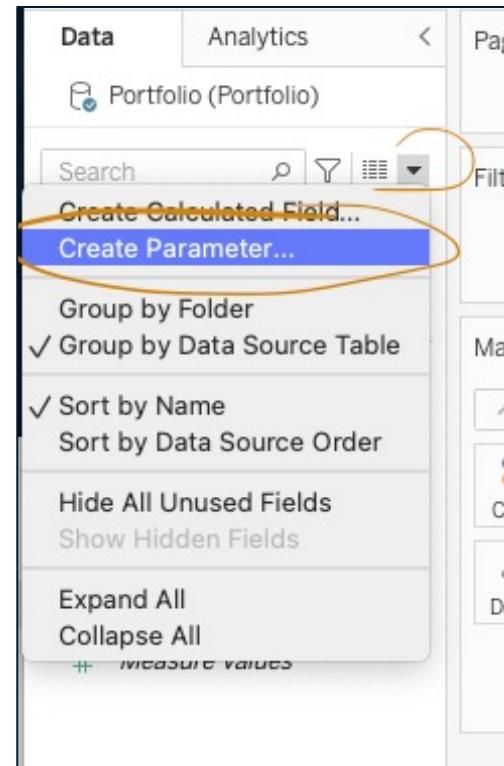
What are some ways a parameter can be used?

- User-controlled thresholds
- What-if analysis
- Dynamic field, axis, titles, etc.
- Filtering across data sources
- Top N

Use the parameter in either a calculated field, reference line, set or filter

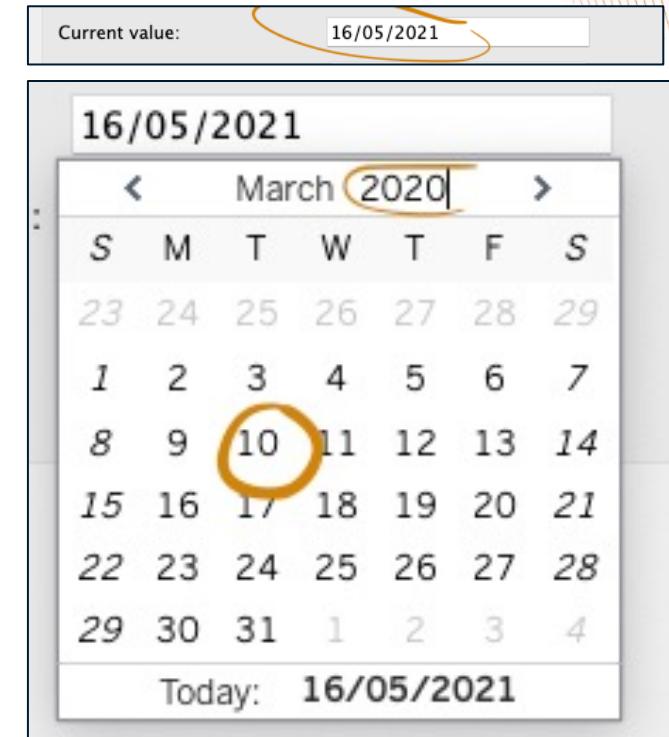
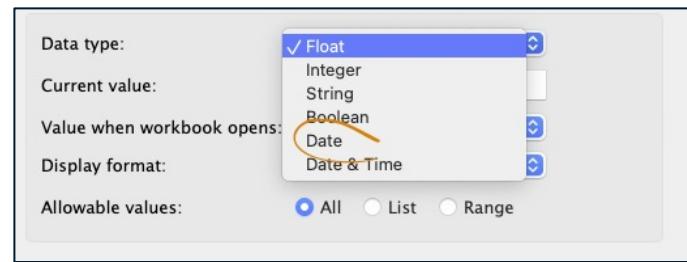
Configure a Parameter

- Open "Portfolio.xlsx"
- Select Create Parameter
- Edit Parameter Name and change Date Type



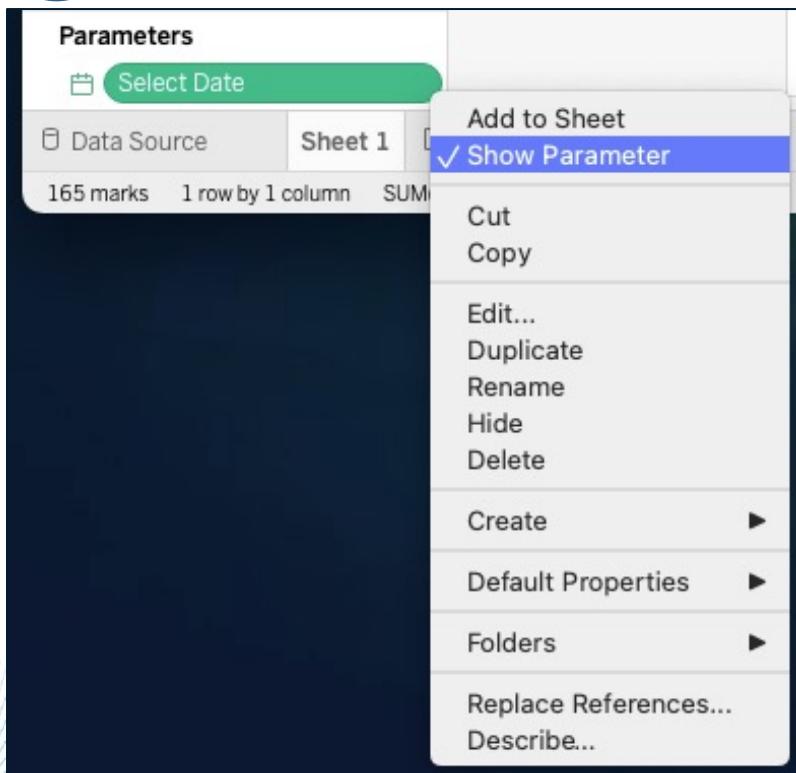
Configure a Parameter

- Change the Date type to the type you want to Parameterise
- Change the default date to the one of your choice

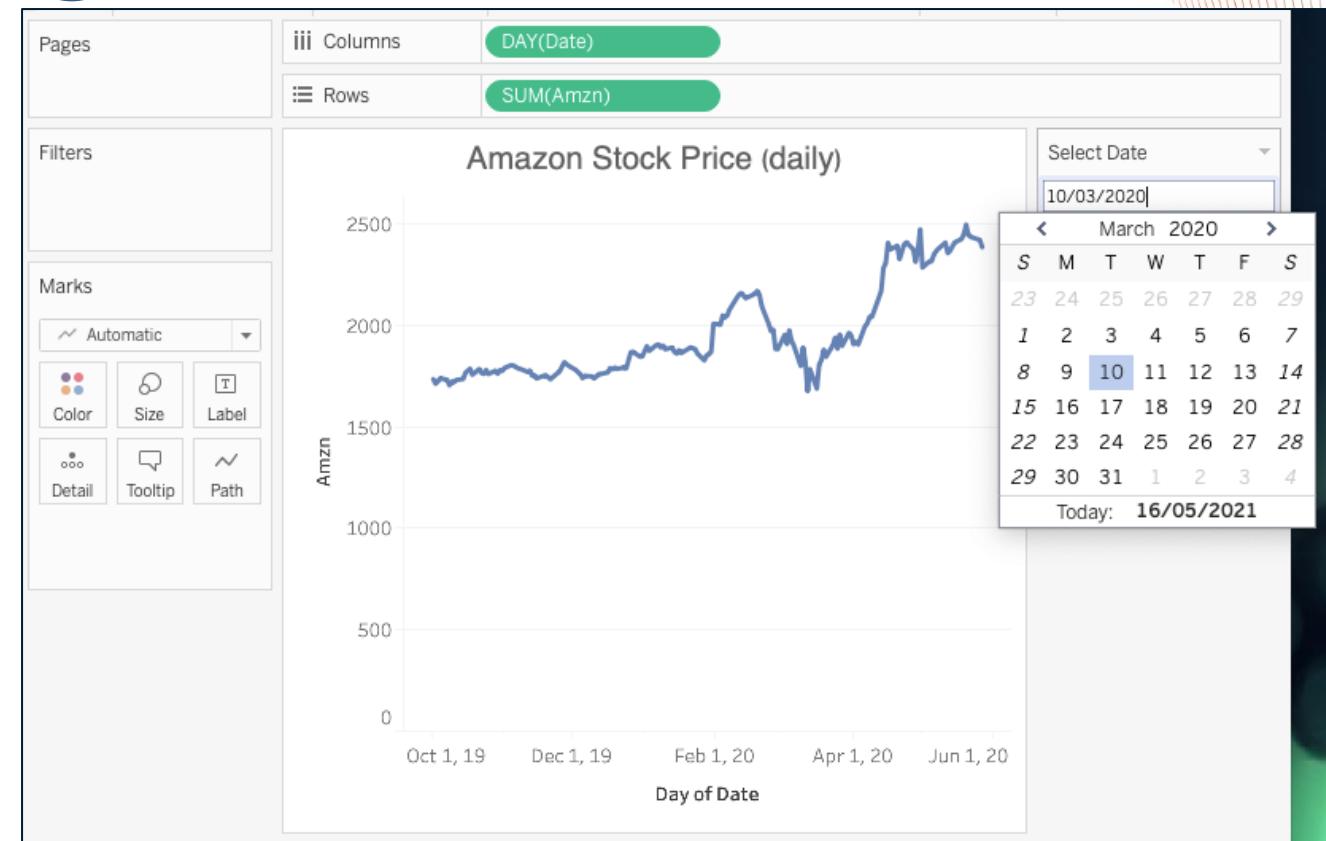


Bring the parameter to the Plot

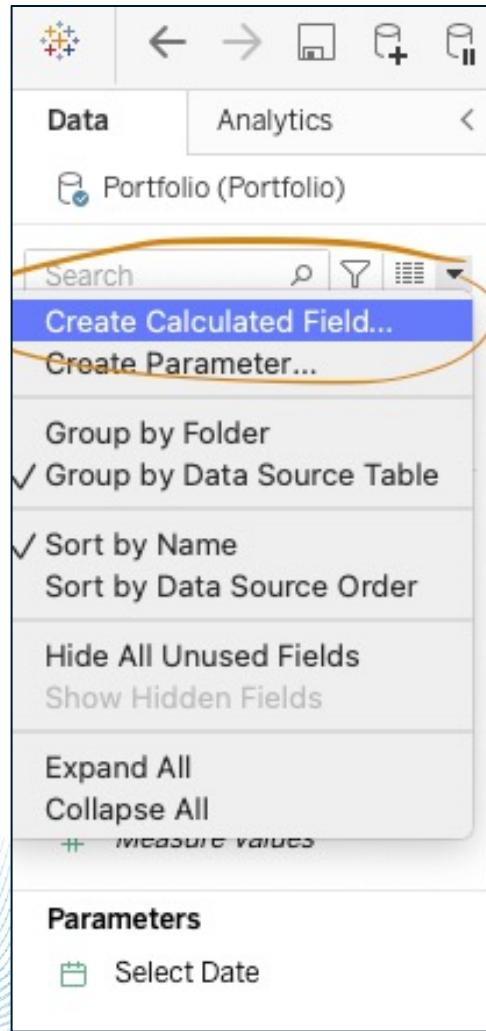
1



2



Configure a Calculation



The screenshot shows the Power BI ribbon with the 'Data' tab selected. A context menu is open over a 'Portfolio (Portfolio)' item, with the 'Create Calculated Field...' option highlighted by a yellow oval.

Create Calculated Field...

Calculation1

Portfolio (Portfolio)

Apply OK

The right side of the interface shows a configuration dialog for a new calculated field named 'Calculation1'. The dialog includes fields for the name and data source, and buttons for 'Apply' and 'OK'.

Configure a Calculation

Is older than Date Chosen

[Select Date] <= [Date]

- Date
- f DATE
- f DATEADD
- f DATEDIFF
- f DATENAME
- f DATEPARSE
- f DATEPART
- f DATETIME
- f DATETRUNC
- f DAY

The calculation contains 0

Return

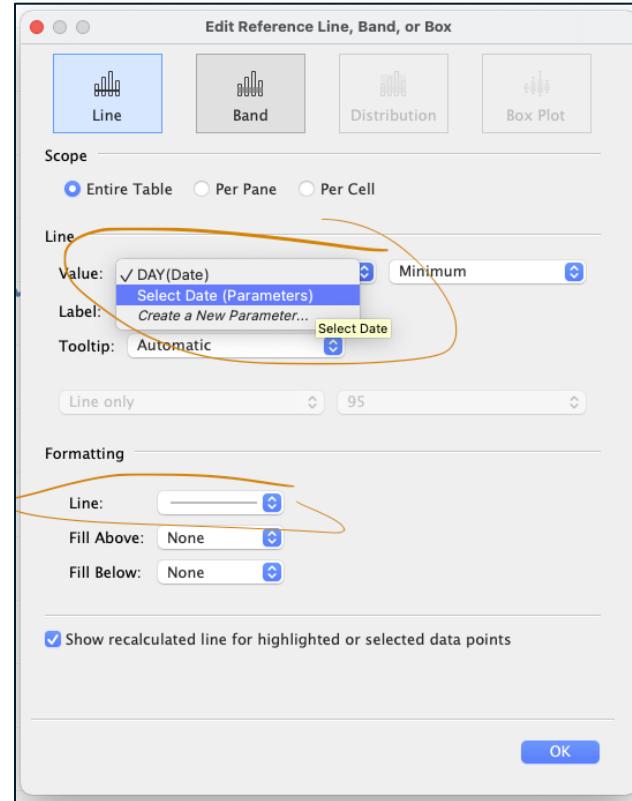
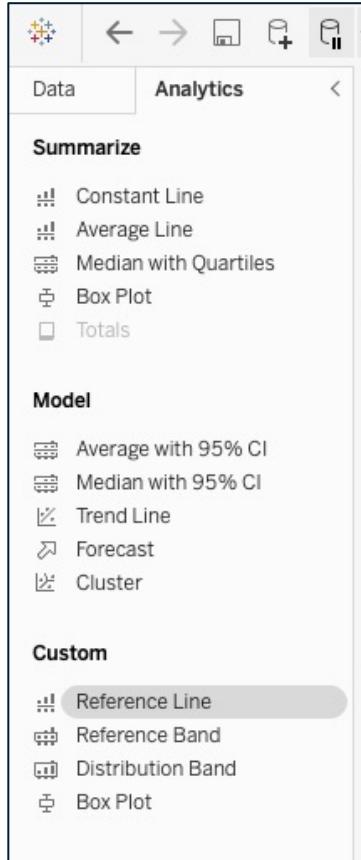
Is older than Date Chosen

[Select Date] <= [Date]

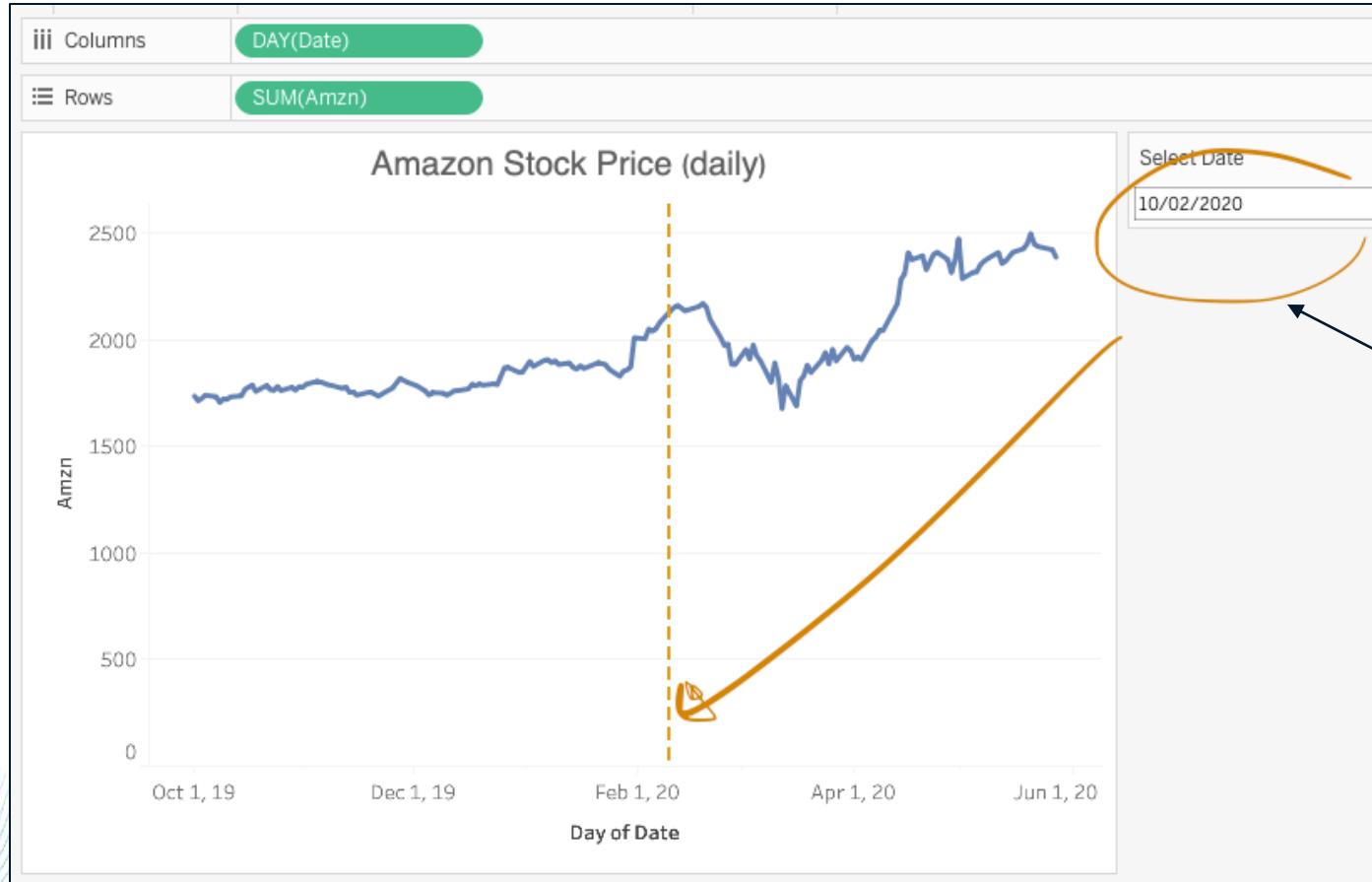
The calculation is valid.

Apply OK

Reference line



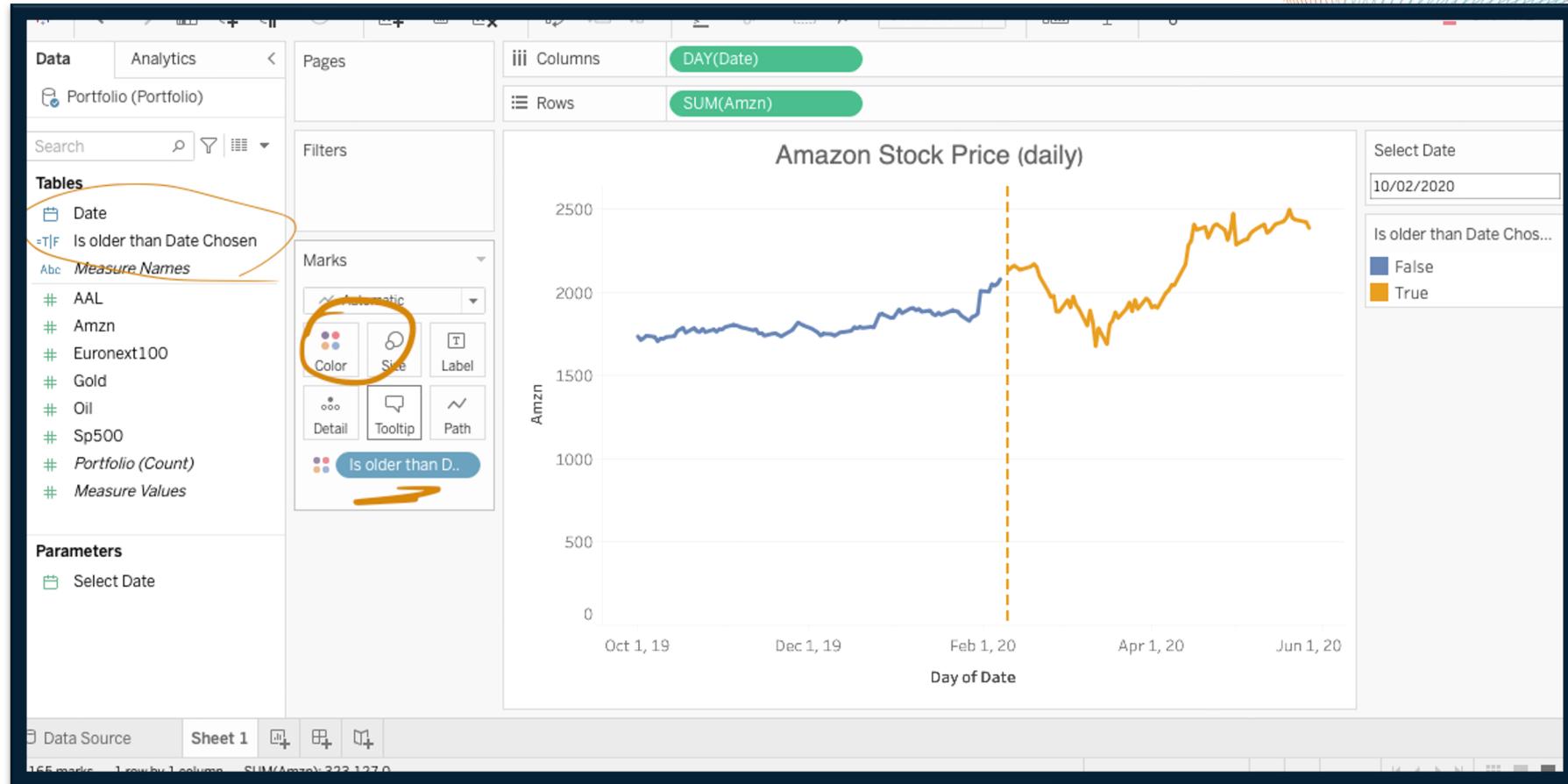
Reference line



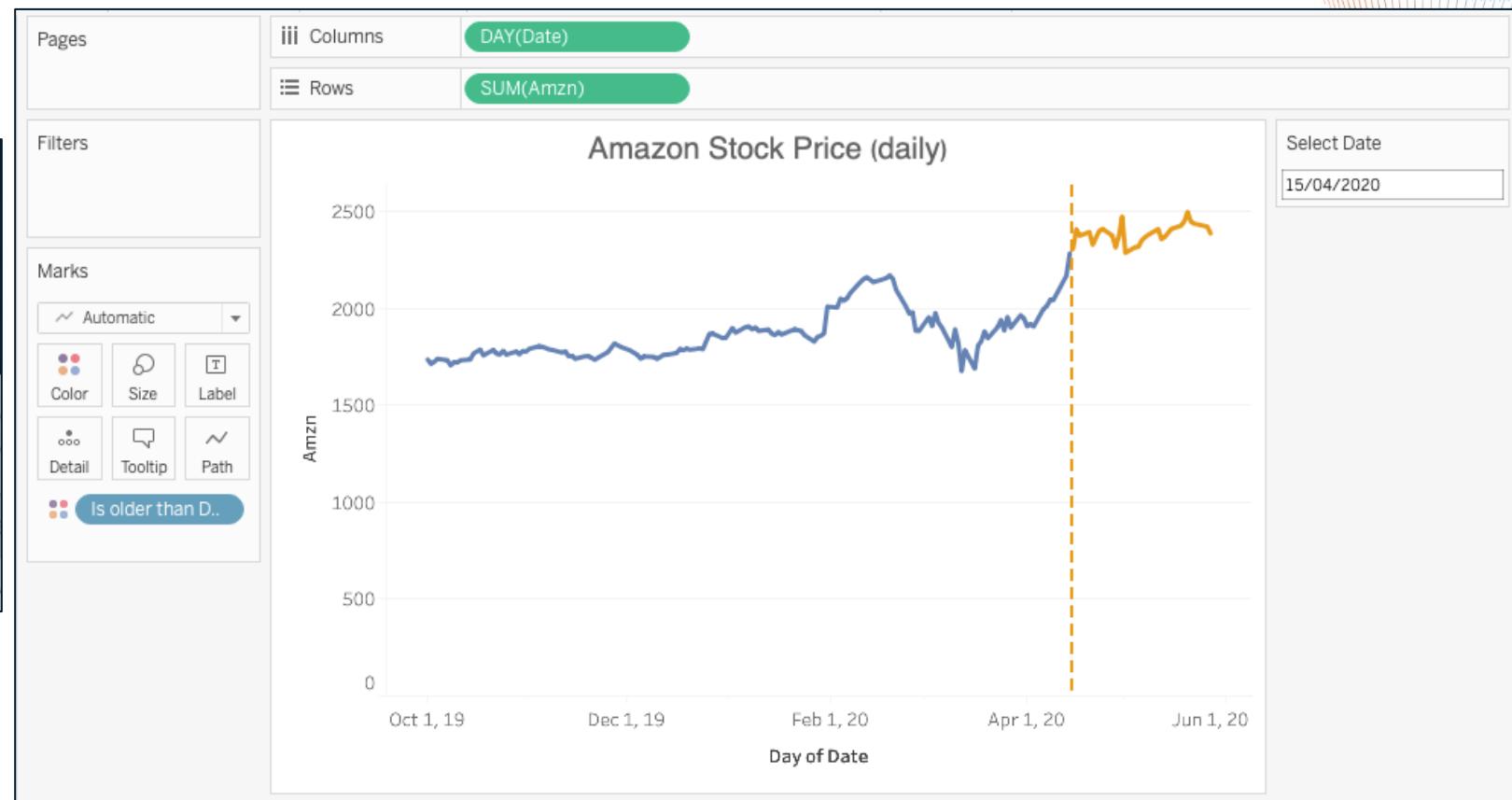
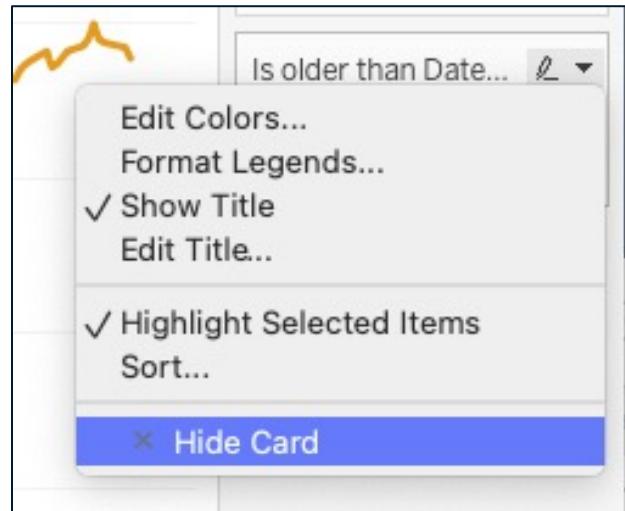
Click on **Select Date** and see how the reference line automatically adjusts to it

Configure a Calculation

Select the Calculation by it's name ("Is older than Date Chosen") and drag and drop in Marks Color



You can choose to hide the Label Box



Build your first visual

Data Superstore

- 1 Create a new Worksheet – Right click in one of the sheet names and select "New Worksheet"
- 2 Create a new Calculated Field – Use the drop-down icon in the Data panel 1
- 3 Rename to "Sales Tax Free"
- 4 Drag the column Sales to the calculation field
or type Sales (and select from the drop-down suggestions)
- 5 Multiply by 0.7 – assuming the tax is 30% then this way we obtain the price without tax
- 6 Drag to columns "Sales Tax Free" and to rows "Product → Sub-Category" 2
- 7 Make sure you have the viz horizontal bar charts selected 3
- 8 On the plot, mouse-over near subcategories, click on the symbol appears and
select "Field → Sum(Sales Tax Free)" 4
- 9 Extra(if you have time) Drag column "Sales Tax Free" to Marks on top of icon

Color
35



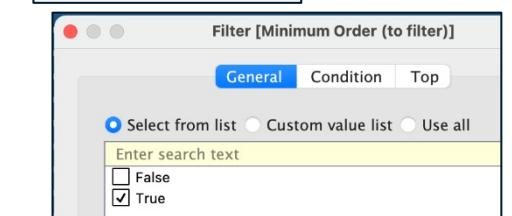
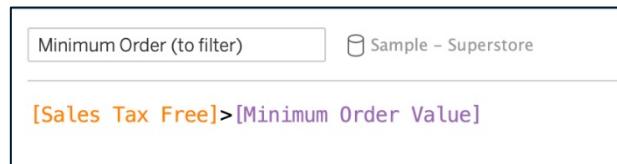
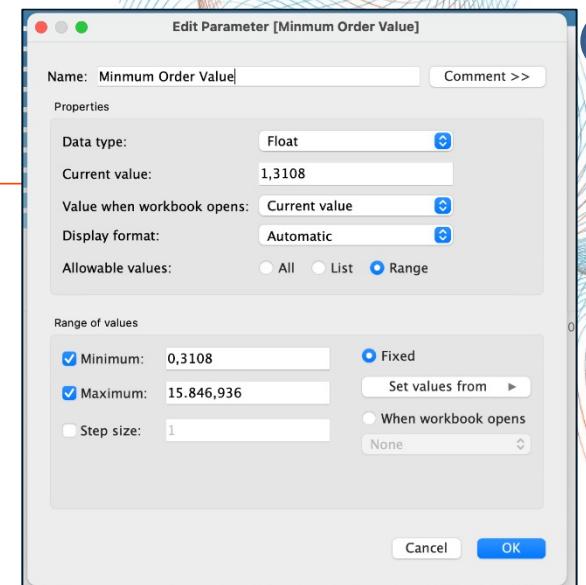
The screenshot shows the Tableau interface with several numbered steps:

- 1 Data panel: Shows the "Sample - Superstore" data source selected. A callout points to the dropdown menu icon.
- 2 Data panel: Shows the calculated field "SUM(Sales Tax Free)" created. A callout points to the newly created field.
- 3 Show Me panel: Shows various visualization options. A callout points to the horizontal bar chart icon.
- 4 Marks shelf: Shows the "Field" dropdown menu open, with "SUM(Sales Tax Free)" selected. A callout points to the "Field" option.

Build a parameter and filter

Data Superstore

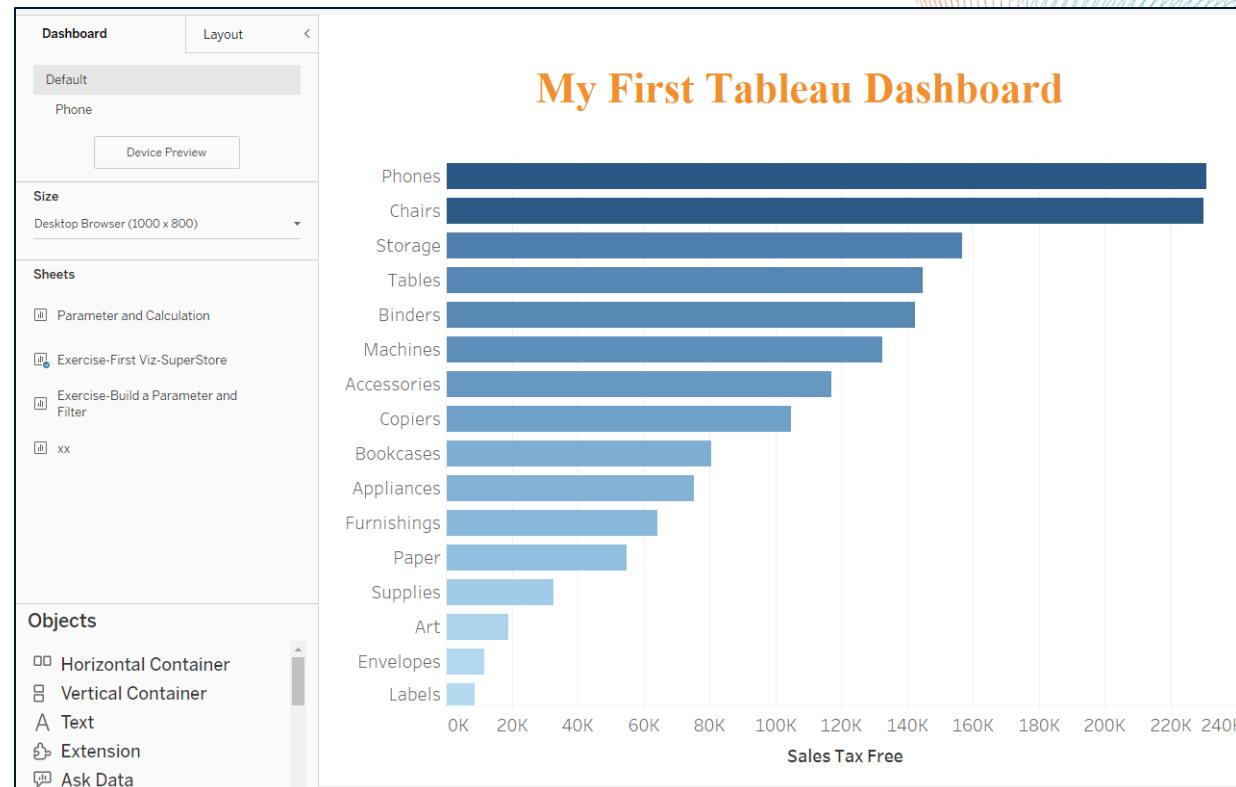
- 1 Duplicate the worksheet from the previous exercise
- 2 Create a new Parameter Field – Use the drop-down icon in the Data panel
- 3 Rename to "Minimum Order Value"
- 4 Select Range, then "Set values from" and choose the field "Sales Tax Free" 1
- 5 Change Display format to "Number (custom)", remove decimal cases and use thousands as display units
- 6 Create a calculation field to use as filter and name it as "Minimum Order (to filter)"
- 7 For the formula in the calculation field say that you want to filter Sales that are higher than Minimum Order Value 2
[Sales Tax Free]>[Minimum Order Value]
- 8 Drag the calculated field "Minimum Order (to filter)" to the Filters 3
(configure to keep only true values)
- 9 Change the values in the parameter and observe as the plot changes



Build your first Dashboard

Data Superstore

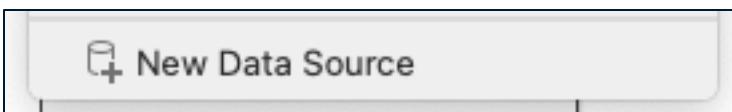
- 1 Create a new Dashboard
- 2 Keep the **Tiled** option on
- 3 Drag one **Vertical** container to the canvas
- 4 Drag a **Text** field to the Vertical container – Give *a title*
- 5 Drag one **Horizontal** container to the lower part of the canvas
- 6 To the left of the Horizontal container drag the **Chart** of the first exercise
- 7 Customize your Dashboard



HORIZONTAL BAR CHART

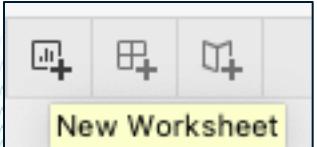
Add a new data source

- Go to Data Source tab



- Select **top50banks2017-03-31.xlsx**

- Create a new work sheet

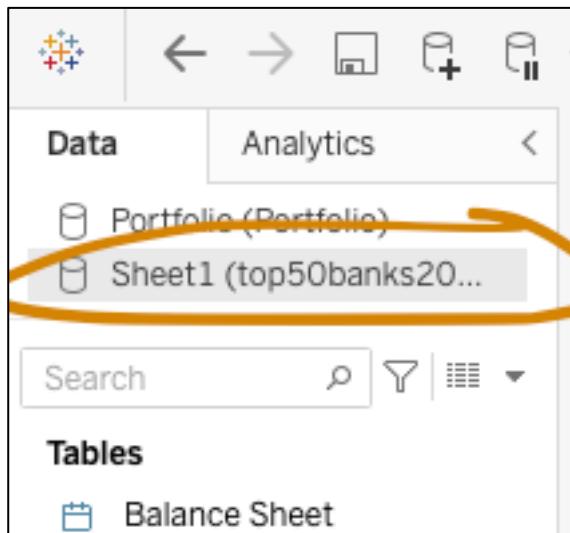


The screenshot shows the Power BI Data Source Editor. On the left, under 'Connections', there is a single entry for 'top50banks2017-03-31' (Microsoft Excel). Under 'Sheets', 'Sheet1' is selected. A checkbox for 'Use Data Interpreter' is present with a descriptive note. Below the sheets list is a 'New Union' option. At the bottom, there are buttons for 'Sort fields' and 'Data source order'. The main area displays a preview of the data from 'Sheet1', showing columns for Rank, Bank, Country, Total Assets Us B, and Balance Sheet, with data for the top 7 banks as of March 31, 2017.

#	Bank	Country	Total Assets Us B	Balance Sheet
1	Industrial & Commer...	China	3,615.17	31/03/2017
2	China Construction B...	China	3,149.25	31/03/2017
3	Agricultural Bank of ...	China	2,950.21	31/03/2017
4	Bank of China	China	2,746.05	31/03/2017
5	Mitsubishi UFJ Finan...	Japan	2,713.44	31/03/2017
6	JPMorgan Chase & Co	USA	2,546.29	31/03/2017
7	HSBC Holdings	UK	2,416.47	31/03/2017

Select your new data

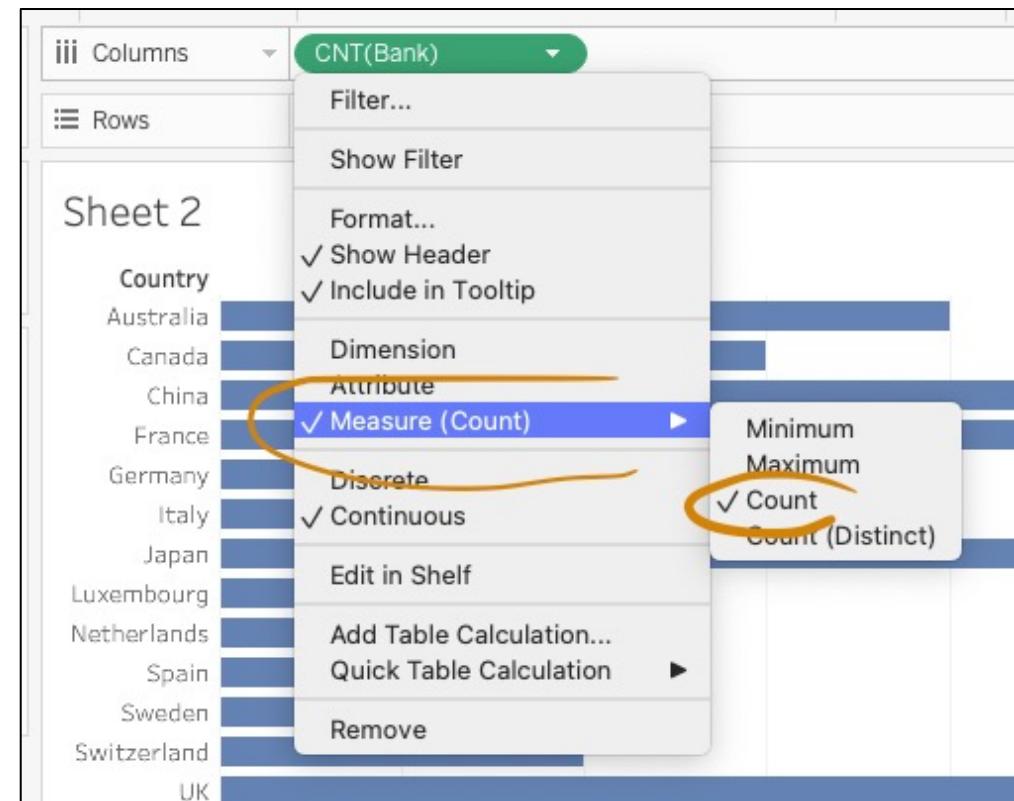
Make sure you have the right dataset selected



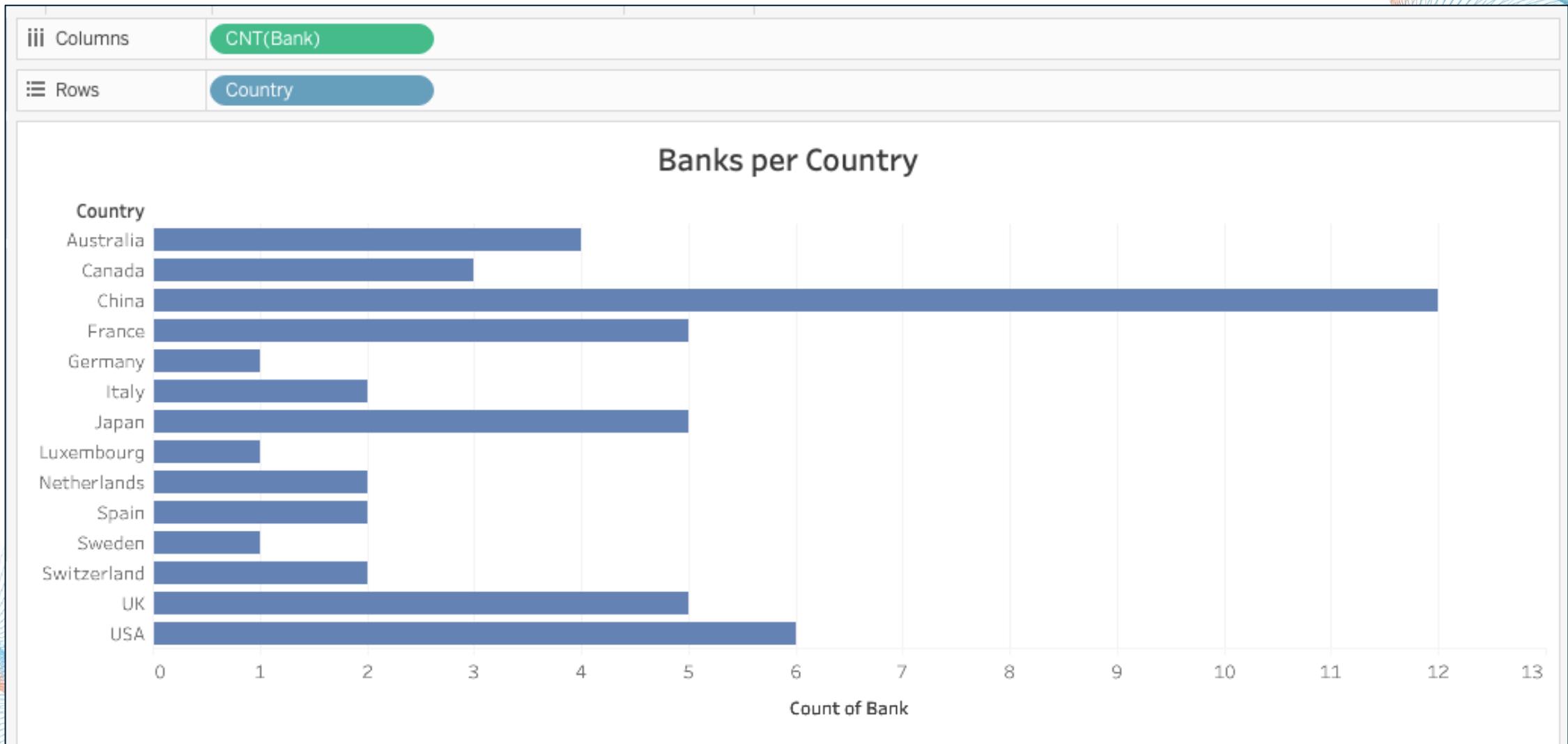
Make an horizontal histogram

Visualize the total number of Banks per country

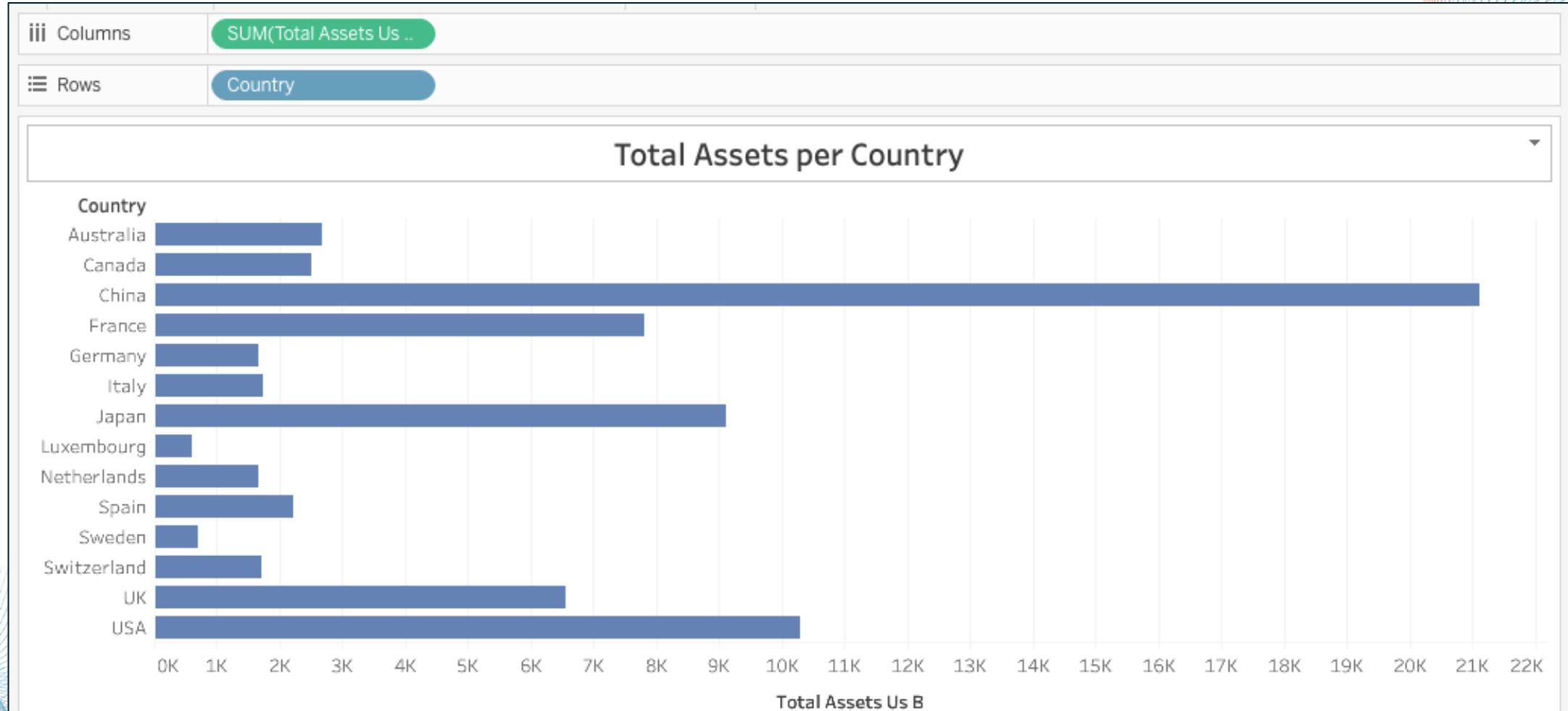
- Rows – drag and drop Country
- Columns – drag and drop Bank
 - Edit the metric for Bank



Histogram

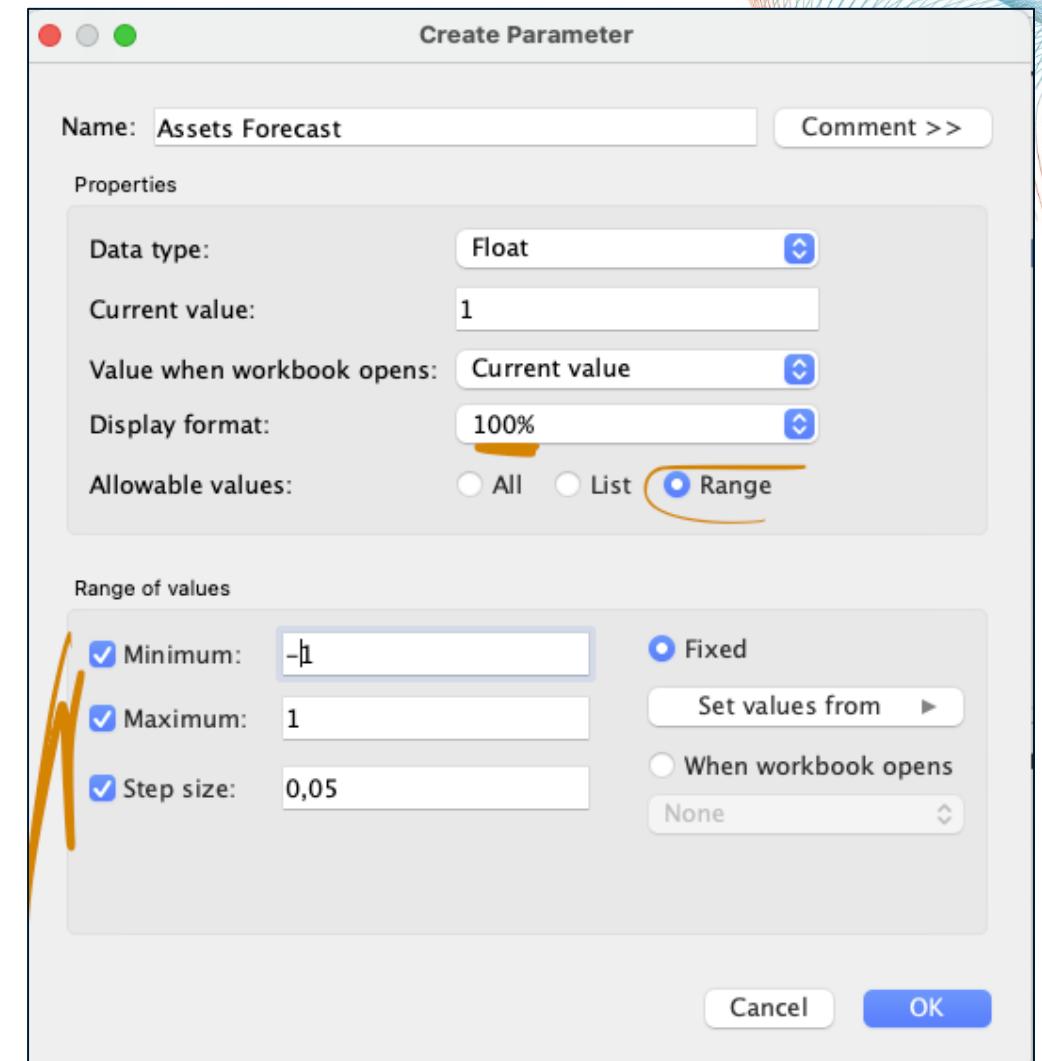


Duplicate your visual and change "Bank" to "Total Assets"



Create an Asset's Forecast per country

- Create a new Parameter "Assets Forecast"
- Go to Display format and select percentage
- Go to Allowed values and select Range
 - Step can be configured to move by each 5% in a scale from 1 to 100%



Add your calculation for Asset's Forecast

1

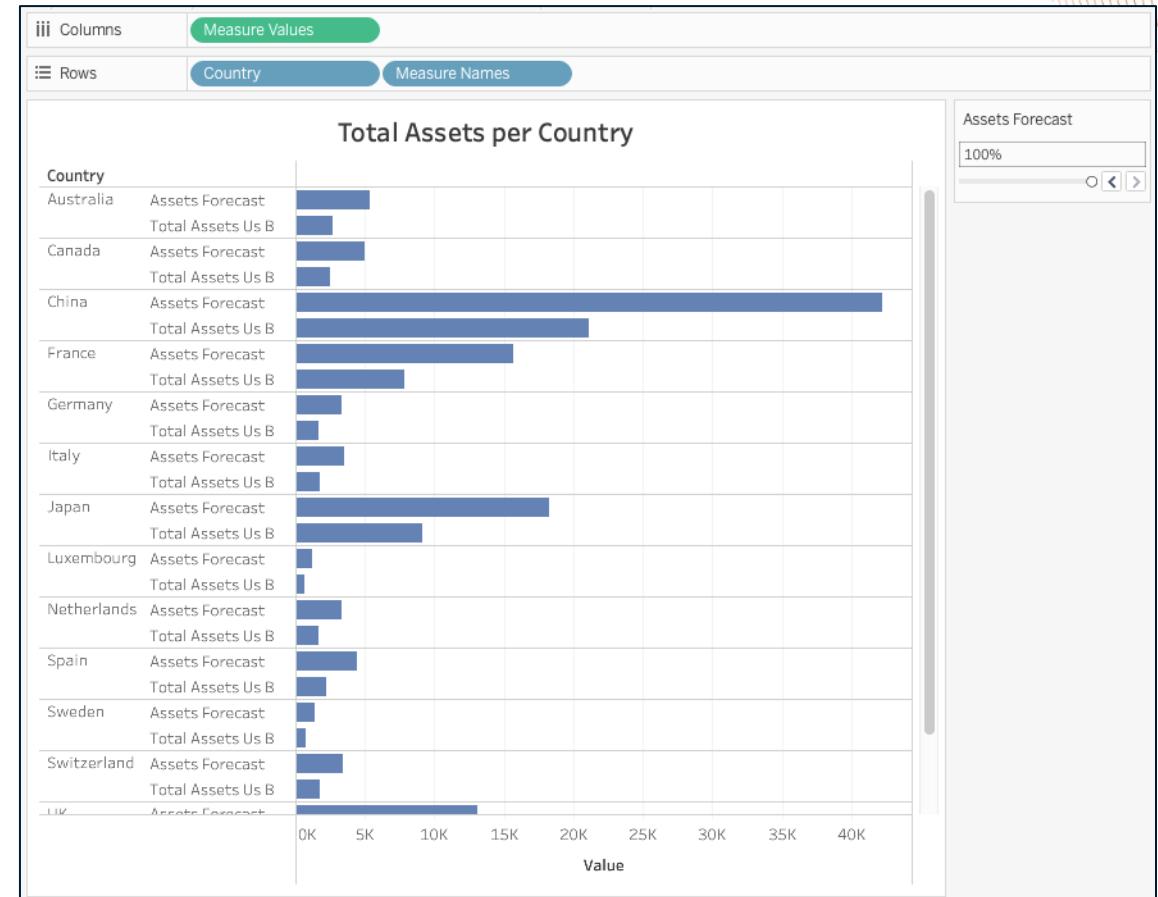
Create the calculation
(Assets Forecast)

```
Assets Forecast
Sheet1 (top50banks2017-03-31)

SUM([Total Assets Us B])*(1+[Assets Forecast])
```

2

Drag and drop the calculation (Assets Forecast)
on the plot XX' axis



Add your calculation for Asset's Forecast

3

Drag and drop
Measures names to the Marks

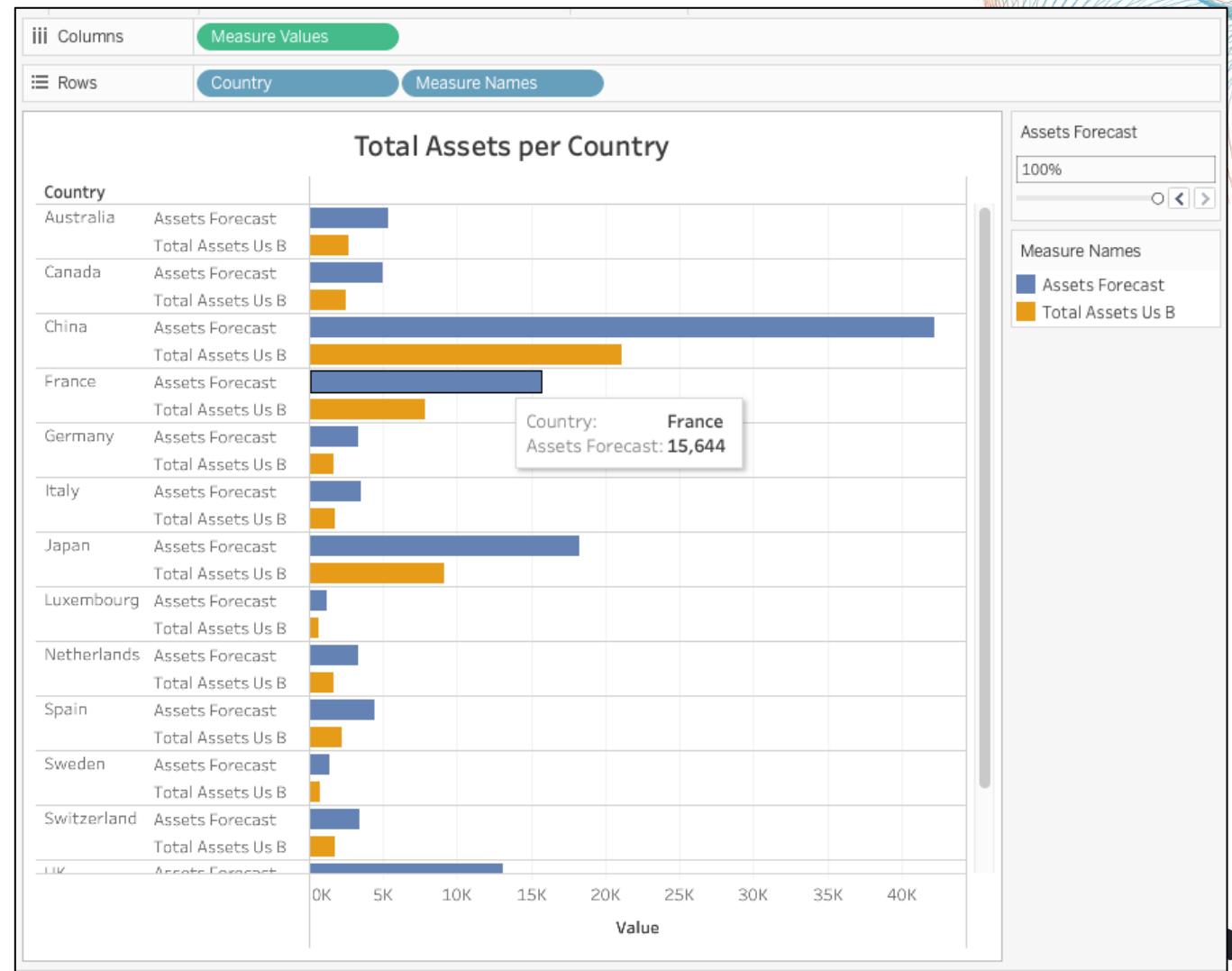
The screenshot shows the Tableau interface. In the Data pane, under 'Tables', 'Country' is selected. In the 'Measure Names' dropdown on the Marks shelf, 'Assets Forecast' and 'Total Assets Us B' are listed. A large blue arrow points from this interface to the final visualization.



TRAINING

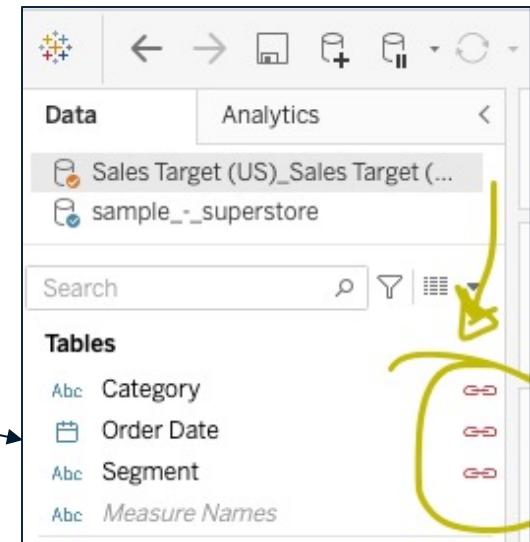
Add your calculation for Asset's Forecast

- Change the Assets forecast percentage and observe the changes in the plot



Connect Tables → "Sales Target (US)"

- 1 New workbook
- 2 Import 2 datasets
 - 1 Superstore Sales - "sample_-_superstore.xls"
From: https://public.tableau.com/en-us/s/resources?qt-overview_resources=1#qt-overview_resources
 - 2 Sales Target (US) – "Sales Target (US)_Sales Target (US).csv"
- 3 Create a new sheet and notice how the fields automatically connected



Try to build this visual on your own

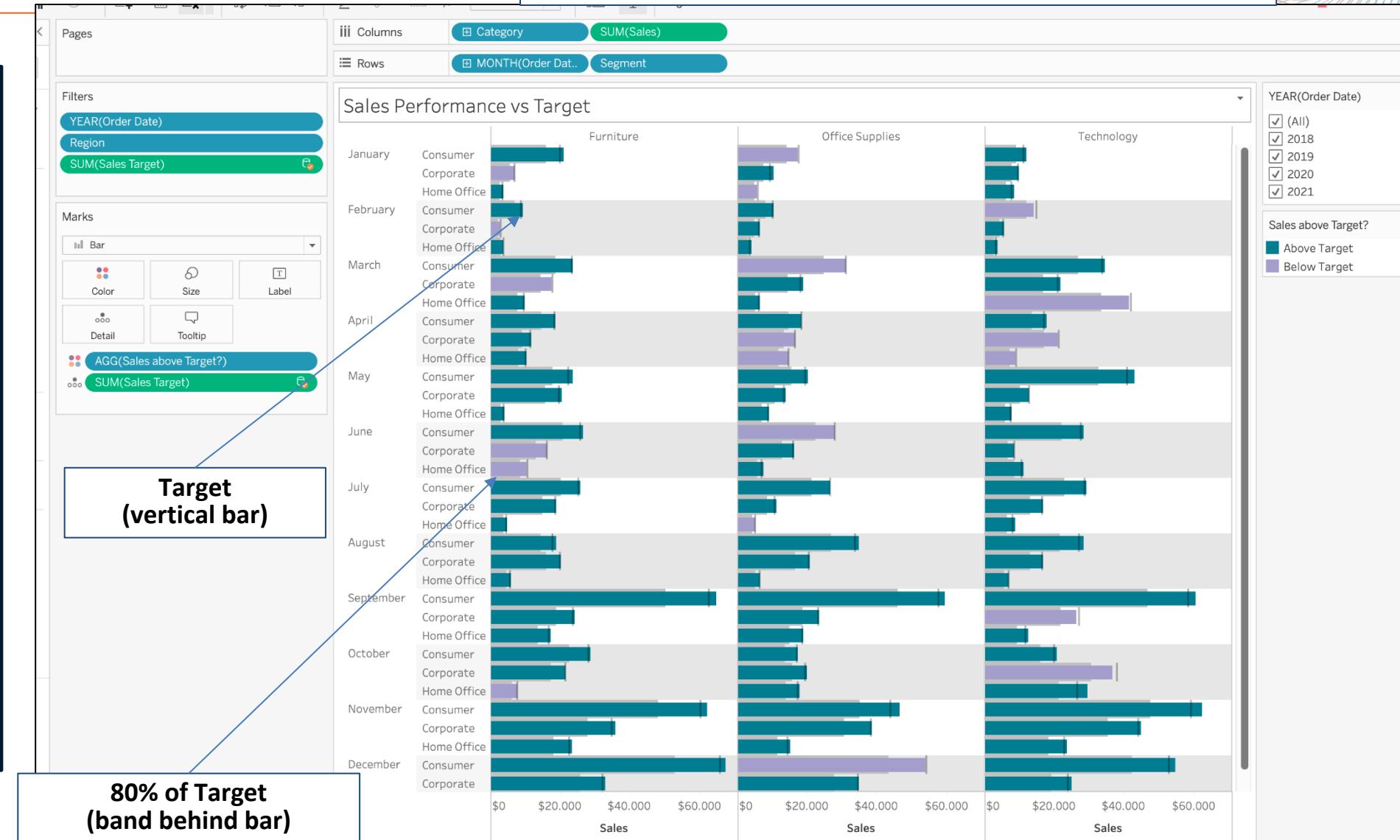
"Above Target" -> Total Sales higher than Target

SampleStore Dataset

Sales Target (US) Dataset

Tips

- 1 Sales above Target is in dataset – "Sales Target (US)"
- 2 Category, Sales, Segment and Order date is in dataset – "Sample – Superstore"
- 3 This is an horizontal bar chart
- 4 Reference Lines can be added by right-click on top of x axis

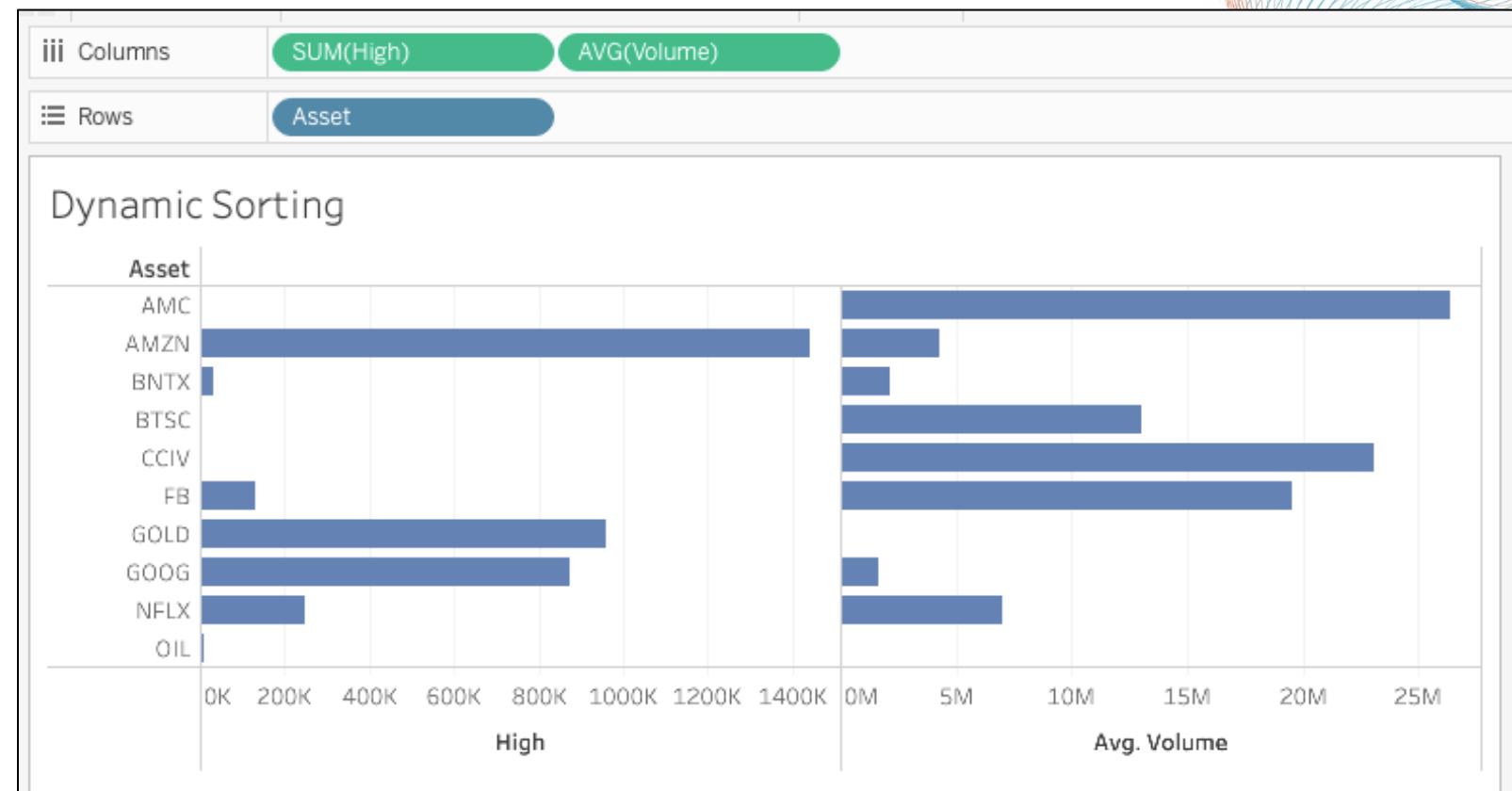


DYNAMIC SORTING

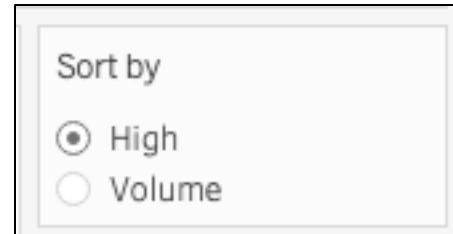
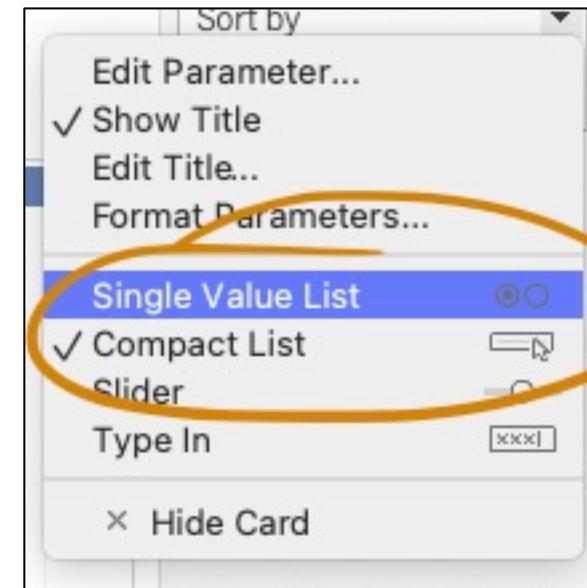
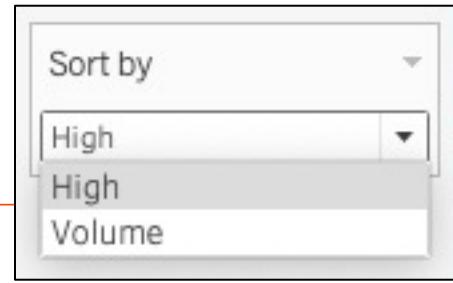
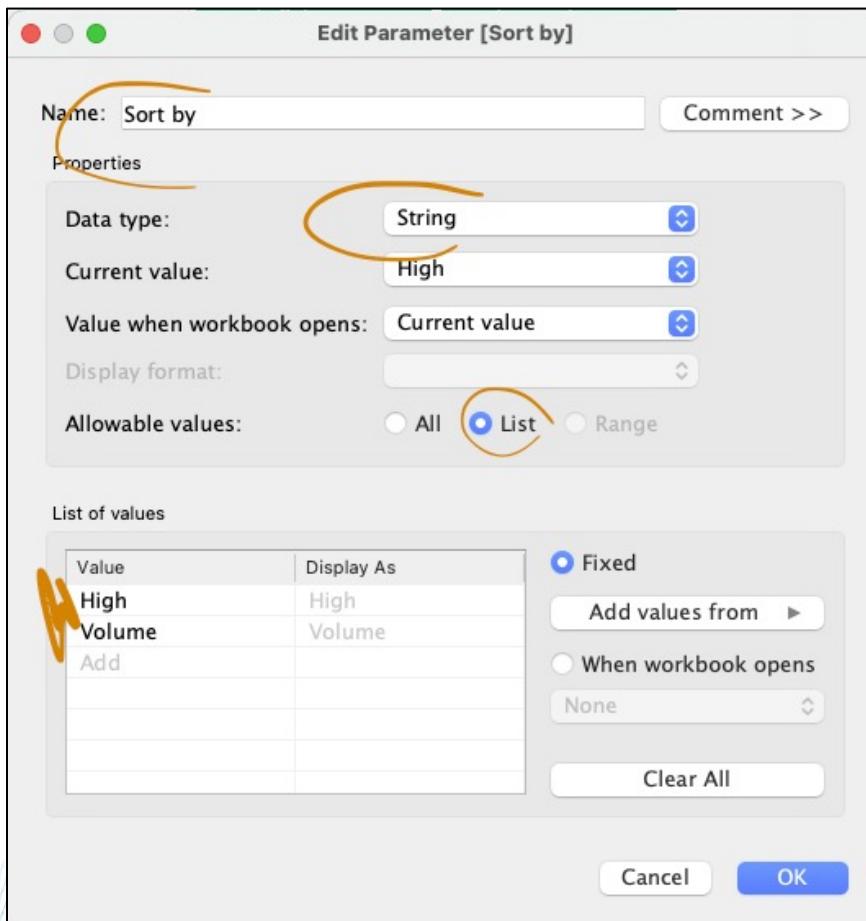
Dynamic Sorting

Load the data stocks.xlsx

- Rows - SUM(High), AVG(Volume)
- Columns - Asset



Parameter to "Sort by"



Calculation for Sort

Sort Order Sheet1 (stocks) X

```
CASE [Sort by]
WHEN "High" THEN SUM([High])
ELSE AVG([Volume])
END
```

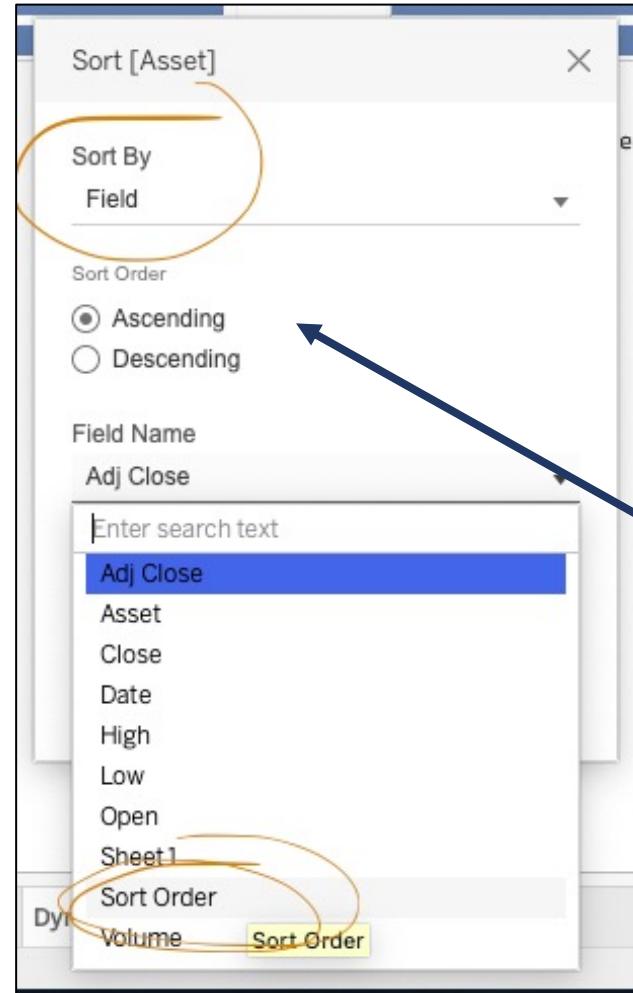
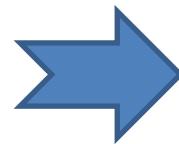
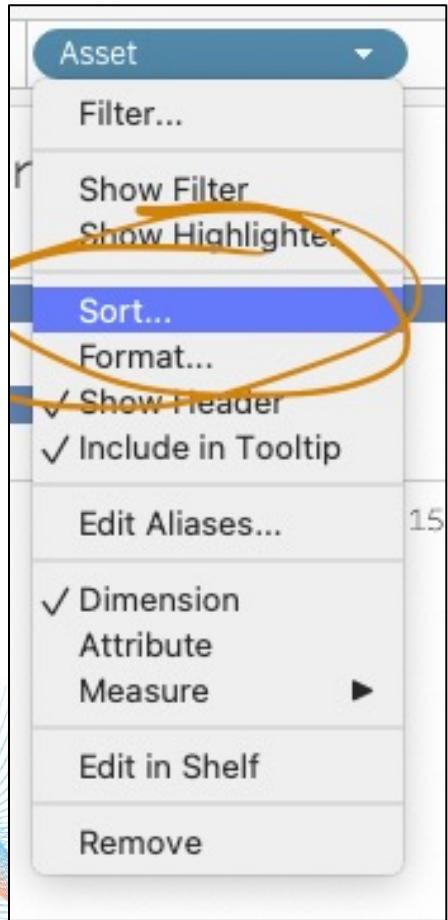
The calculation is valid.

Apply OK

- Let's drag the calculation to the Columns and see how it changes with the Parameter

iii Columns SUM(High) SUM(Open) AVG(Volume) AGG(Sort Order)

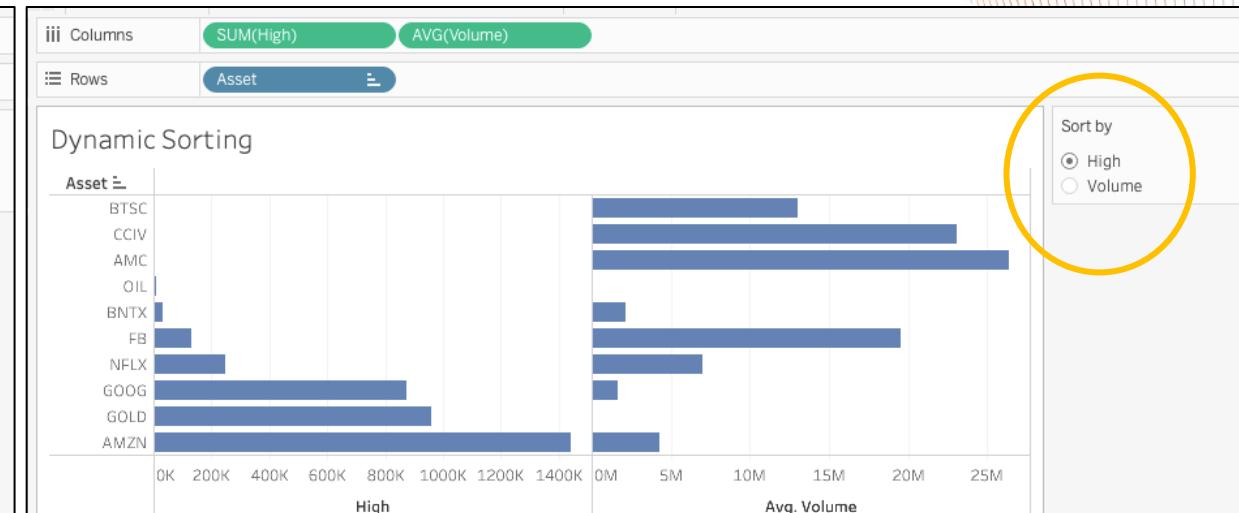
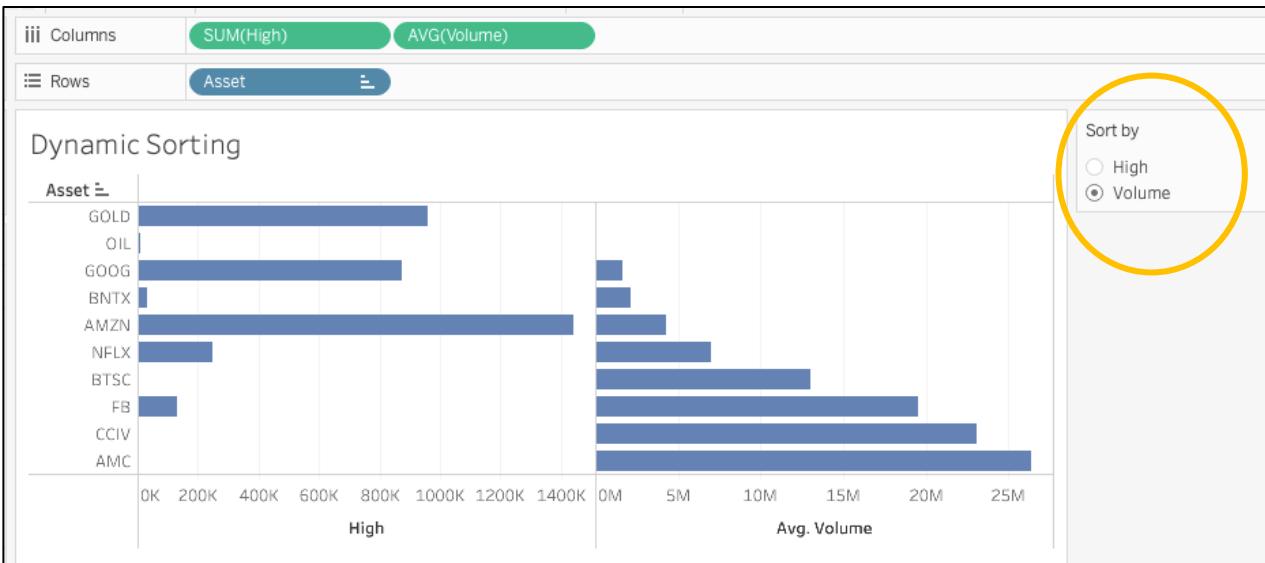
Apply Sort to the Rows



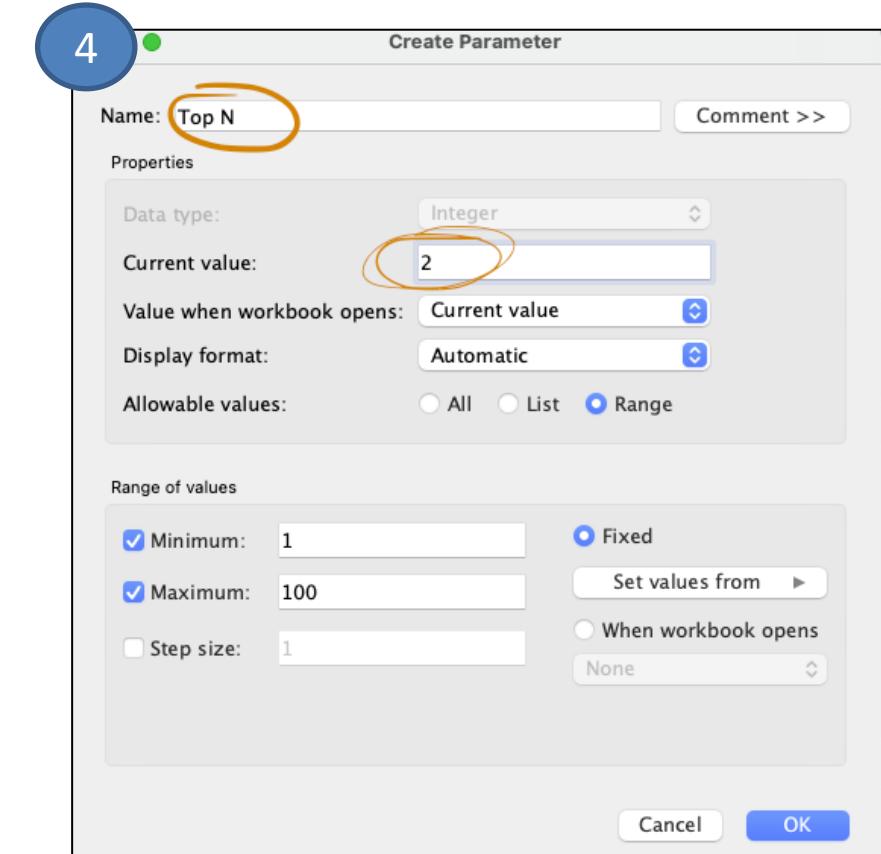
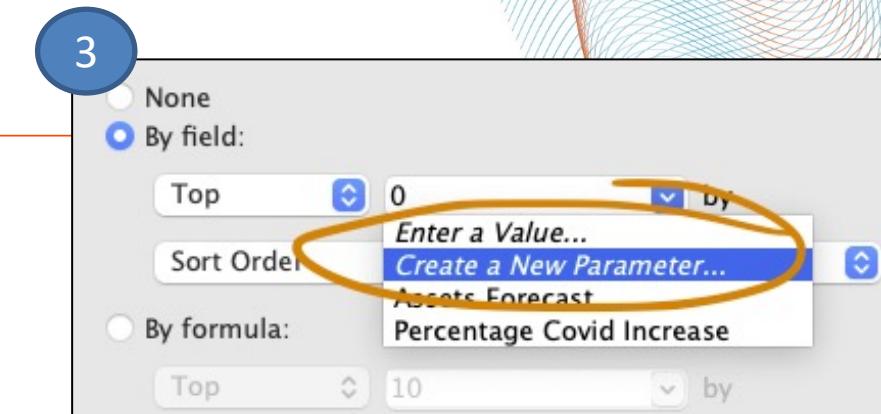
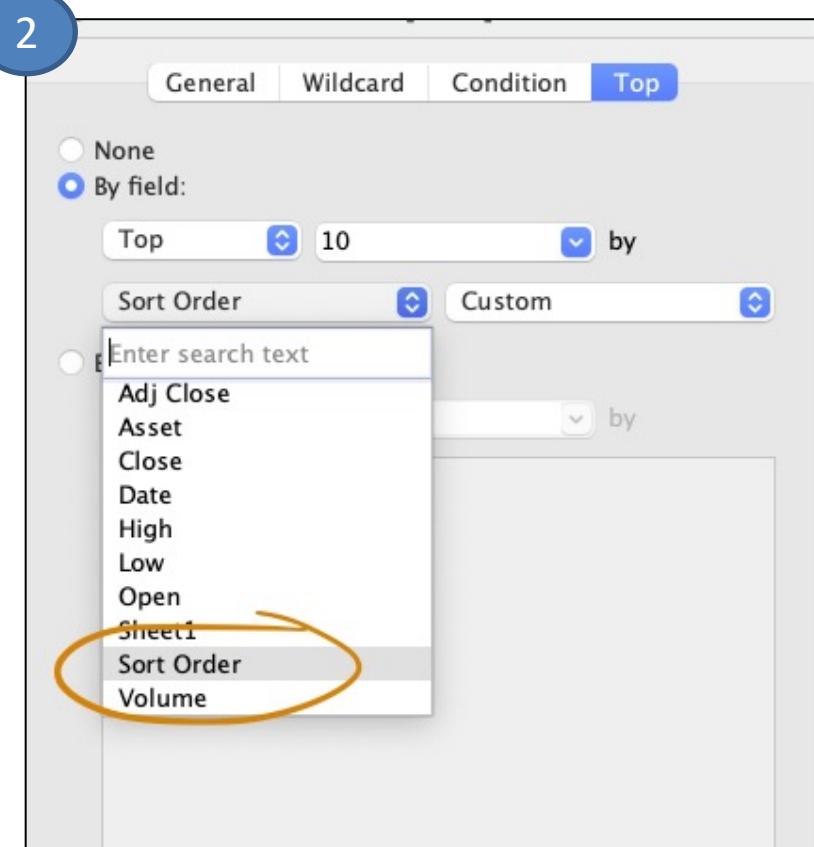
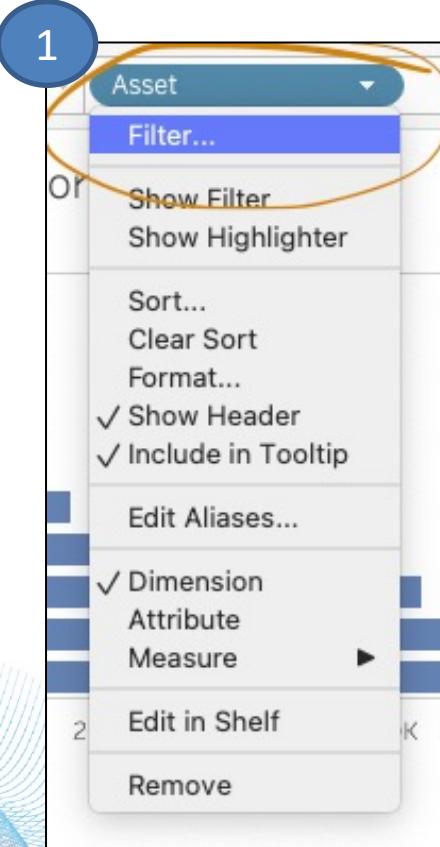
Tip

- If you need ascending for some fields but descending for other fields
- Go back to the Calculation and add a negative sign to simulate that effect for the columns that will not respect the same Sort Order

Check how the sort changes dynamically on your plots



Sort and filter by Top N



Sort and filter by Top N



DYNAMIC DIMENSION

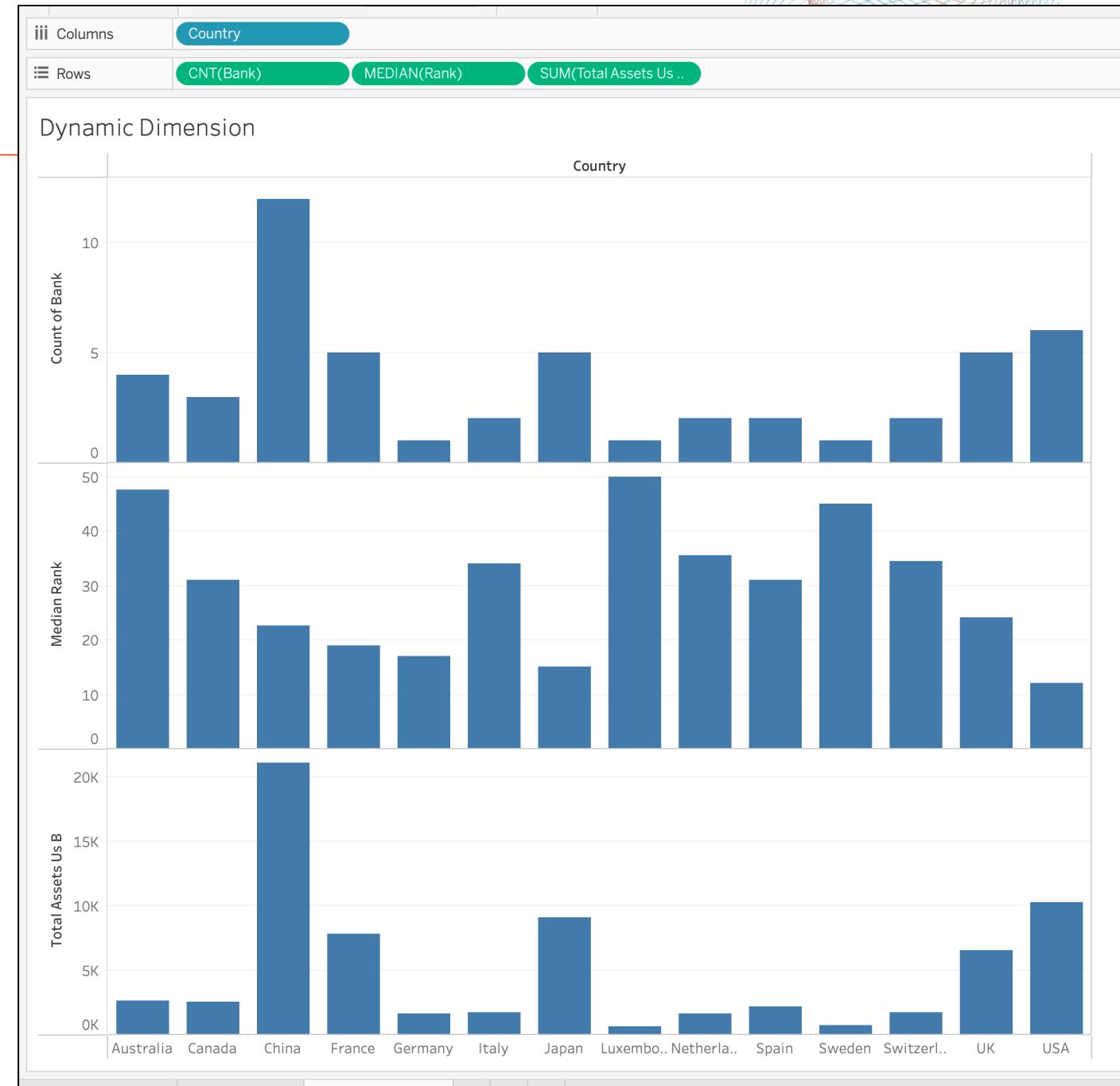
Dynamic Dimension

Look at different information about each Country's

- Banks
- Rank
- Total Assets
- Etc.

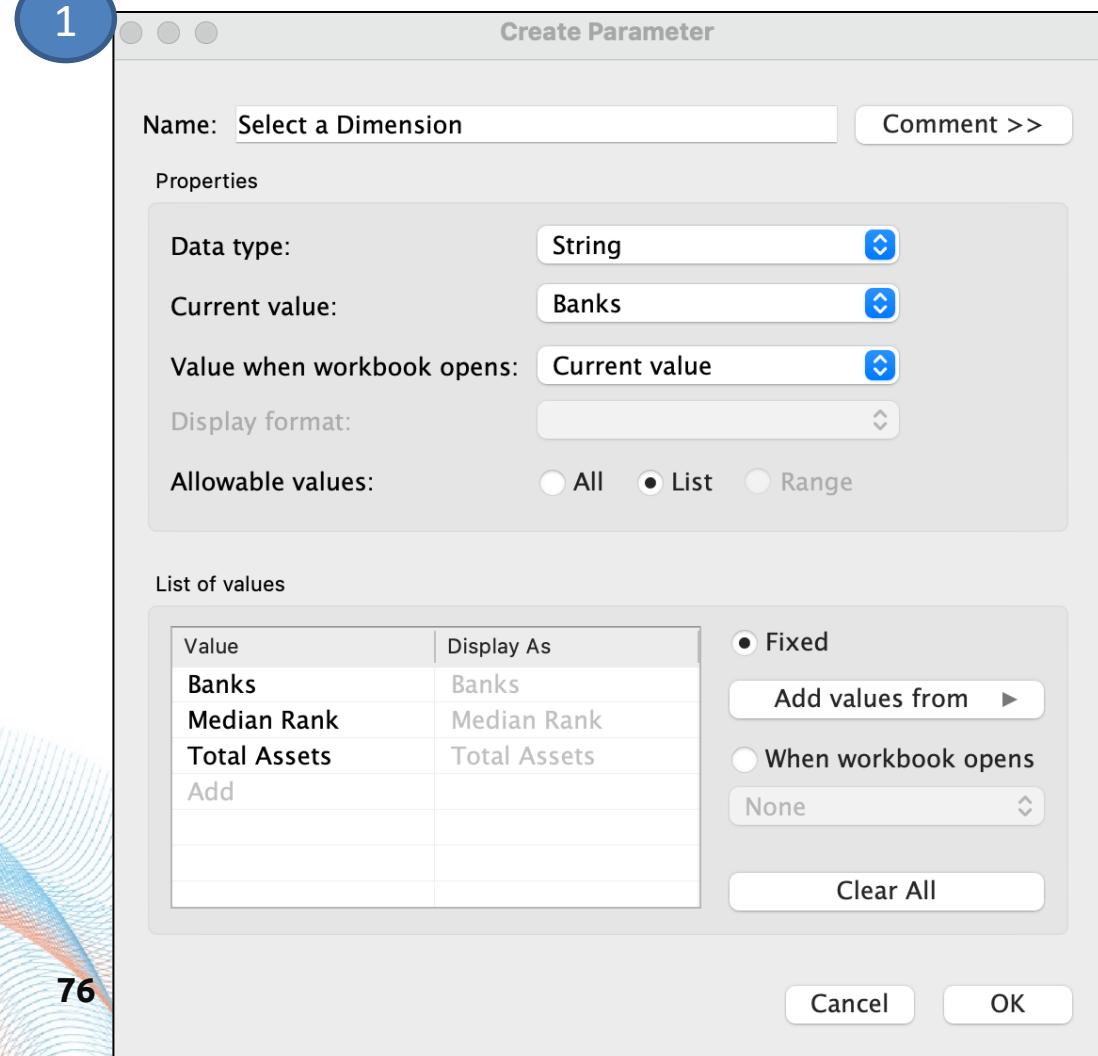
By country

- Count for all banks
- Median rank
- Sum total assets



Select a Dimension

1



2

Dimension Selected

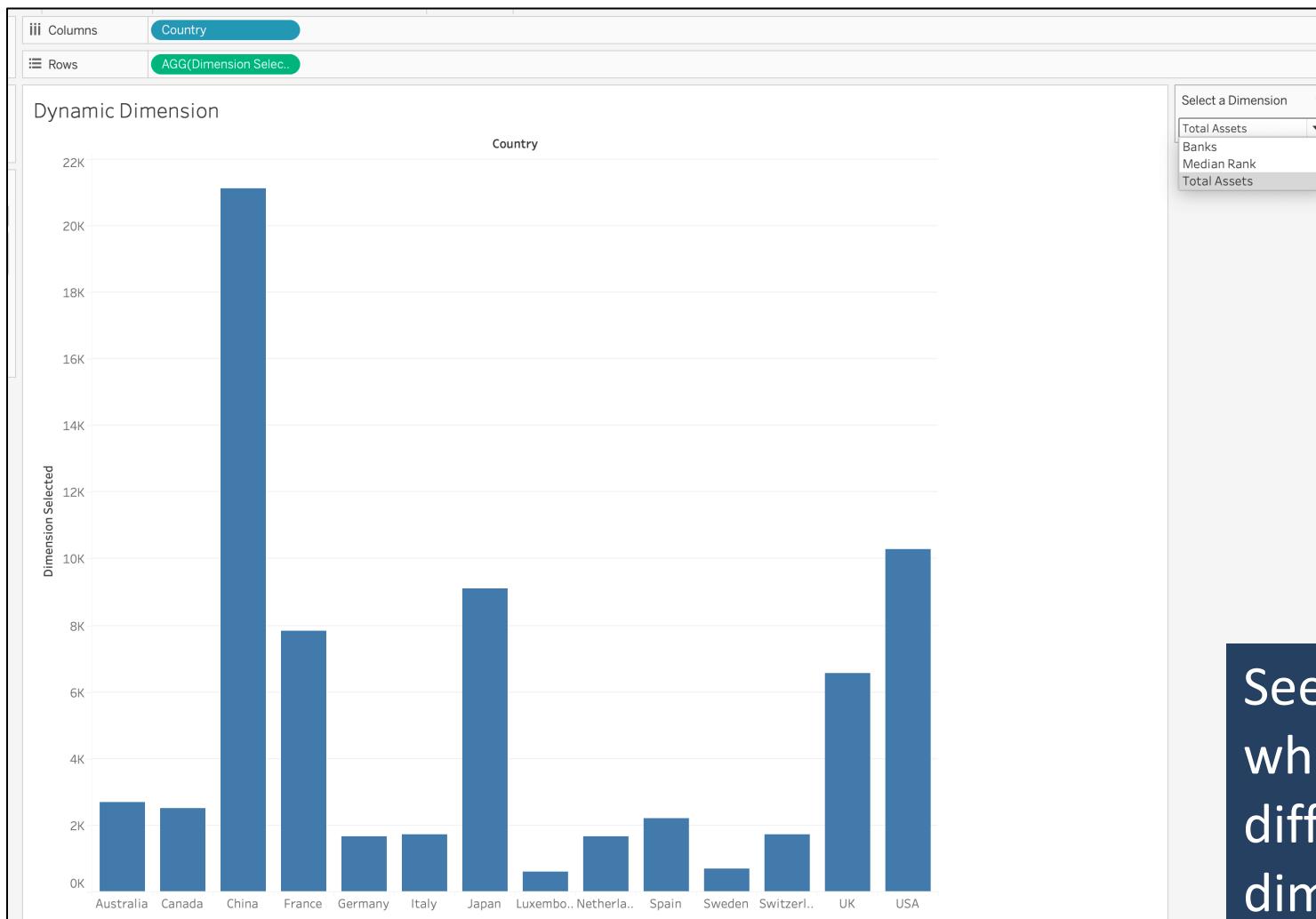
```
CASE [Select a Dimension]
WHEN "Banks" THEN COUNT([Bank])
WHEN "Median Rank" THEN MEDIAN([Rank])
ELSE SUM([Total Assets Us B])
END
```

The calculation is valid.

3

Drag and drop the Calculation to the rows

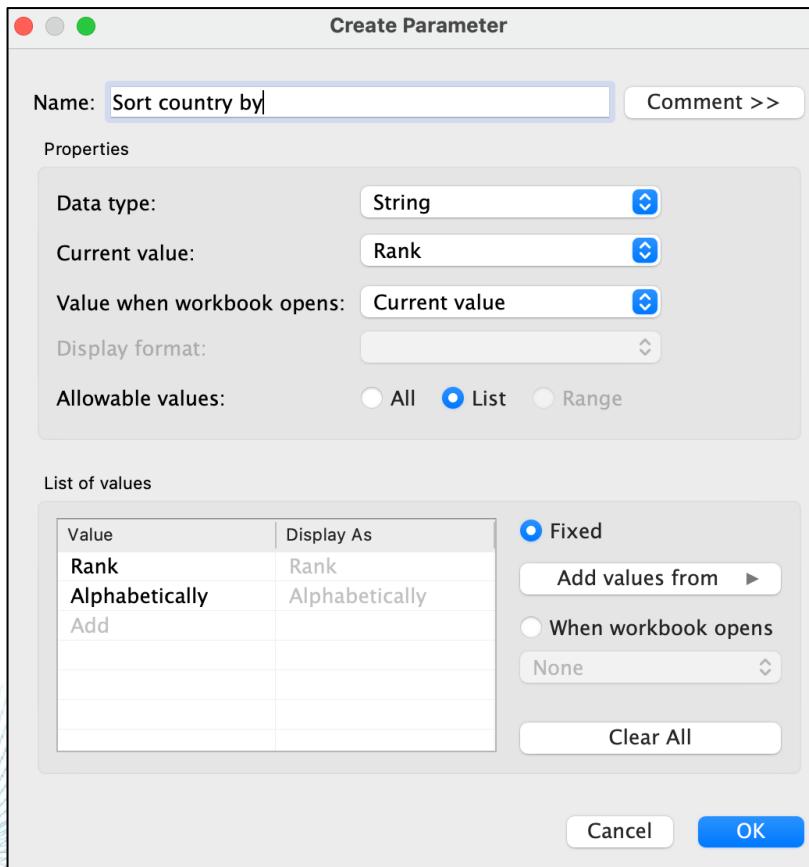
Now you can select dynamically what to plot



See what happens
when you select
different
dimensions

Dynamic Sorting + Sort by

Duplicate previous sheet



Sort country by Sheet1 (top50ban)

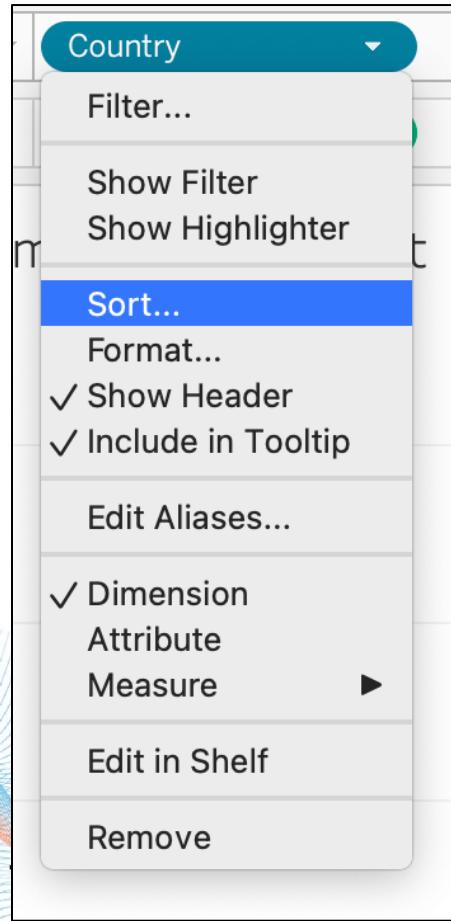
```
CASE [Parameters].[Sort country by]
WHEN "Rank" THEN [Rank]
END
```

The calculation is valid.

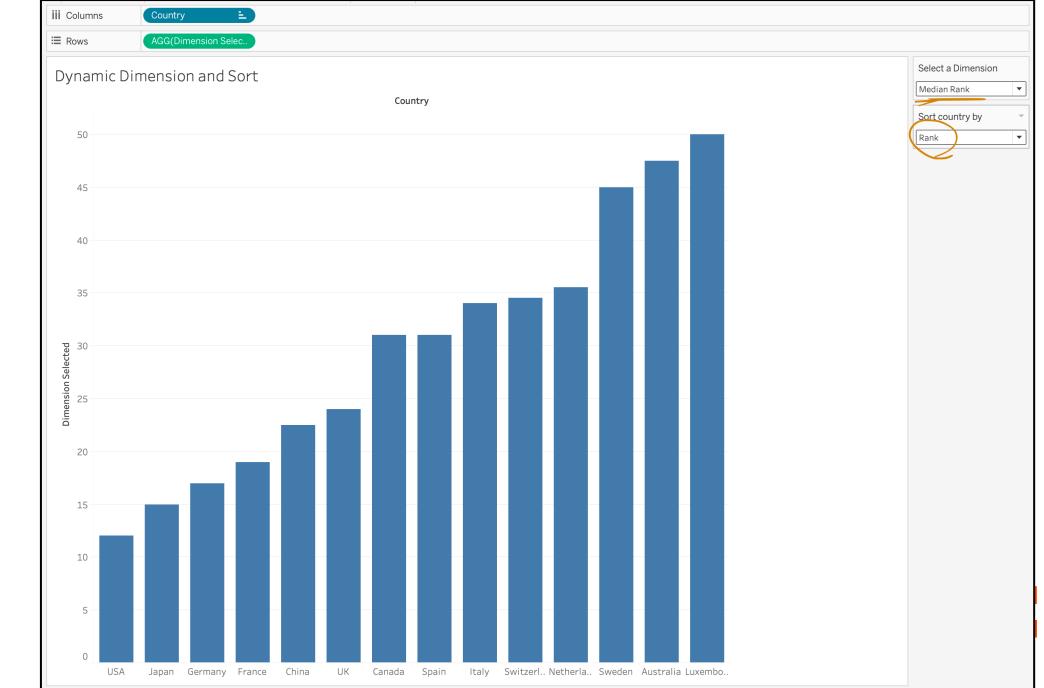
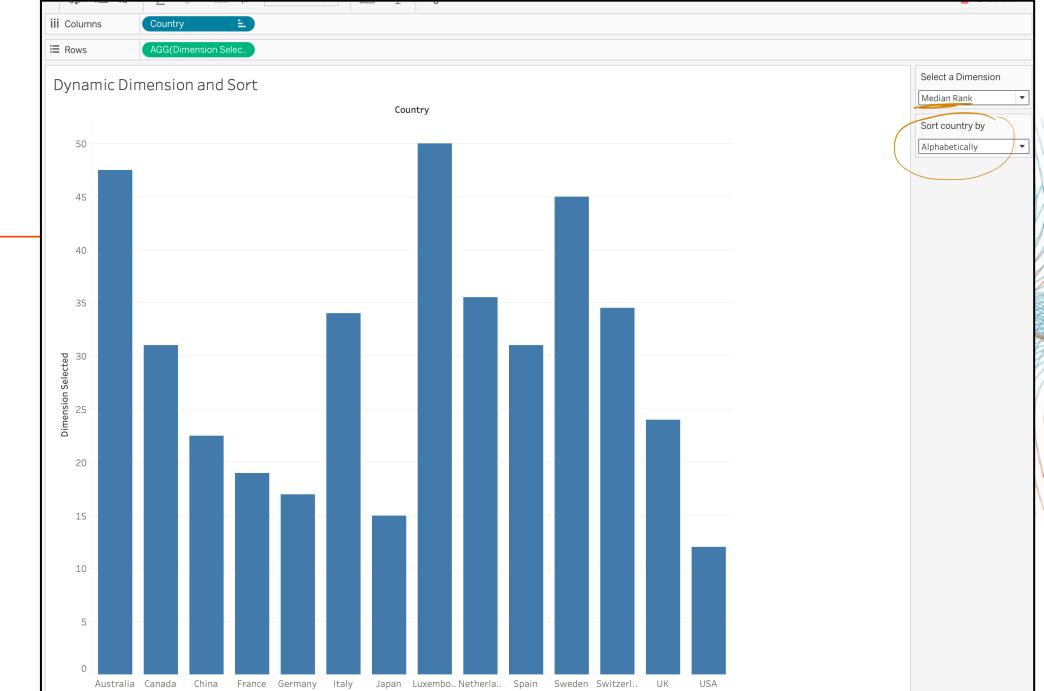
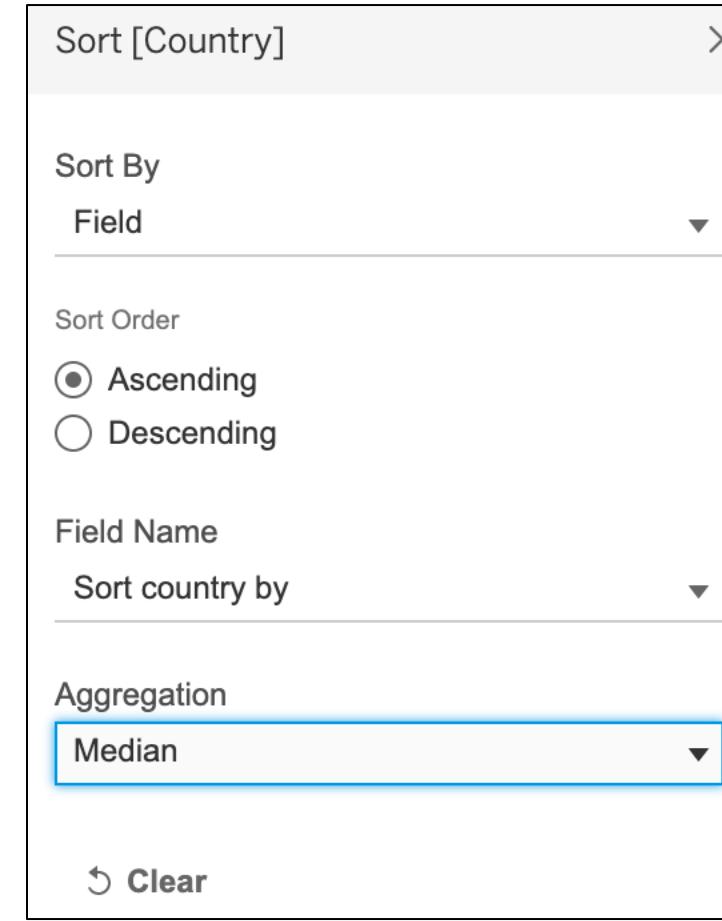
Notice we do not need to add
Alphabetically because that's
Tableau default behaviour

Dynamic Sorting + Sort by

1

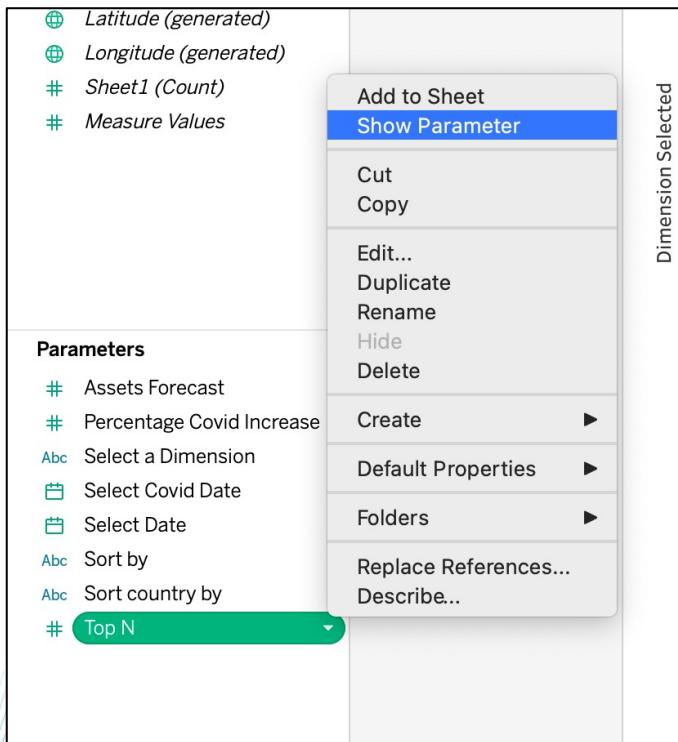


2

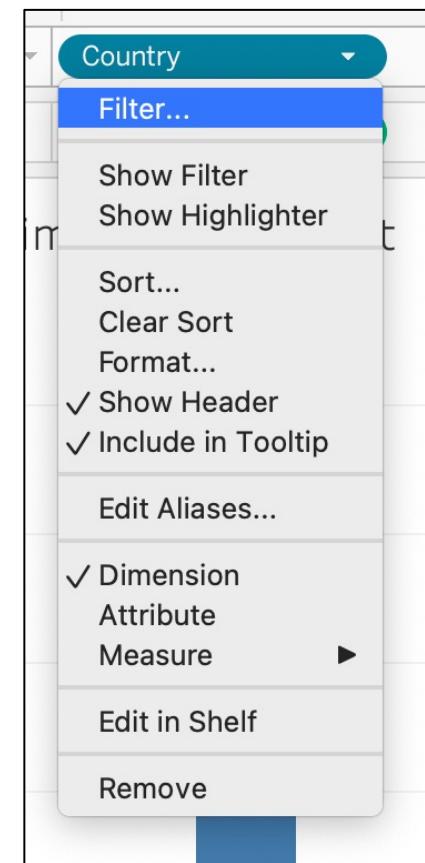


Dynamic Sorting + Sort by + Top N

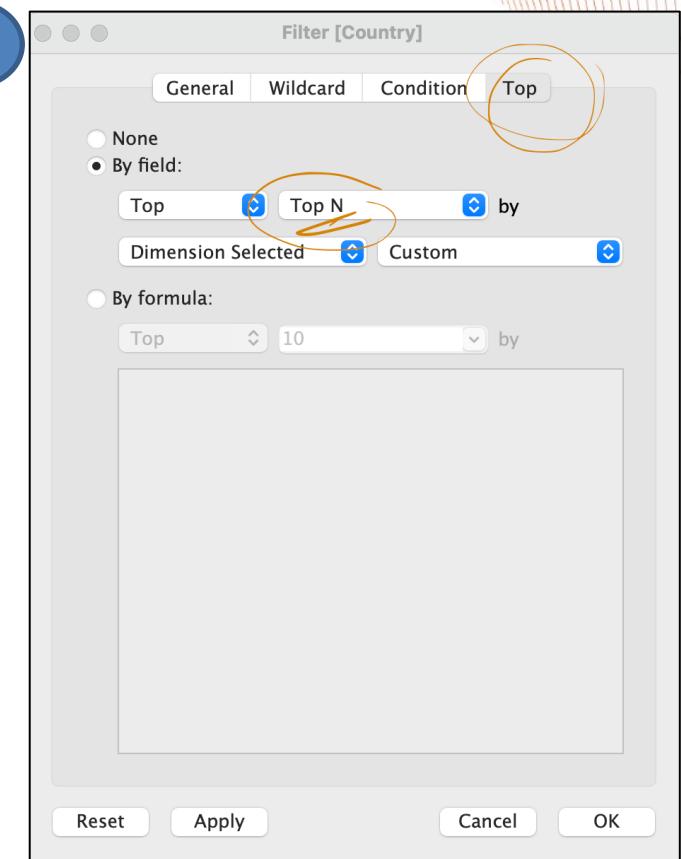
1



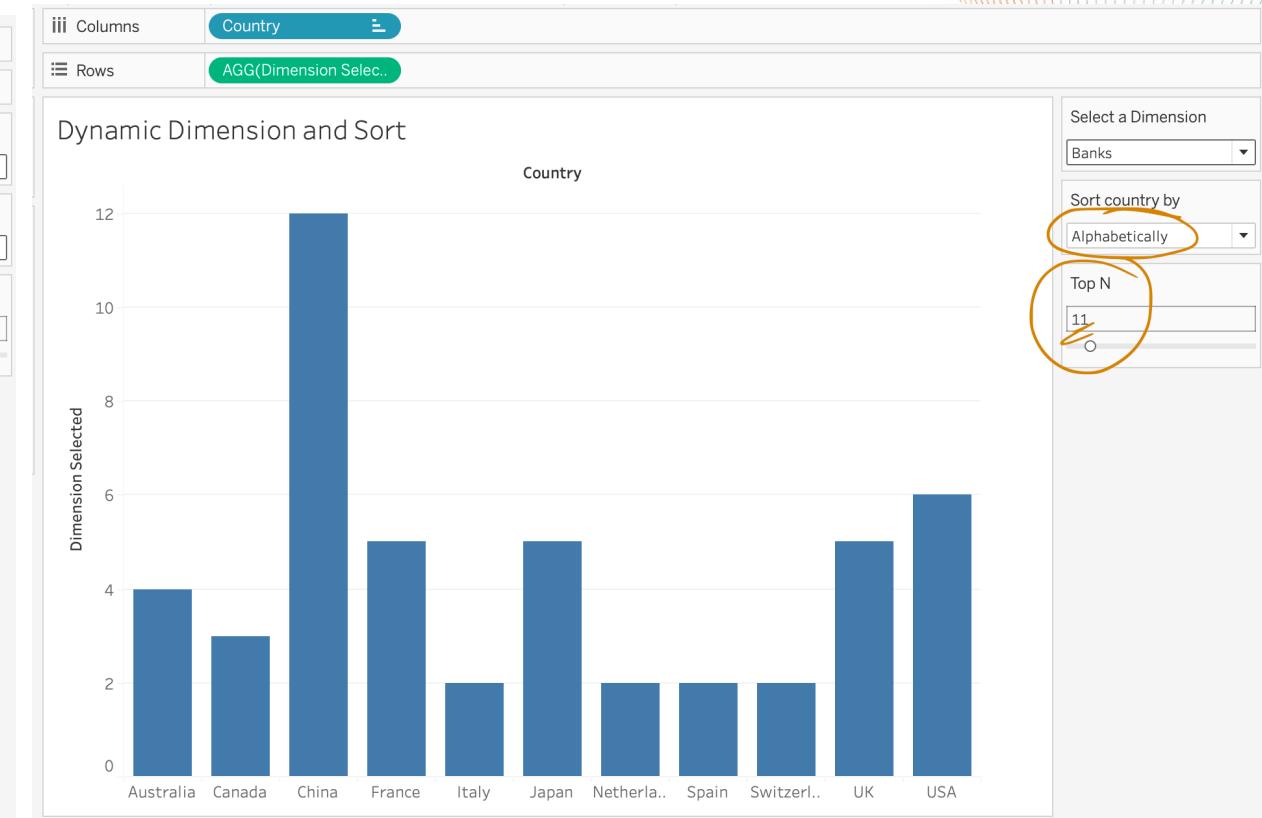
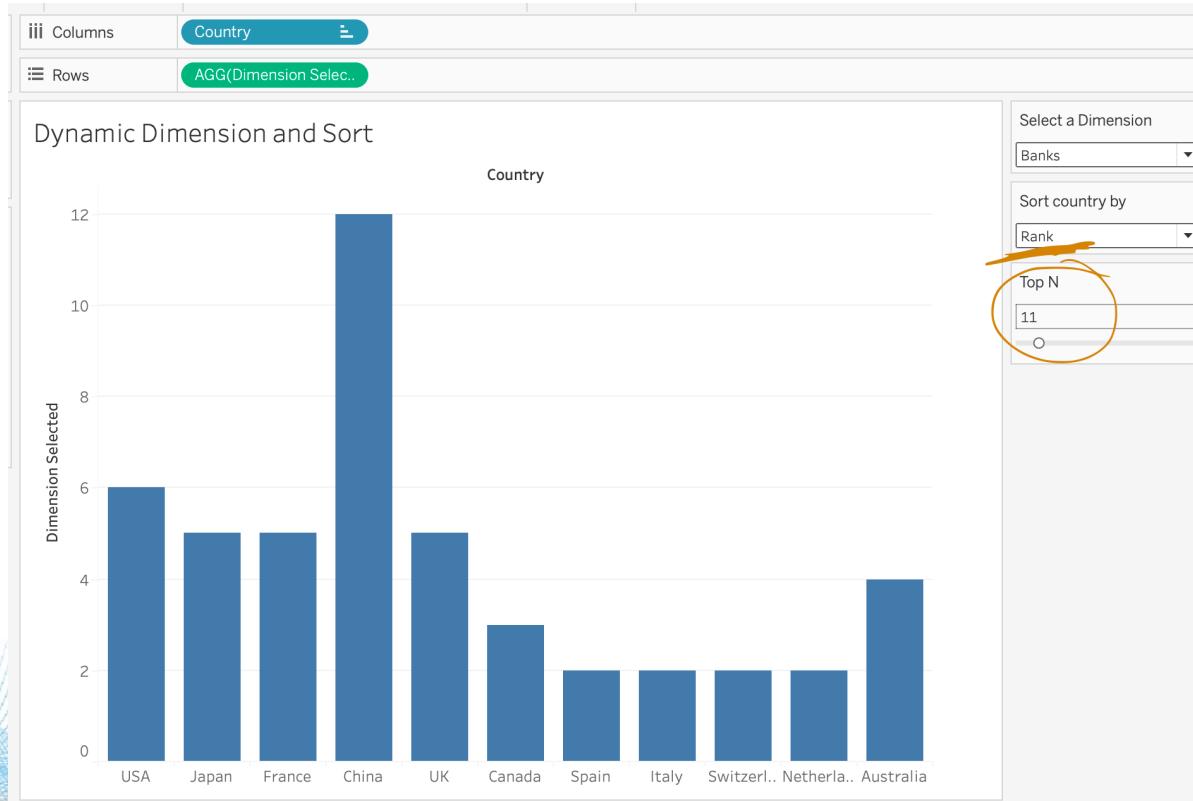
2



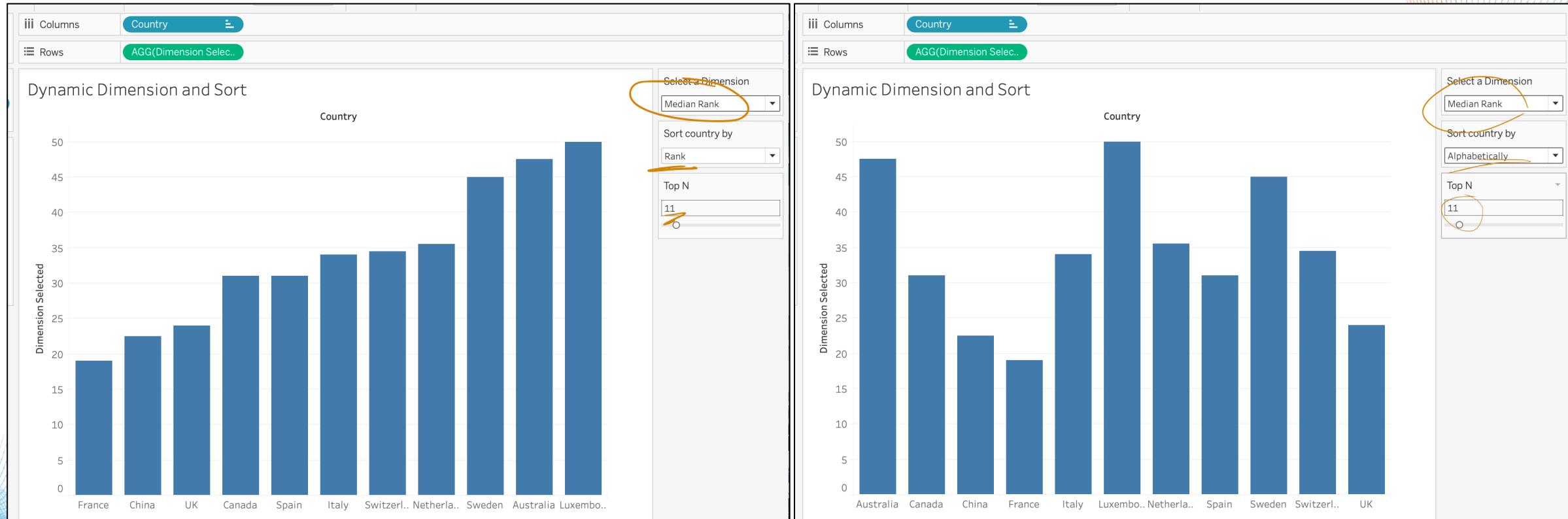
3



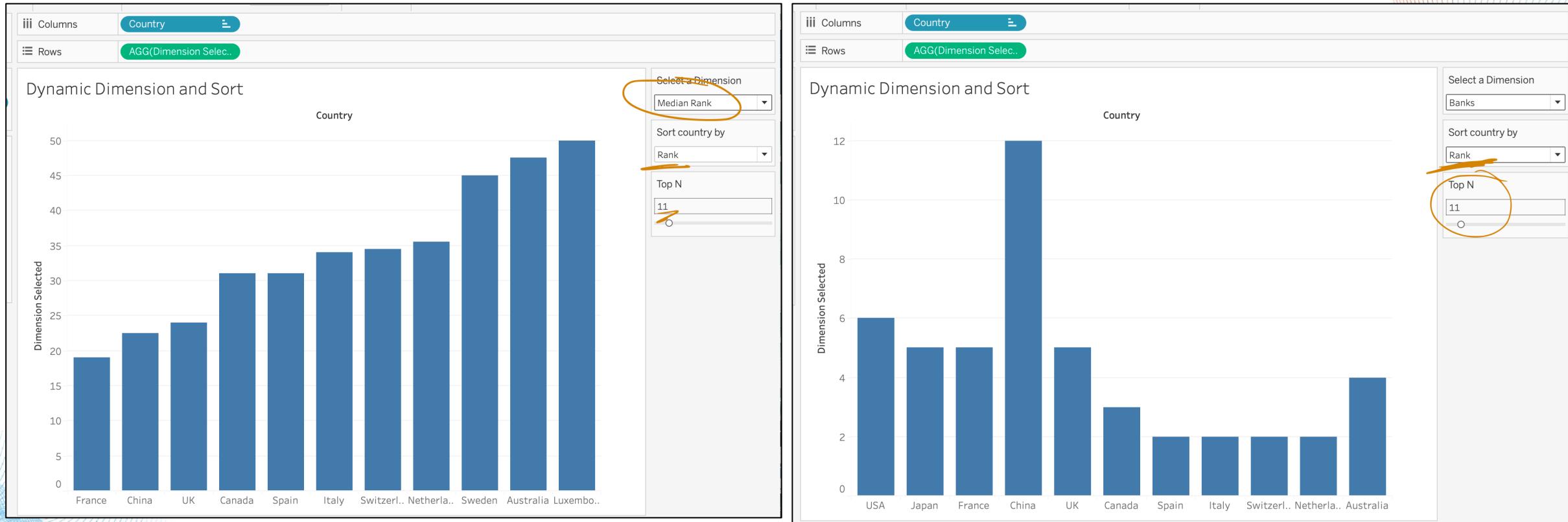
Dynamic Sorting + Sort by + Top N



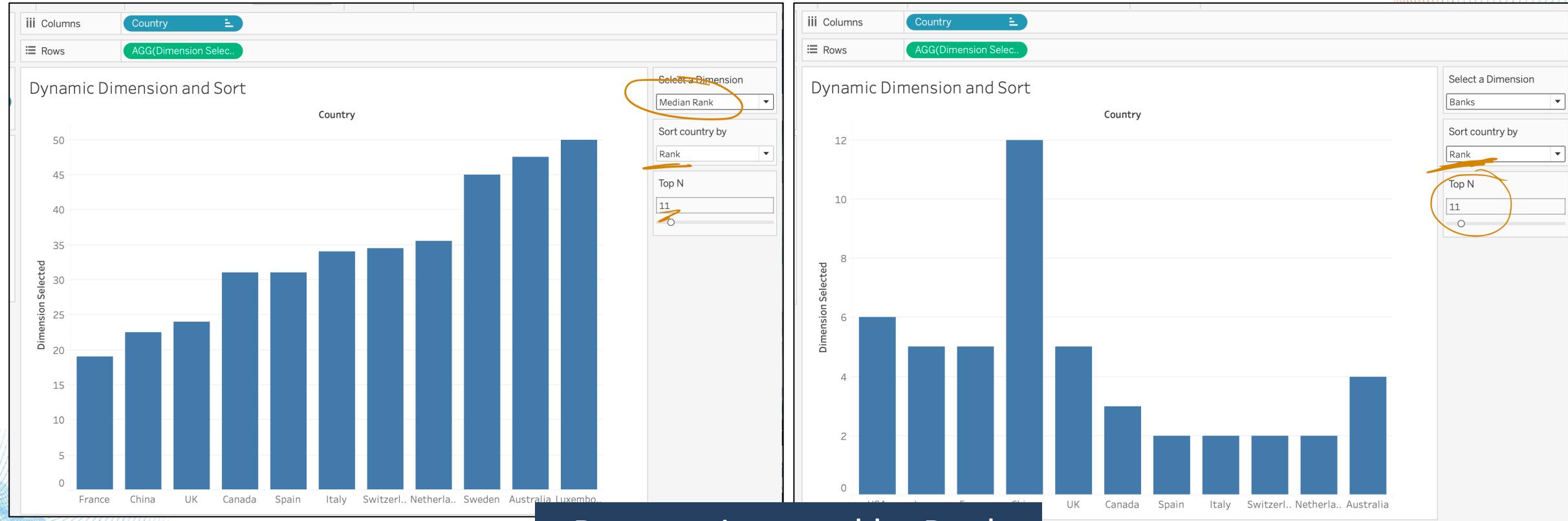
Dynamic Sorting + Sort by + Top N



But? If we select "Sort by Rank" the countries are not the same??

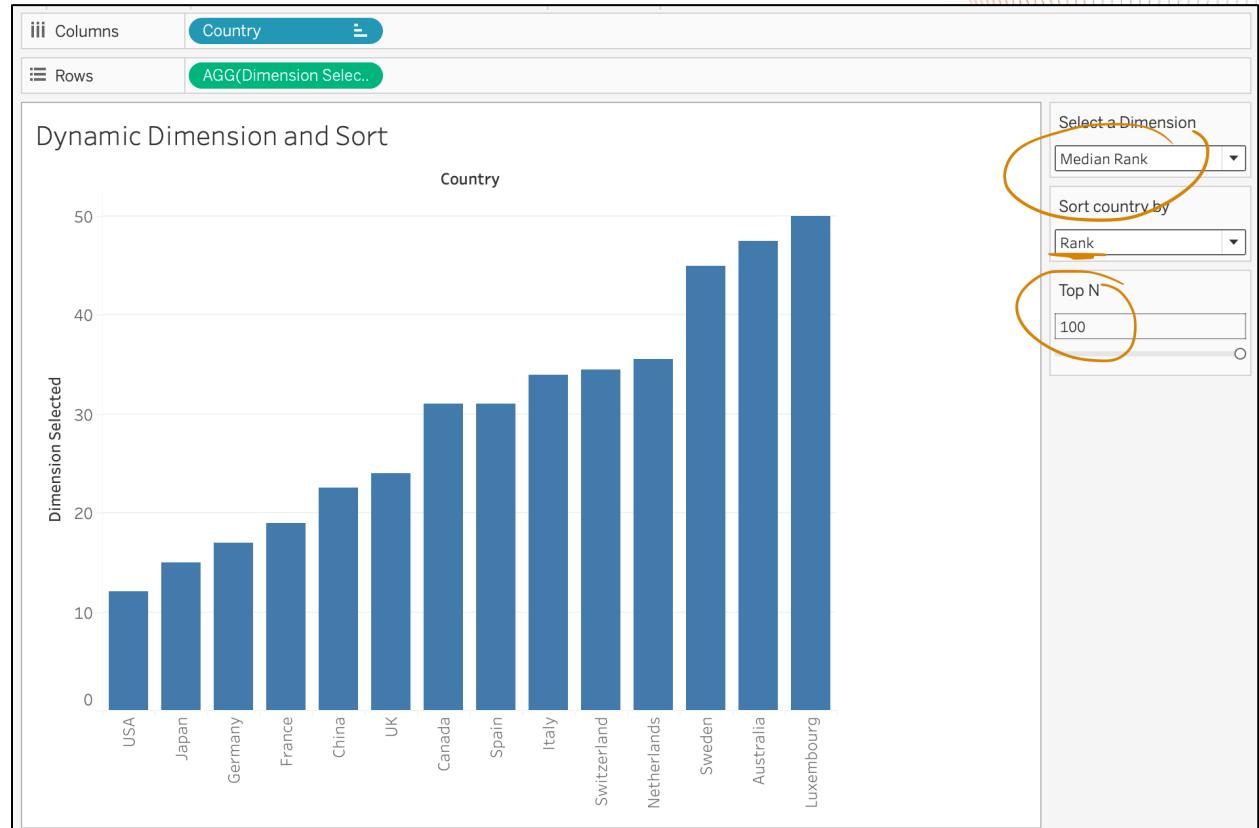
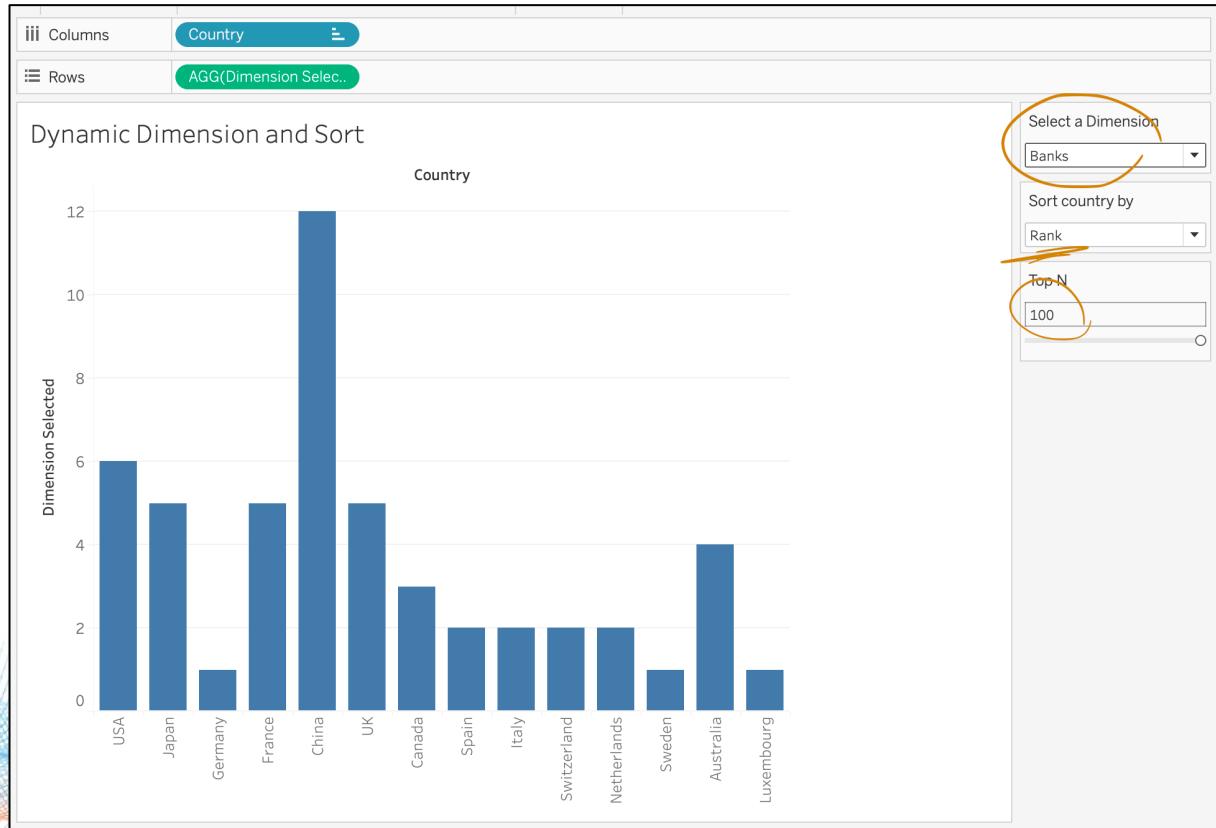


But? If we select "Sort by Rank" the countries are not the same??



Because is sorted by Rank
but for the
Top N = 11 countries

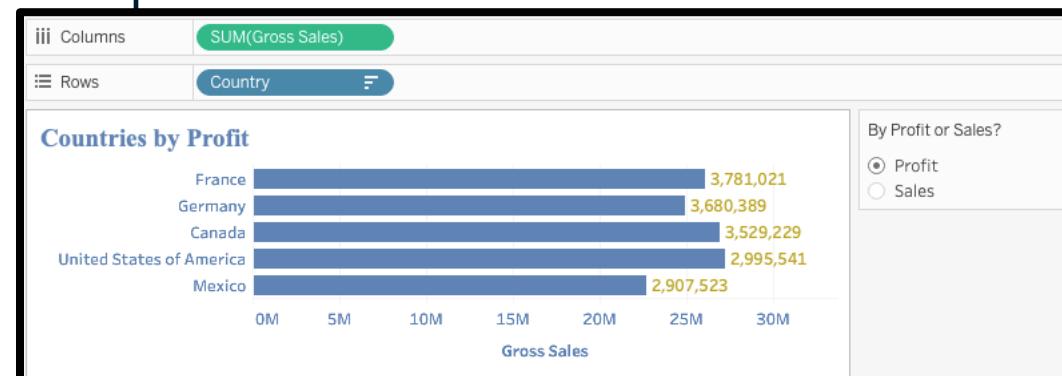
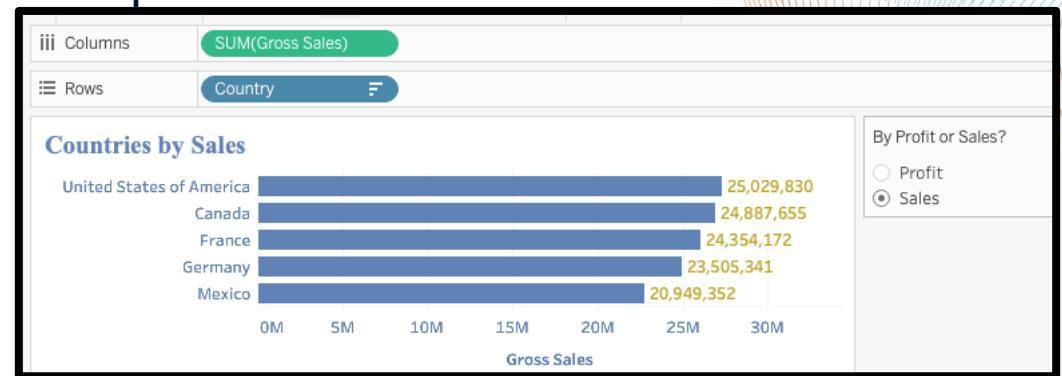
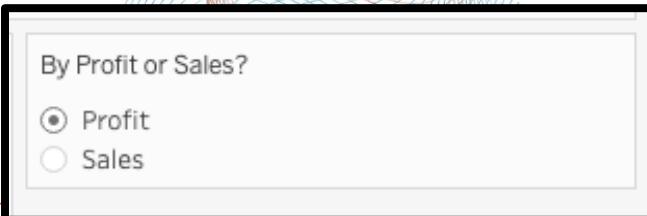
If Top N = max(Countries) then is the same



Exercise: Dynamic Dimension

15min

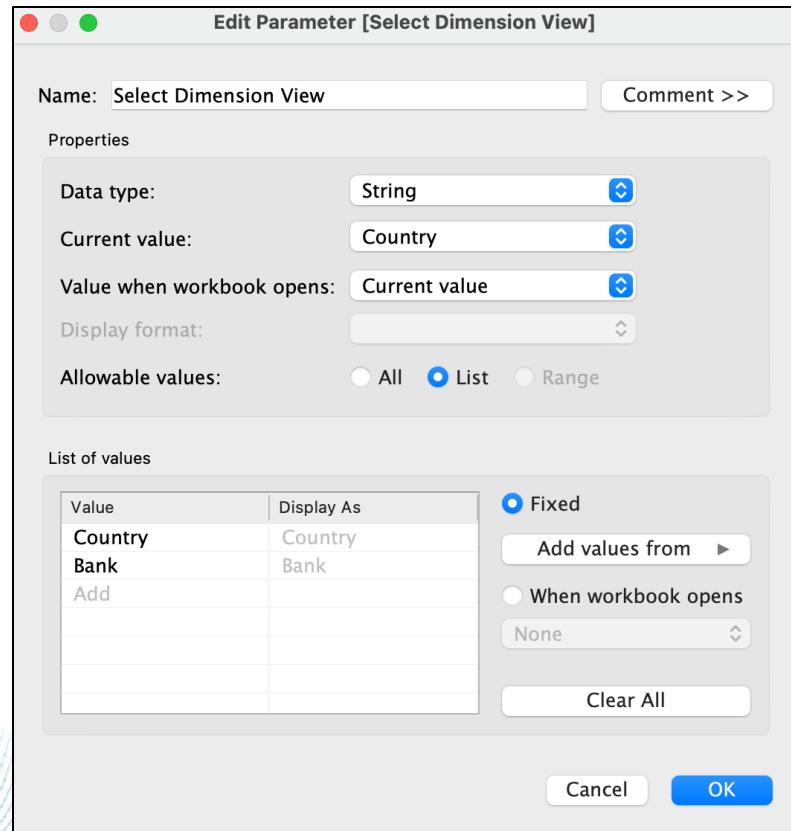
- 1 Create a new Worksheet – Right click in one of the sheet names and select "New Worksheet"
- 2 Load data from excel document "Financial Sample"
- 3 Build a visual that has a bar chart with Countries and Gross Sales (SUM)
- 4 Create a Parameter to select "Profit" or "Sales"
- 5 Change the title of your visual to "Countries Sorted by <Your Parameter>"
- 6 Configure dynamic Sorting by Ordering Country Name based on highest sum of total "Profit" or "Sales" (from highest to lowest)
- 7 Add to Label the value of the selected metric to order your visual
- 8 Format your visual to look better



DASHBOARD & DYNAMIC VIEW



Add a Parameter and a Calculation



Dimension View Selected Sheet1 (top50ban)

```
CASE [Select Dimension View]
WHEN "Bank" THEN [Bank]
WHEN "Country" THEN [Country]
END
```

The calculation is valid.

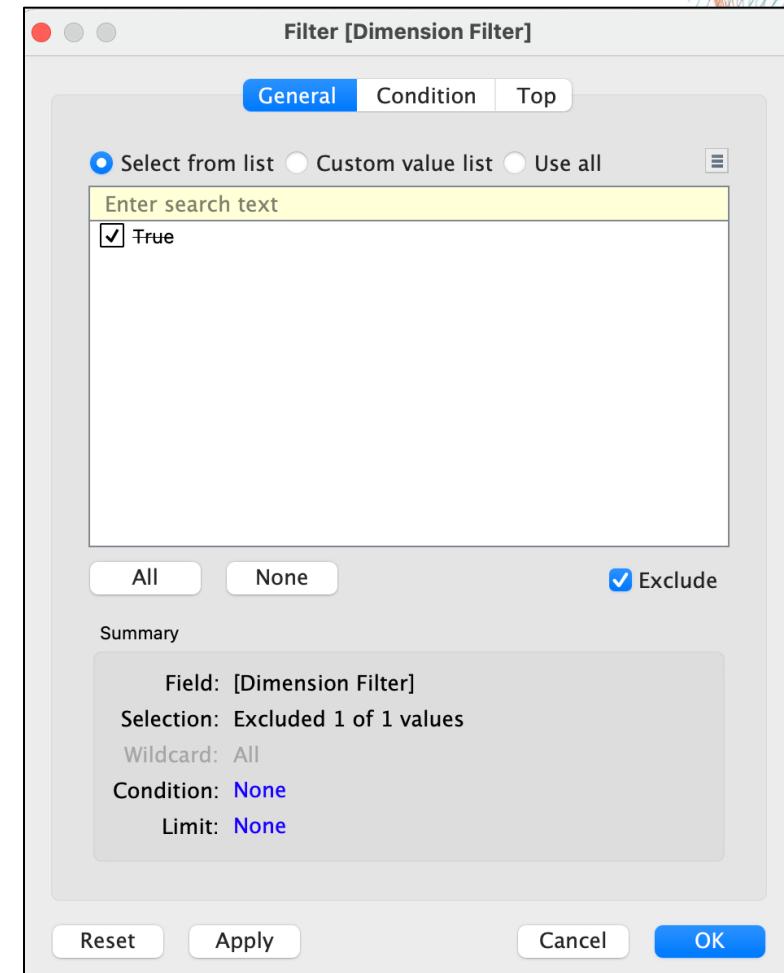
Create a filter

- Now we want to show a horizontal bar viz for Bank but a map for Country
- So, let's start by creating a filter for Country



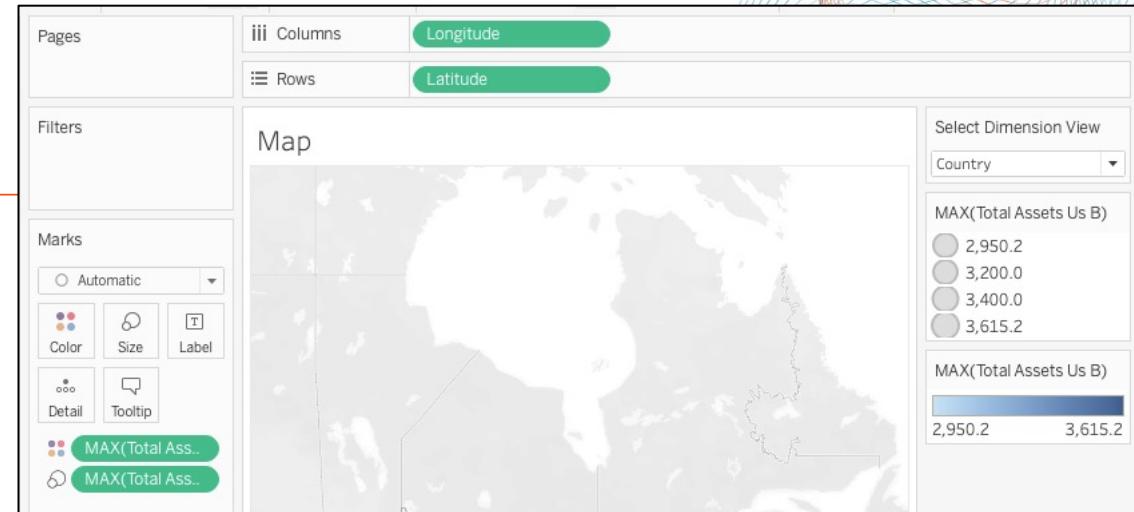
Filters

- Drag it to the Filters
- Exclude the True for the dimension=Country
- Now, the plot should be empty when the Select Dimension View is Country
- Save your sheet and name it Bar Chart



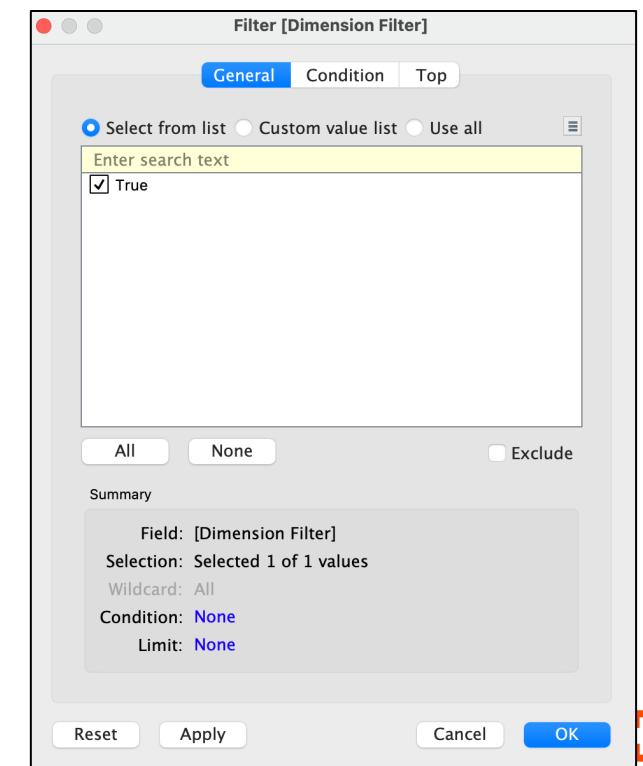
Dynamic View

1. Add Longitude to columns
2. Add Latitude to rows
3. Drag "Total Assets Us B" to the Marks and drop Size
4. Change to metric the MAX
5. Drag "Total Assets Us B" to the Marks and drop Color
6. Change to metric the MAX



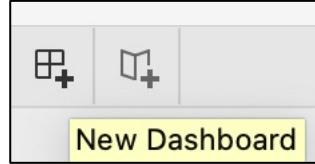
Similar to the previous one,

1. Show the Parameter
2. Show Dimension View
3. Drag the calculated field "notCountry" to Filters
4. But now change it to True
5. Rename your Sheet to Map

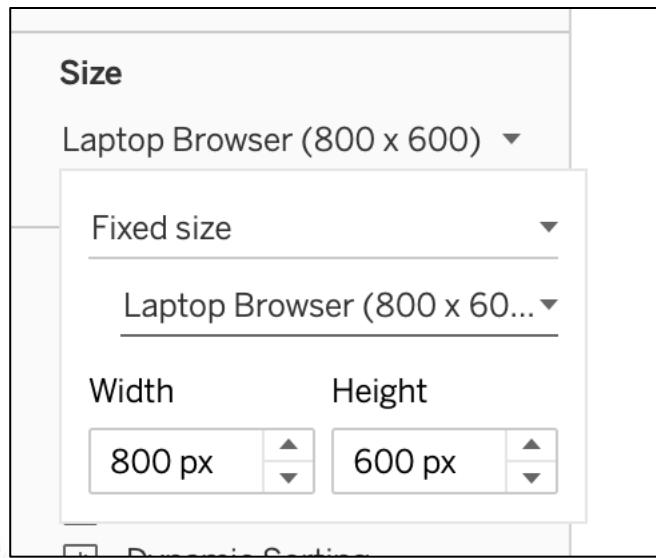


Dashboard and Dynamic View

1

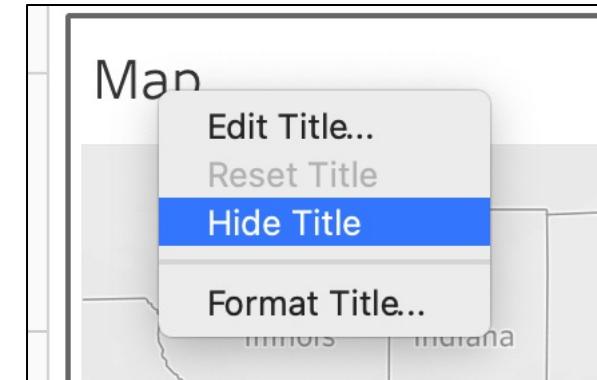


2



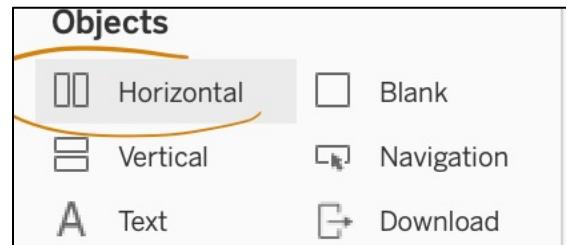
3

1. Drag it and drop the 2 Sheets we just worked on into the Dashboard
 - Bar Chart
 - Map
2. Hide the titles



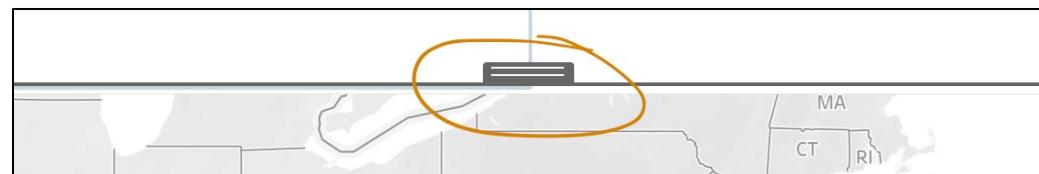
Dashboard and Dynamic View

Drag a container into the dashboard



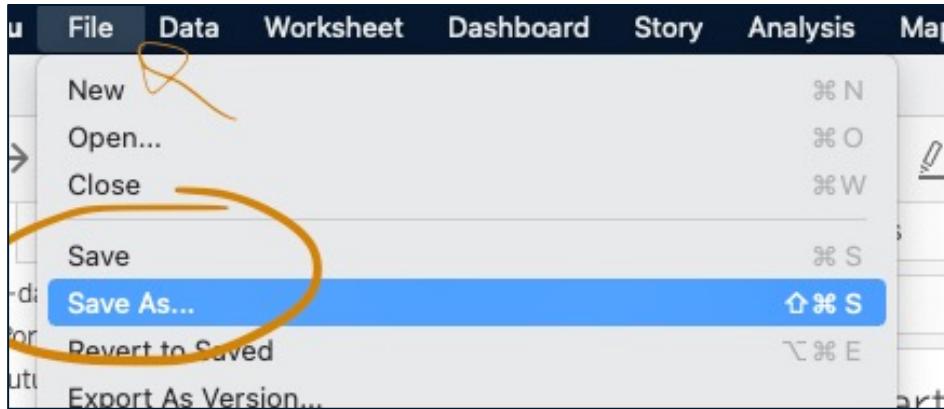
Drag both plots into the container

- grab/move them by the top icon
(see image)

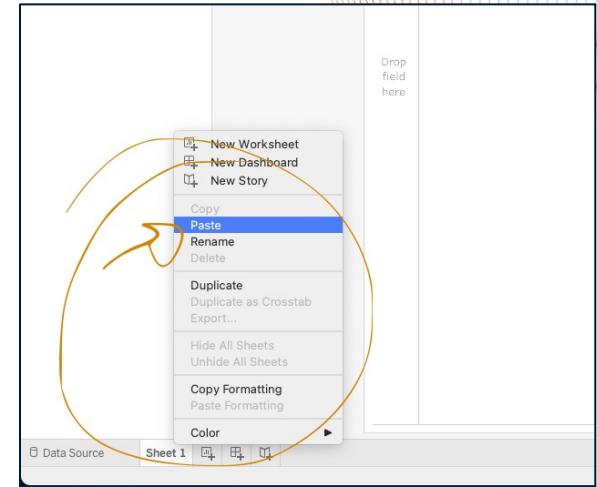
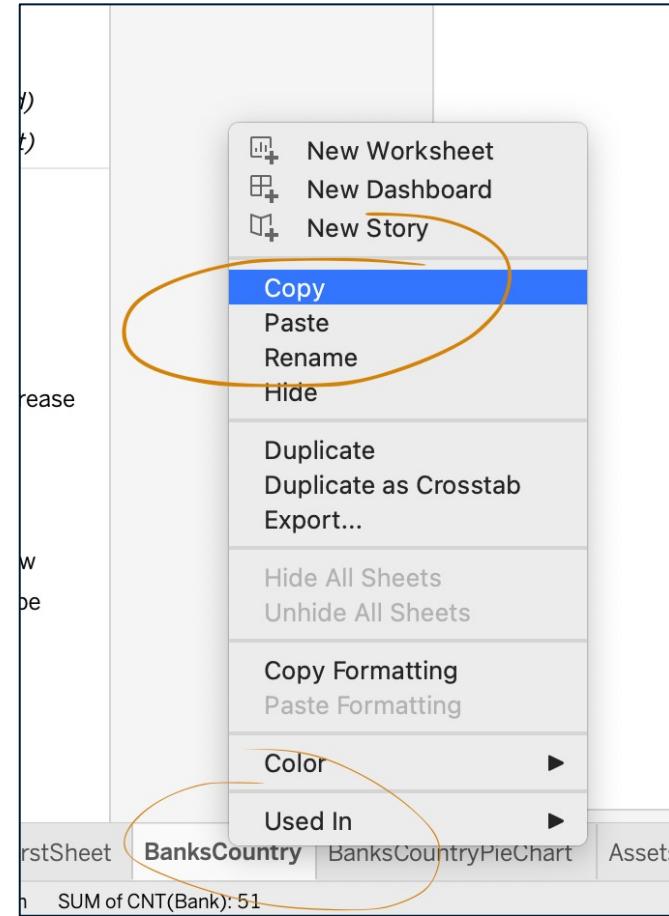


Save & Copy/Paste

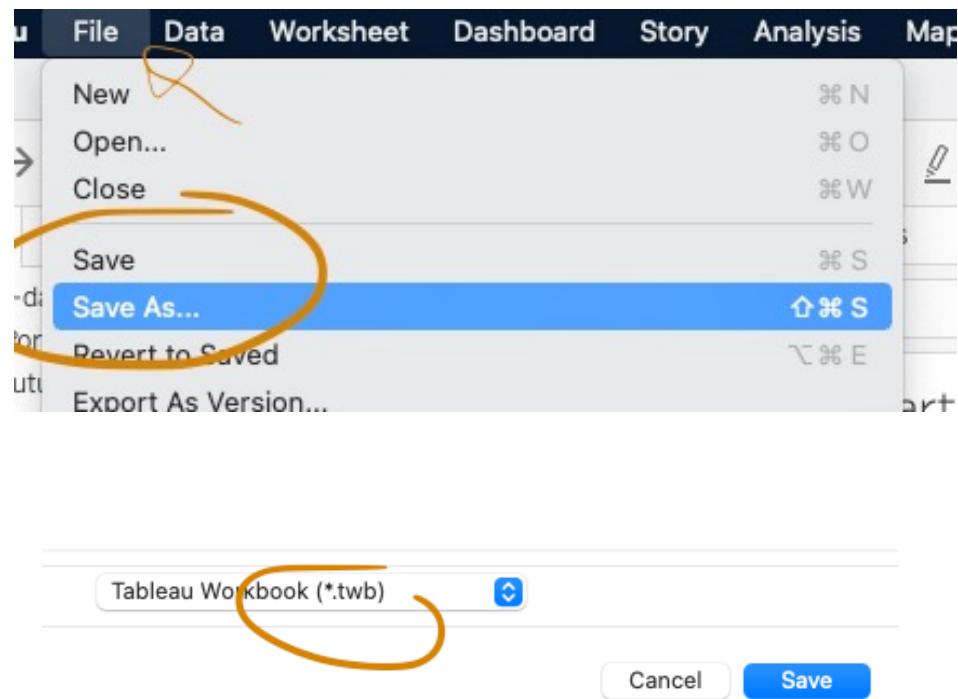
Save



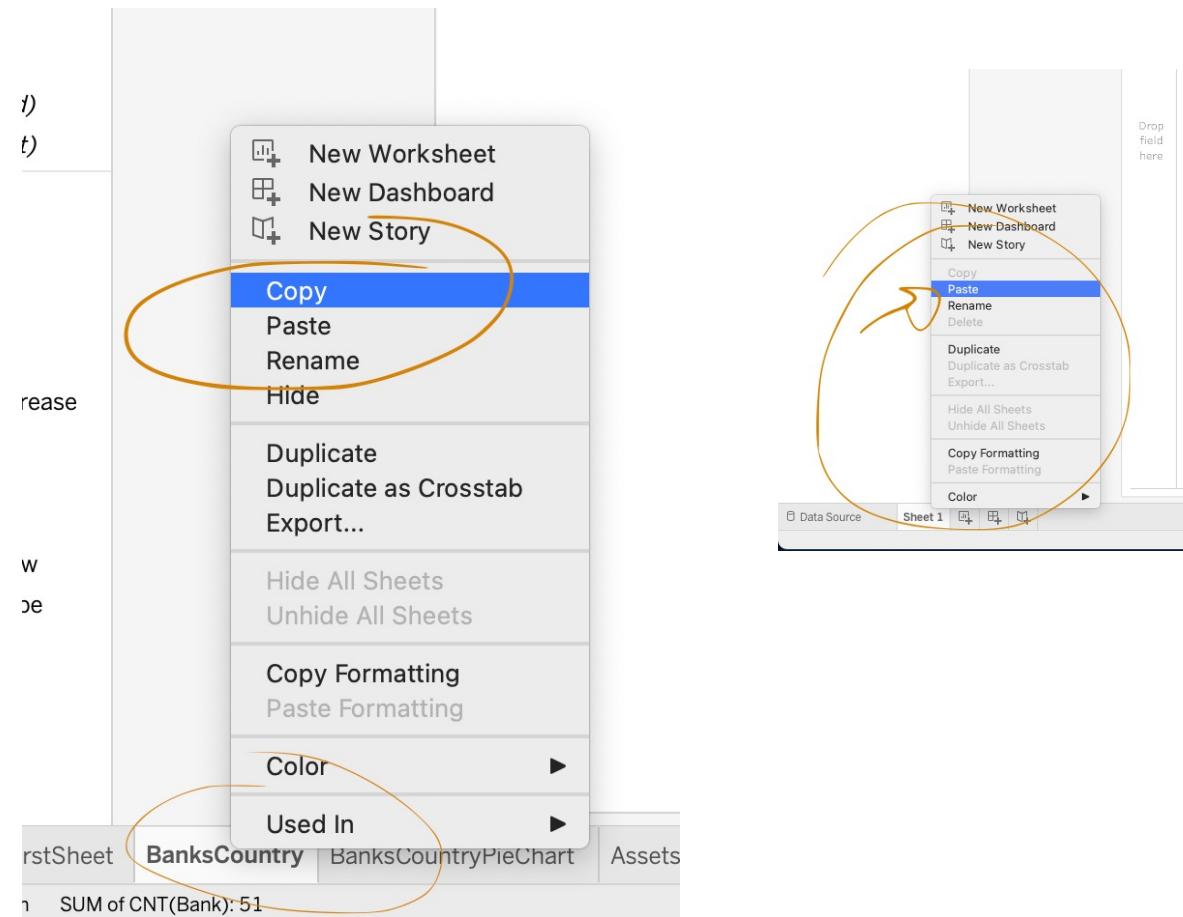
Copy and Paste Sheet or Dashboard



Save



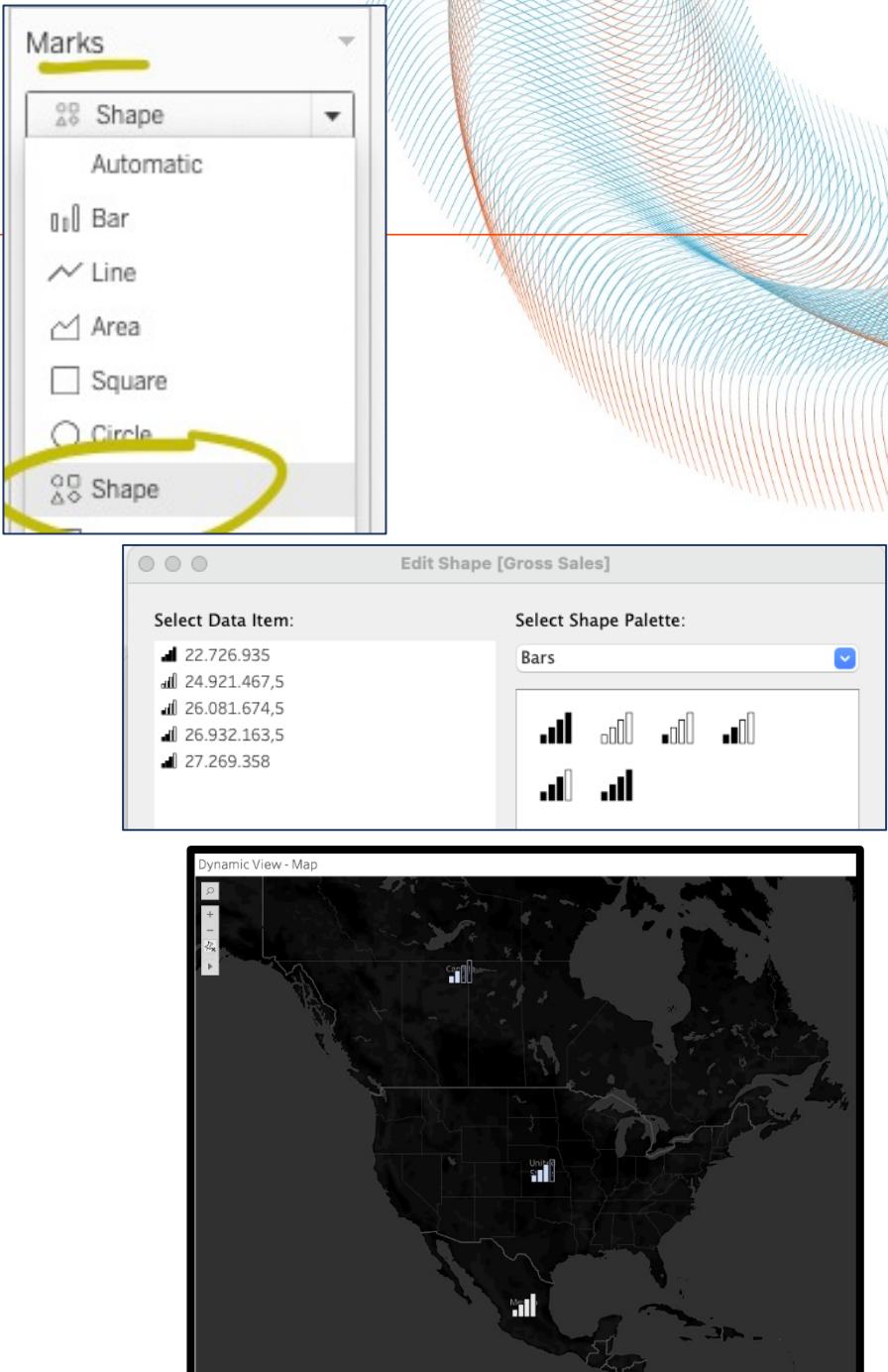
Copy and Paste Sheet or Dashboard



Exercise: Dynamic View

15min

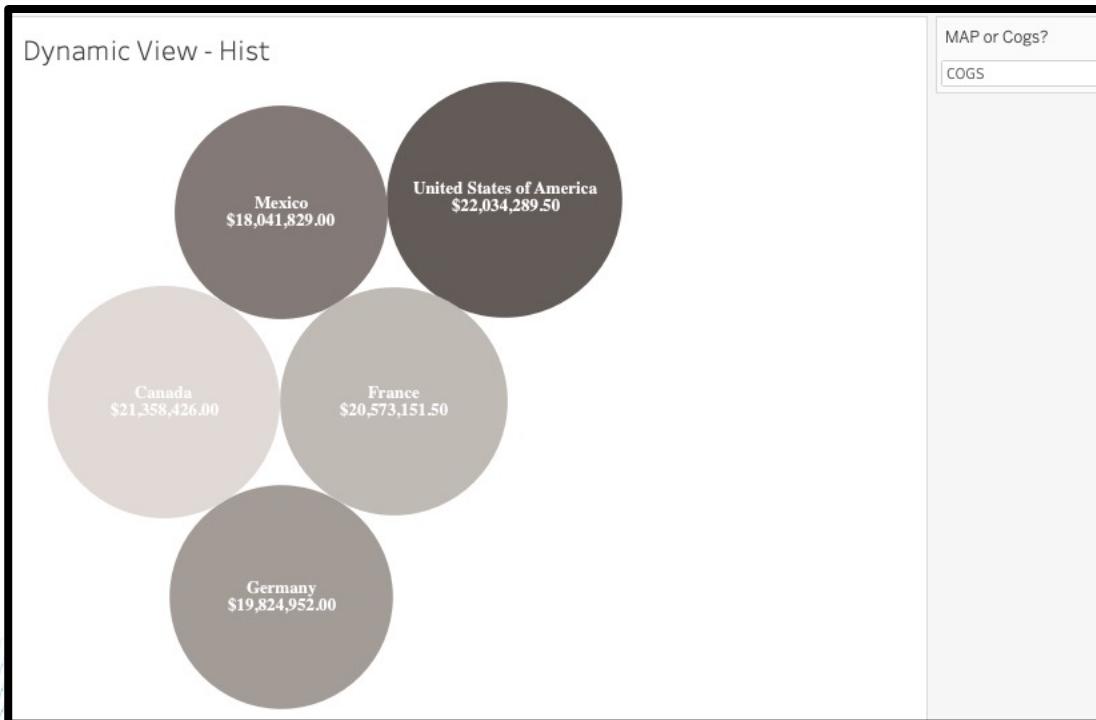
- 1 Create a new Worksheet – *Right click in one of the sheet names and select "New Worksheet"*
- 2 Name your worksheet "Dynamic View – Map"
- 3 Create a Map for Country and customise it
 - 1 Add Sum(Gross Sales) as a marker to your map
 - 2 Change the market shape to Bars
 - 3 Adjust size of your marker
- 4 Make a filter to only **show the visualisation only when MAP is selected from options**
 - 1 MAP or COGs
- 5 Customise your visual



Exercise: Dynamic View

15min

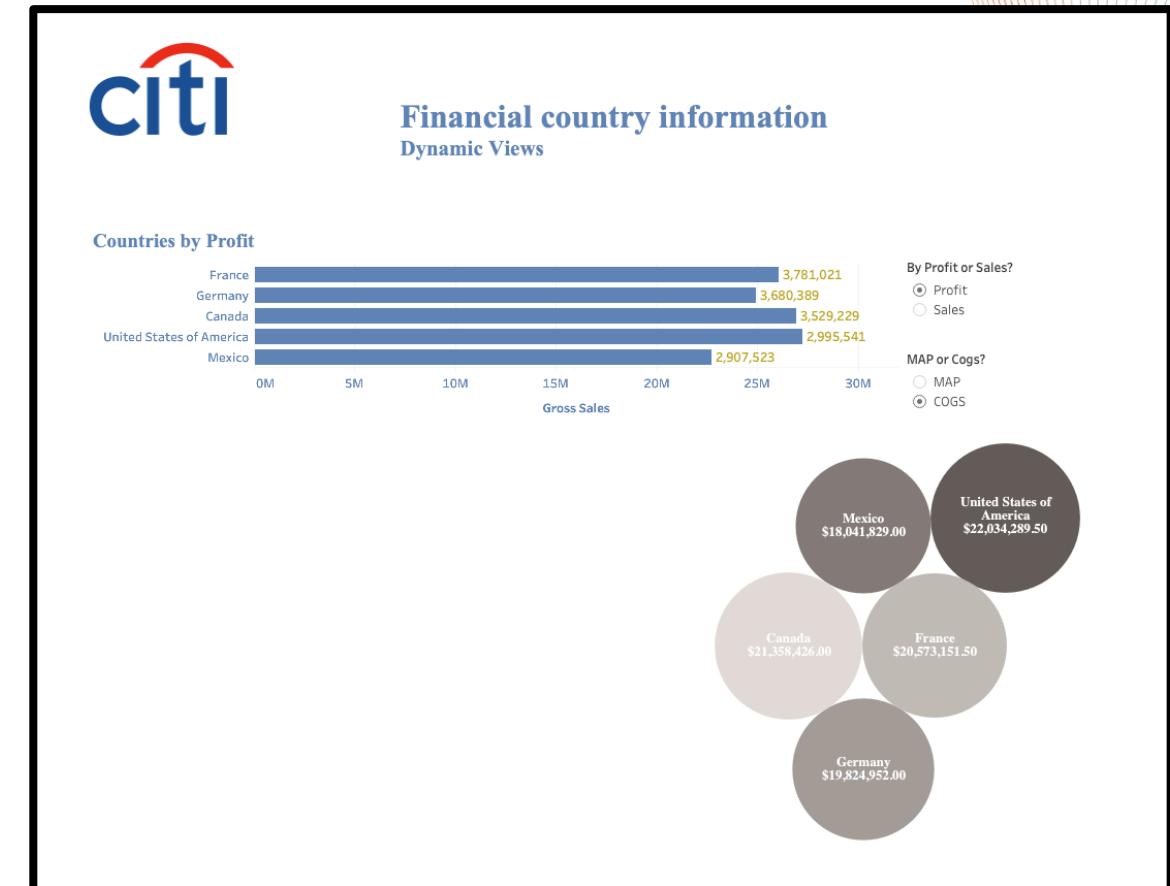
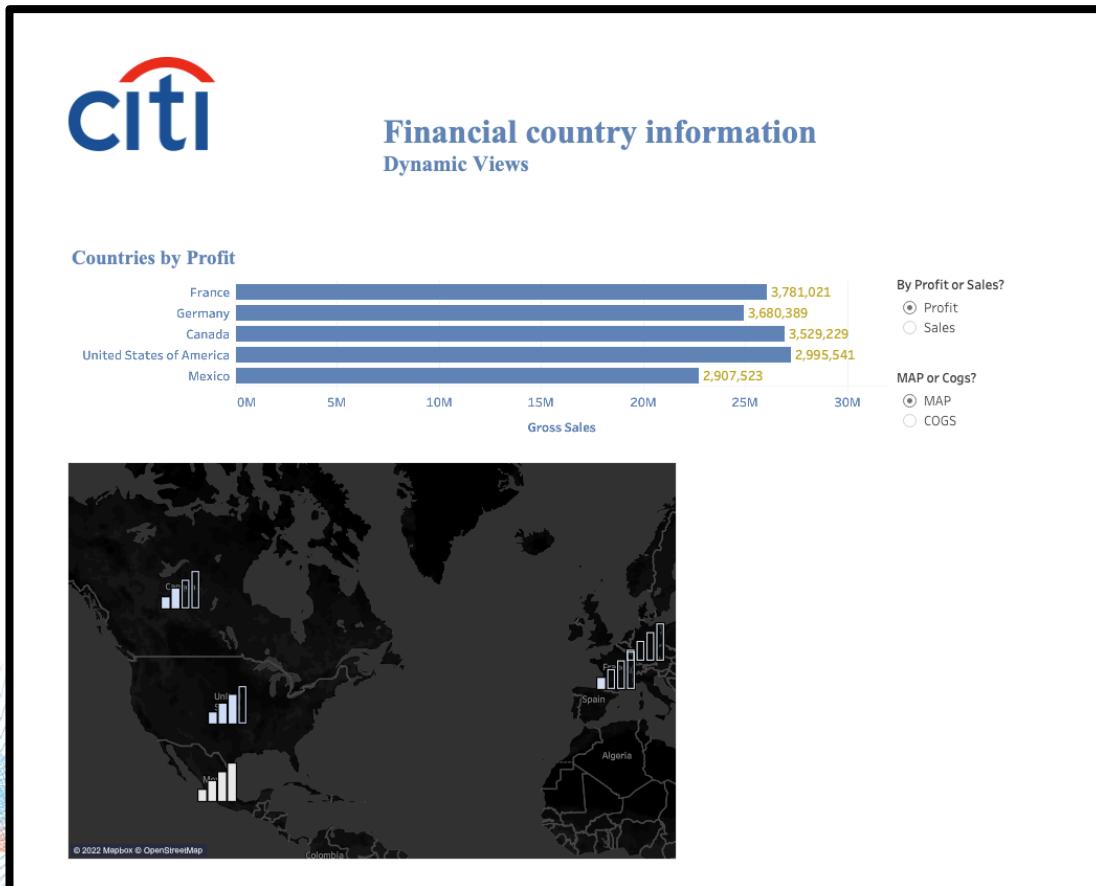
- 1 Same as the MAP but now to build the bubble viz below
- 2 Make sure to only **show the visualisation when COGS** is selected

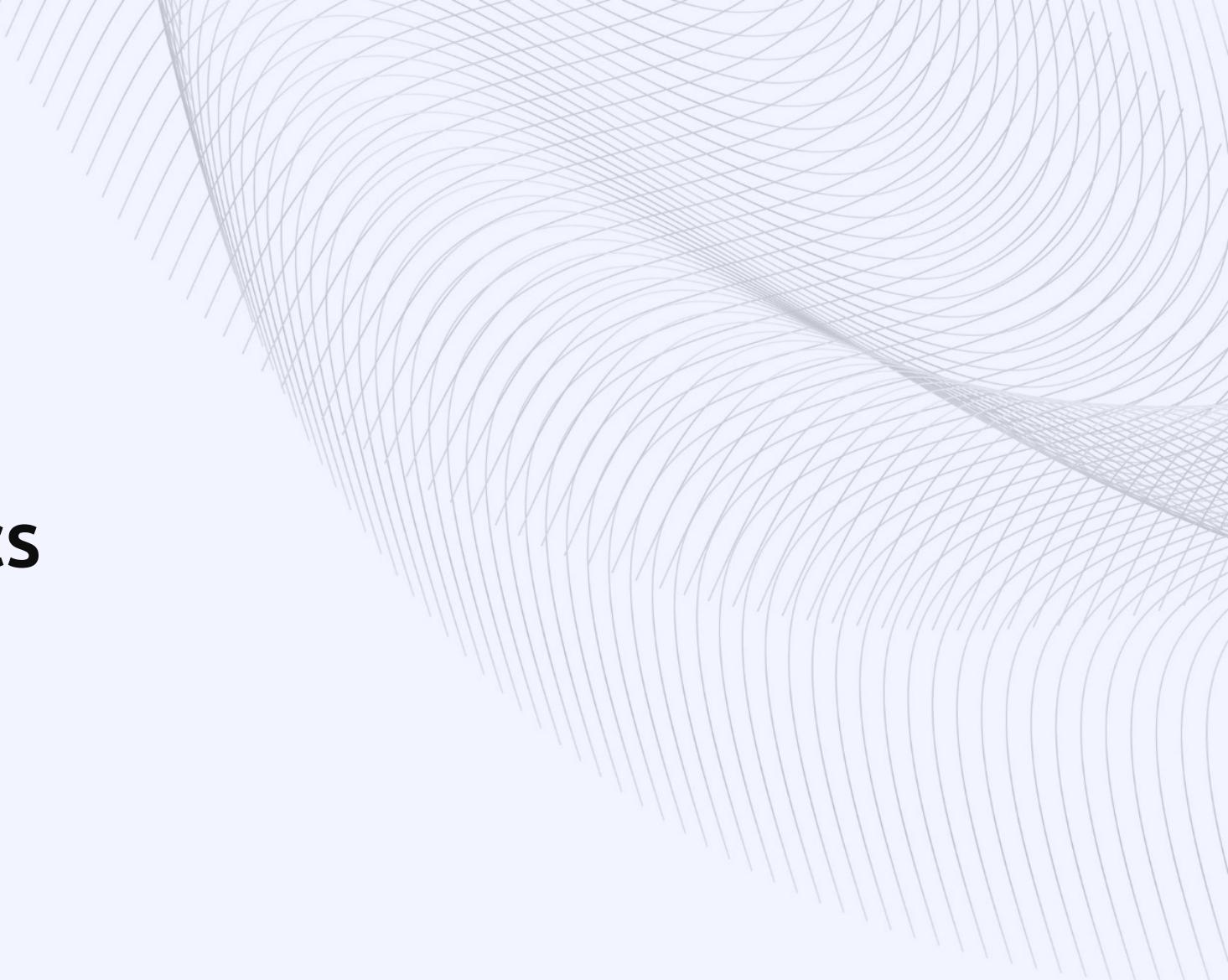


Exercise: Dashboard with Dynamic Dimension and Dynamic View

10min

I Build the Dashboard and Story according to the images below

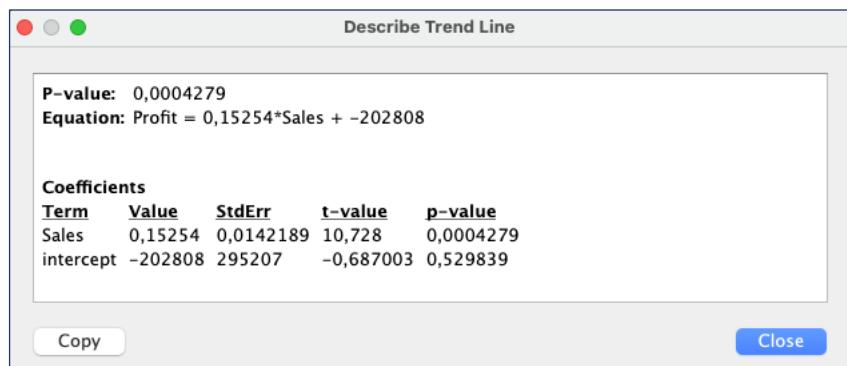
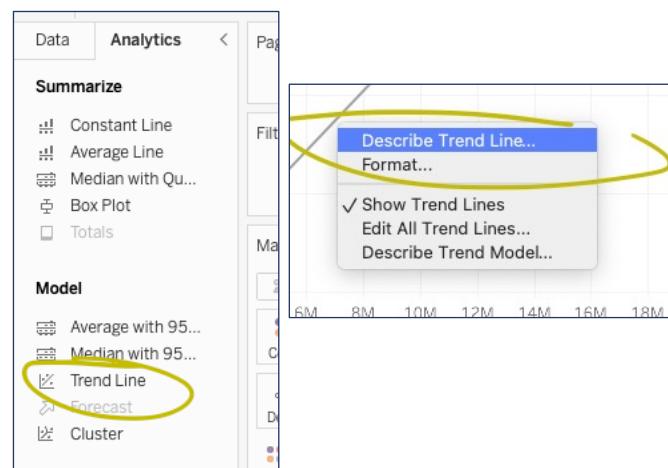
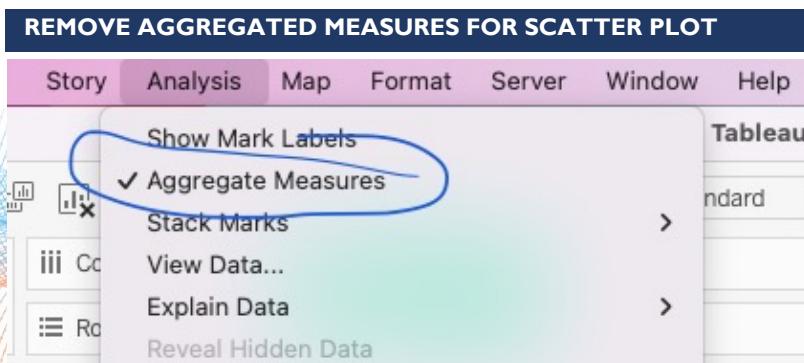
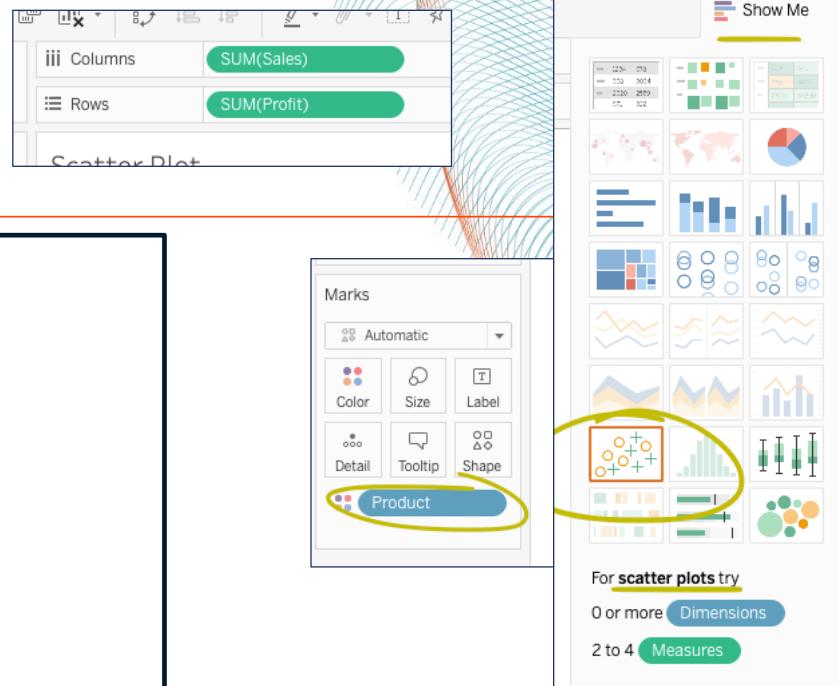




SCATTER PLOT + ANALYTICS TREND

Exercise: Scatter Plot + Analytics/Trend

- 1 Create a new Worksheet – Right click in one of the sheet names and select "New Worksheet"
- 2 Data from "Financial Sample.xlsx"
- 3 Sum(Sales) in xx' axis and Sum(Profit) in yy' axis
- 4 Product will be used to see how Sales and Profit change together
- 5 If the visual is not a scatter plot, make sure to select it from "Show me" viz
- 6 Go to Analytics add a "Trend Line"
 - 1 Get to know the coefficients from your trend line

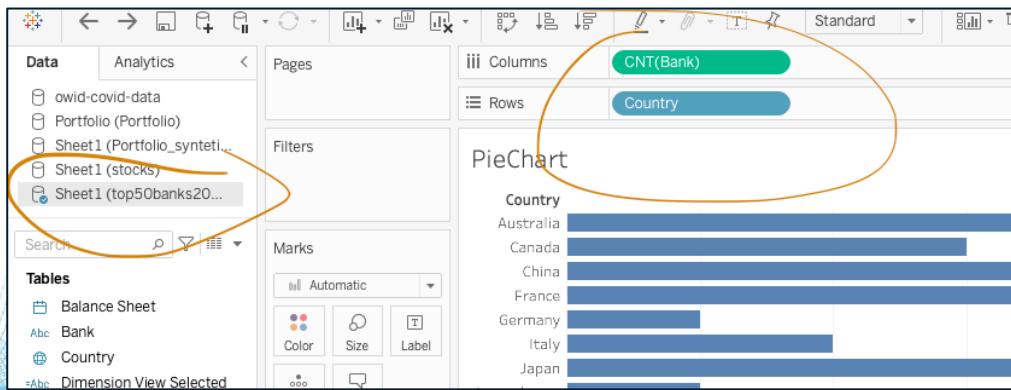


PIE CHART

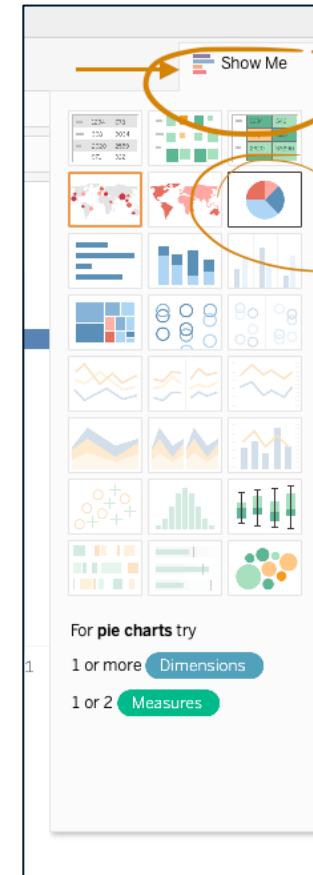
Pie Chart

- Go to top50banks
- Columns: Bank (Count)
- Rows: Country

1



2

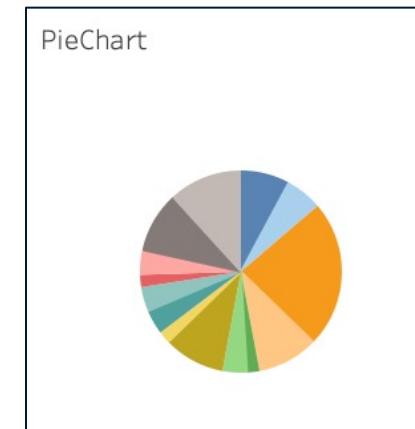
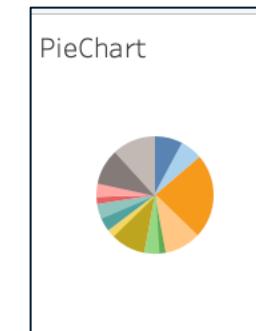


3

By default your pie chart is very very small....

Keyboard shortcut

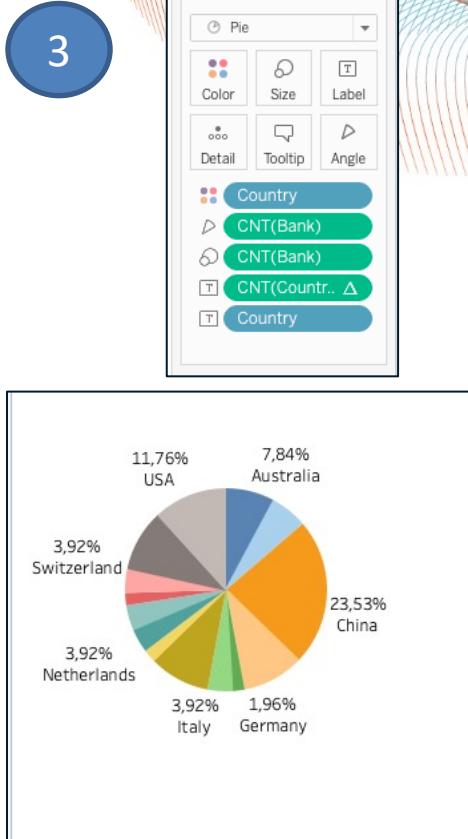
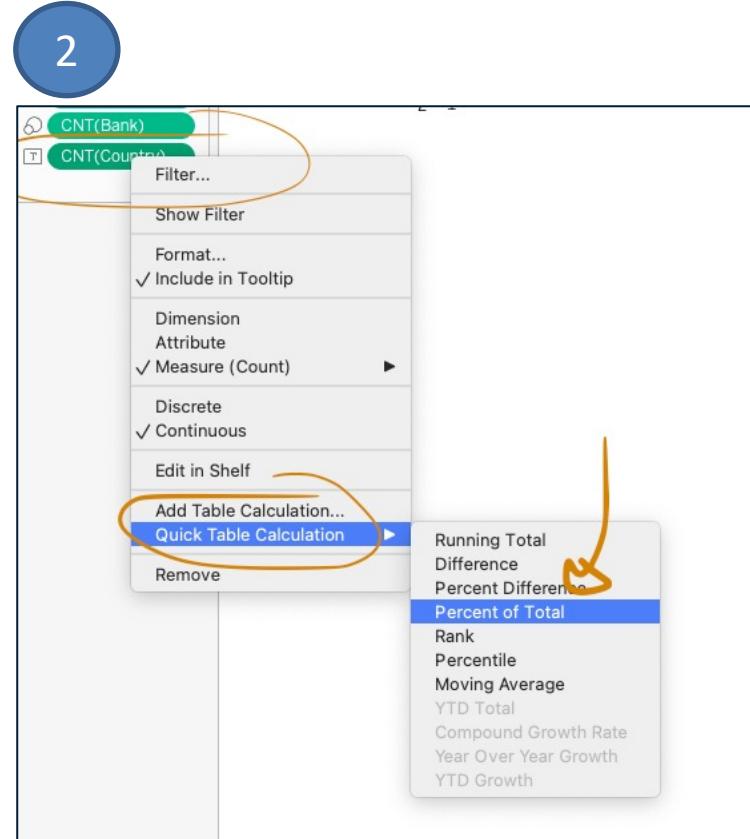
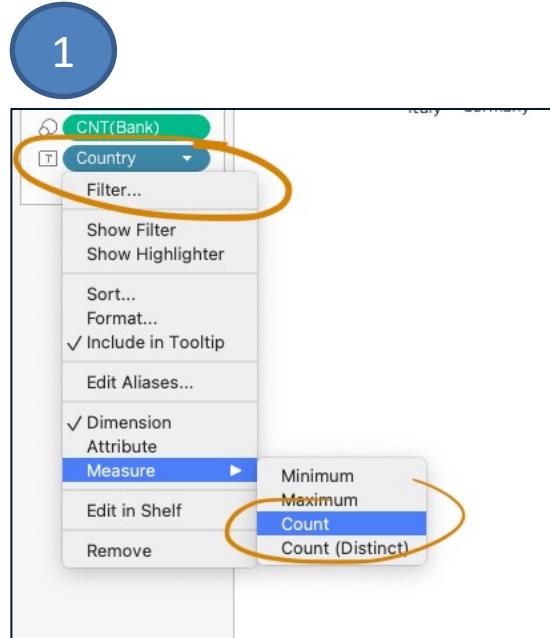
- Larger chart: CMD/CTRL+SHIFT+B
- Smaller chart: CMD/CTRL+B



Pie chart: add percentage and labels

Marks

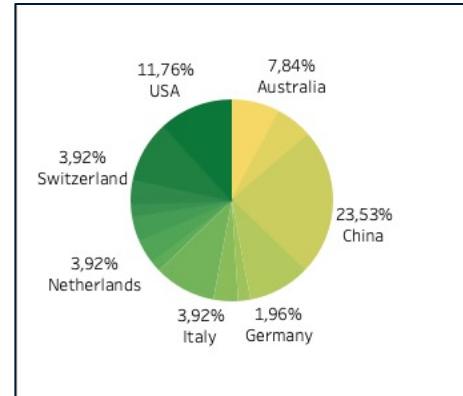
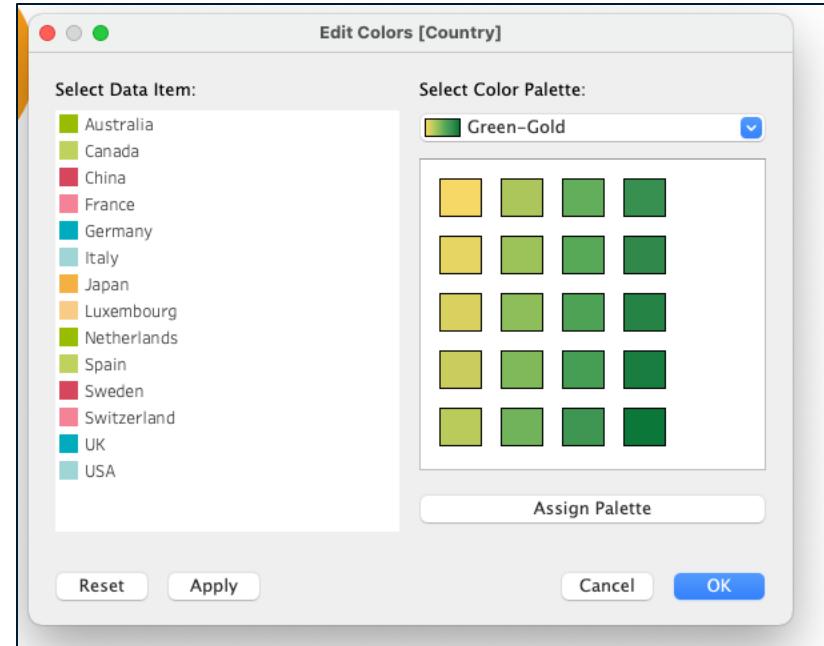
1. Drag Country to Label
2. Click on Country and select the **Measure->Count**
3. Right Click on CNT(Country) and select **Quick Table Calculation -> Percent of Total**
4. Again, Drag Country to Label



Change Colour Palette

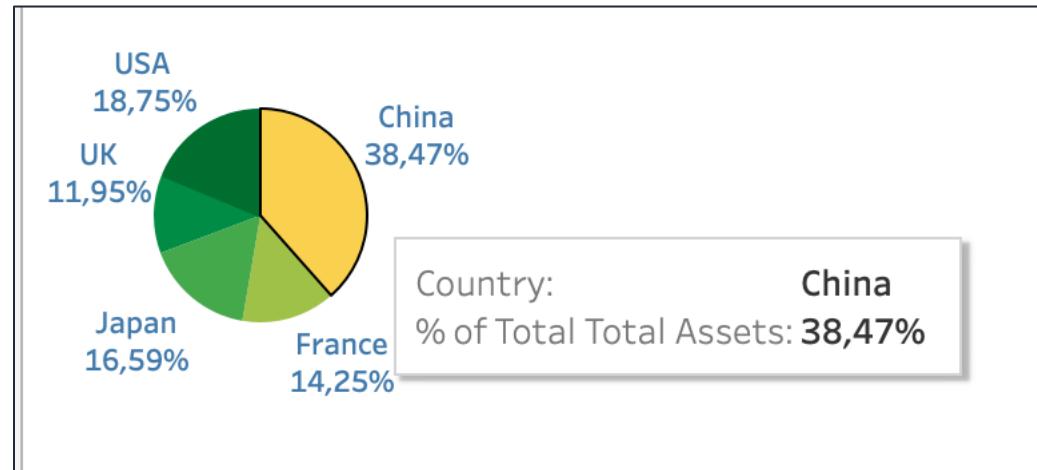
On the right go to the legend Country

1. Select Edit Colors
2. Select Color Palette
3. Assign Palette

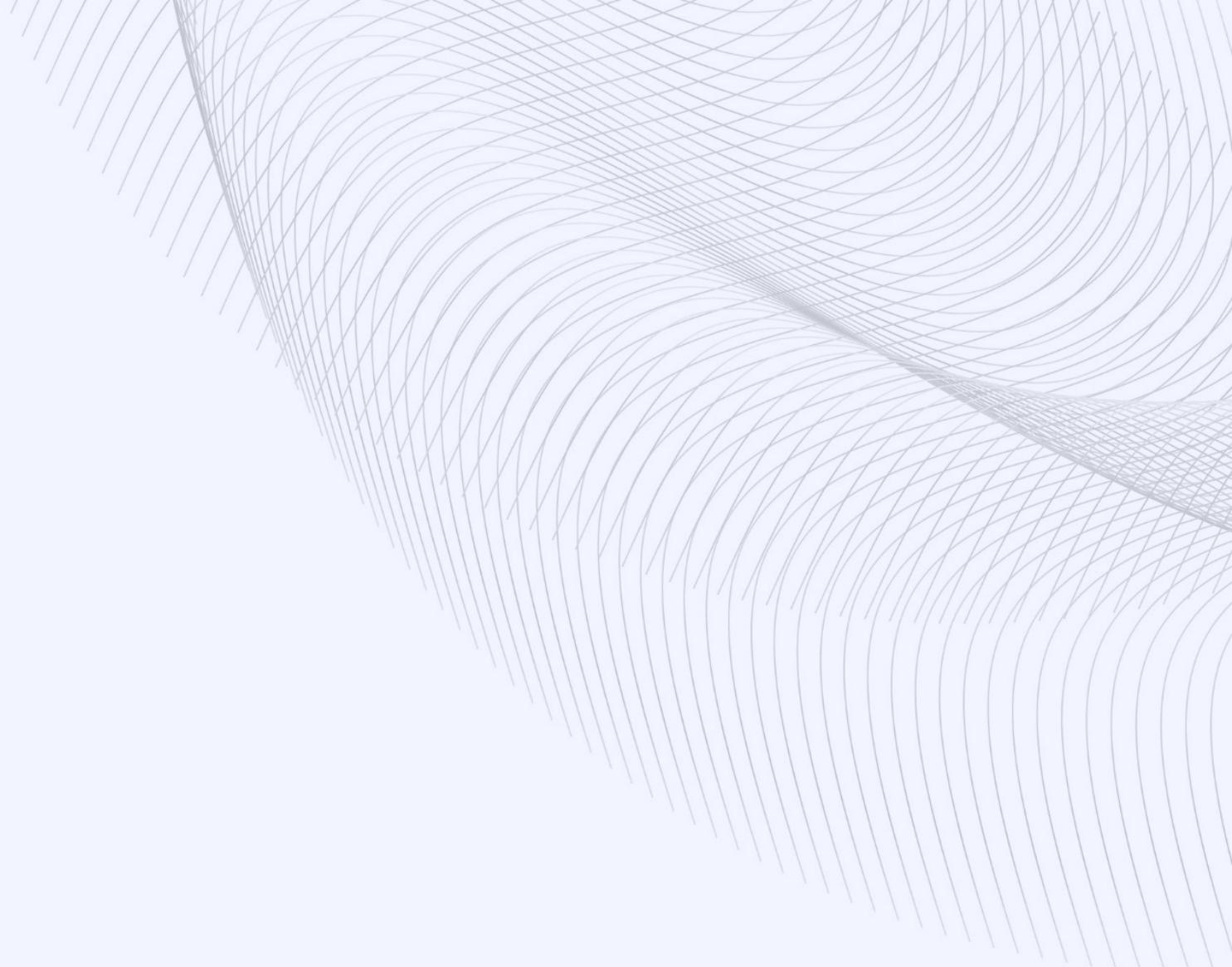


Exercise: Build and customise a Pie Chart

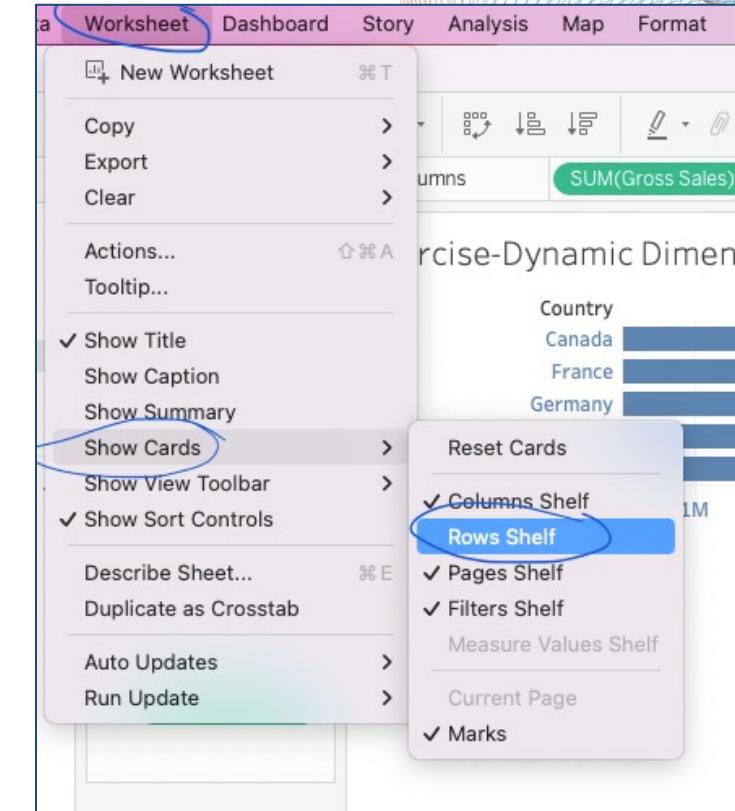
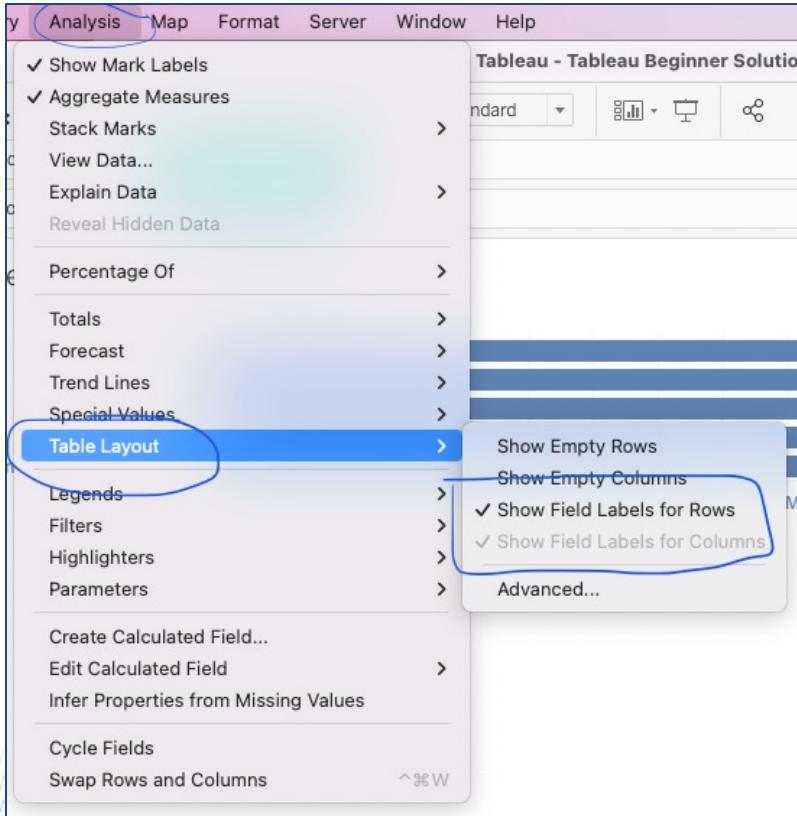
- 1 Create a new Worksheet – *Right click in one of the sheet names and select "New Worksheet"*
- 2 Pie chart with TOP 5 countries with higher "Total Assets Us B"
- 3 Edit Tooltip and customise it (see image)
- 4 Customise your pie



TIPS & RESOURCES



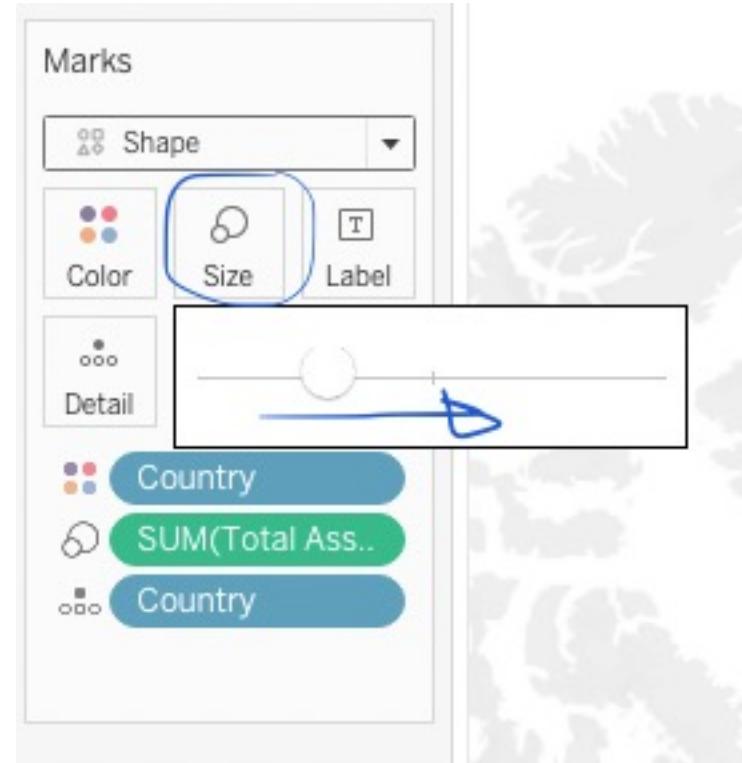
Hide/Unhide



Increase size of markers

Click on
Marks -> Size

A bar will appear on
the bottom and slide
to the right in order to
make the
icons/shapes larger



Dashboard Hints

- Know your audience
- Correct Size and Layout
- Limit views and colours
- Make it interactive

RESOURCES

Tableau Website

- Tableau instruction videos
- Data Viz tips: <https://www.tableau.com/en-gb/learn/articles/data-visualization-tips>

Other Data Visualisation tools

- Data Wrapper
- Flourish Studio – for slick animations