

## Filters, Dashboards and Actions

João Moura Pires

# Notice

- **Author**

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- **Order of Operations**

- **Filtering data**

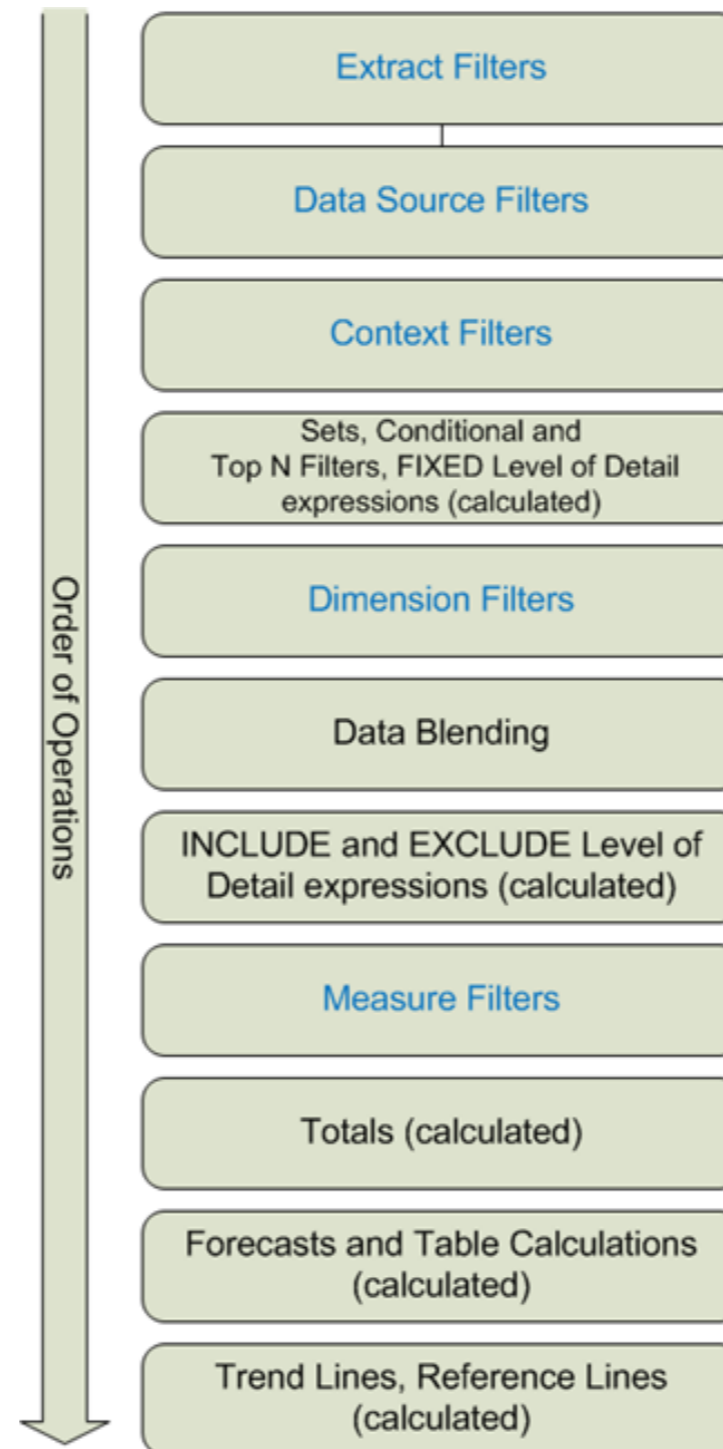
- **Sorting data**

- **Dashboards**

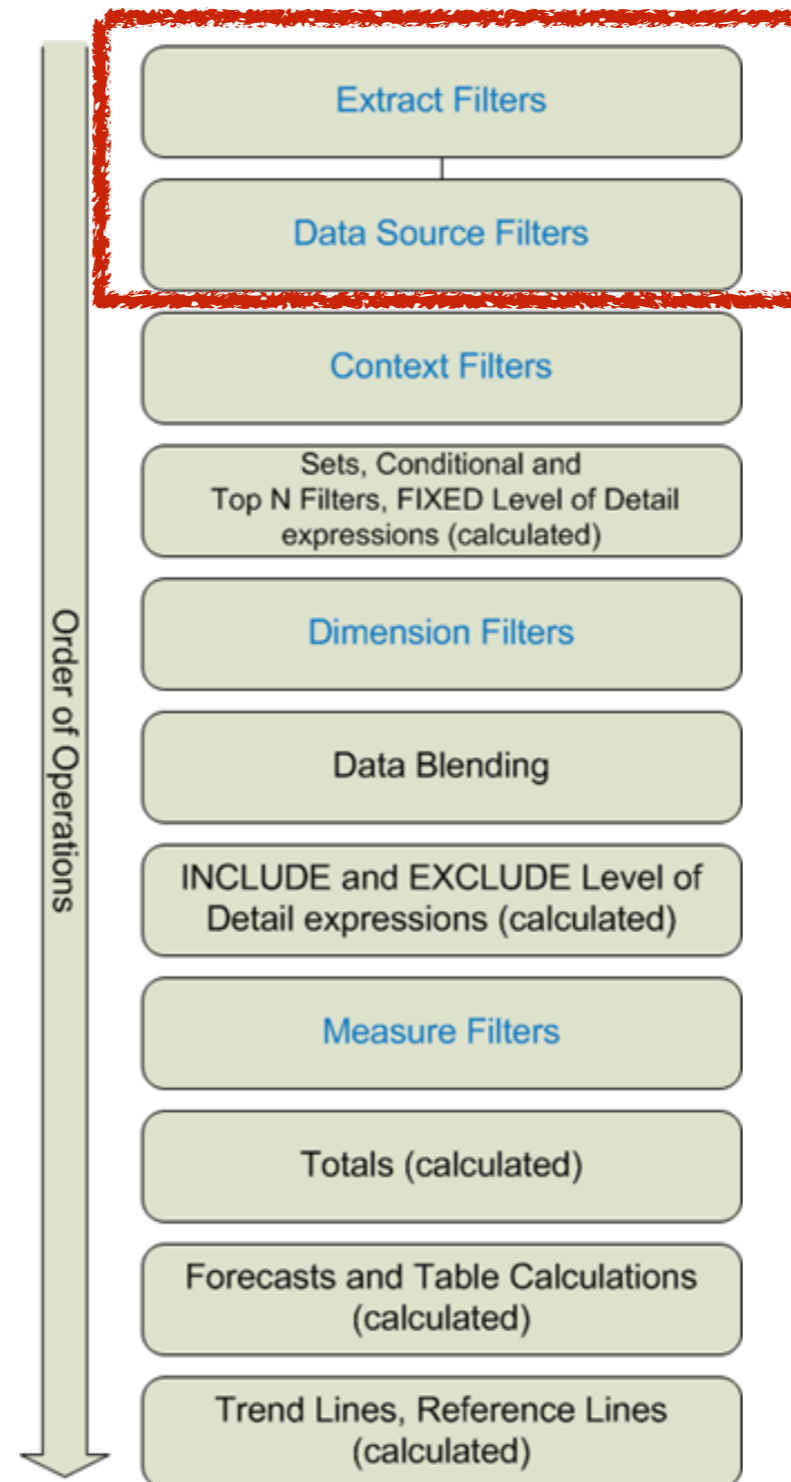
## Order of operations



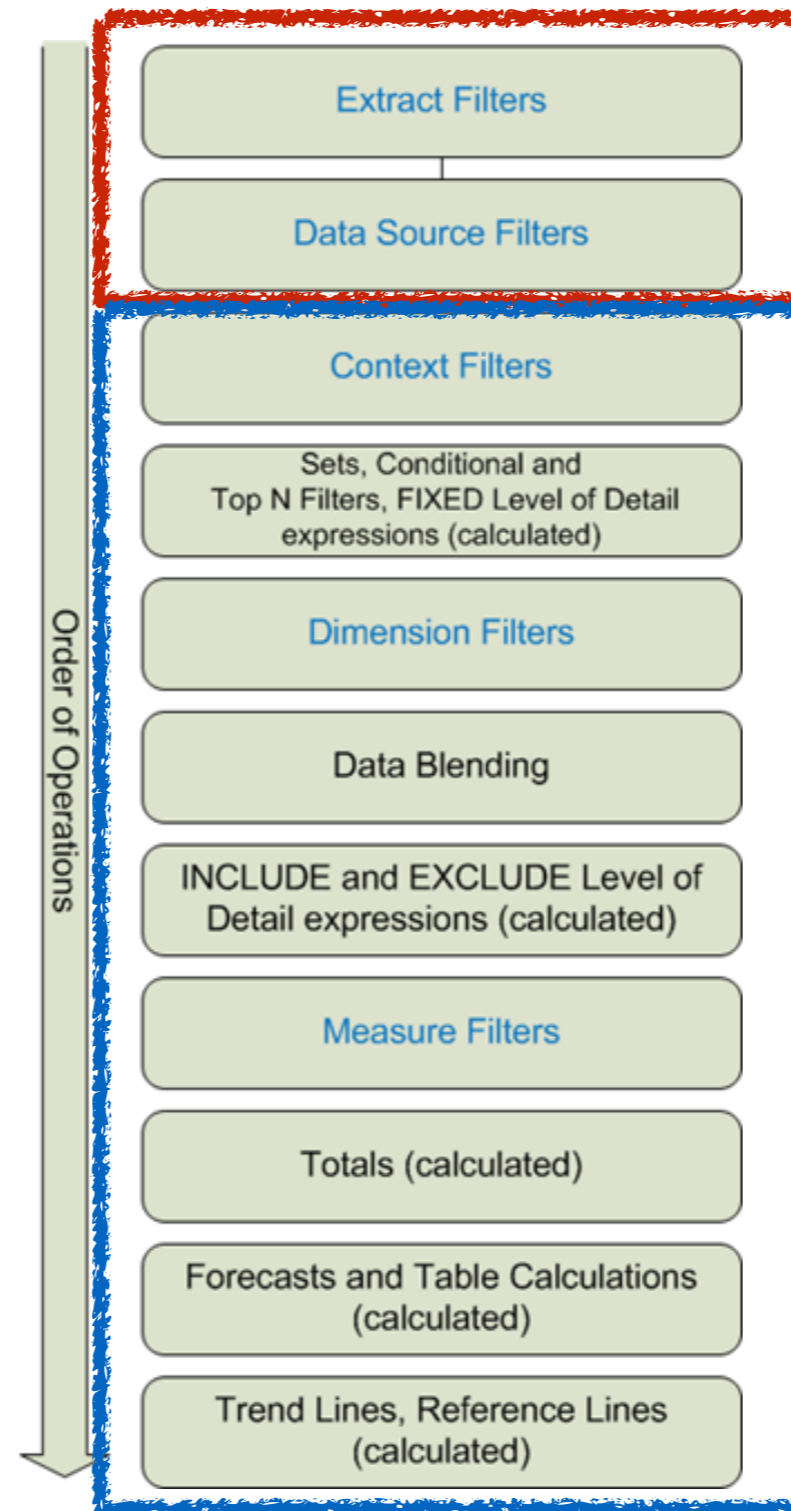
# Order of operations



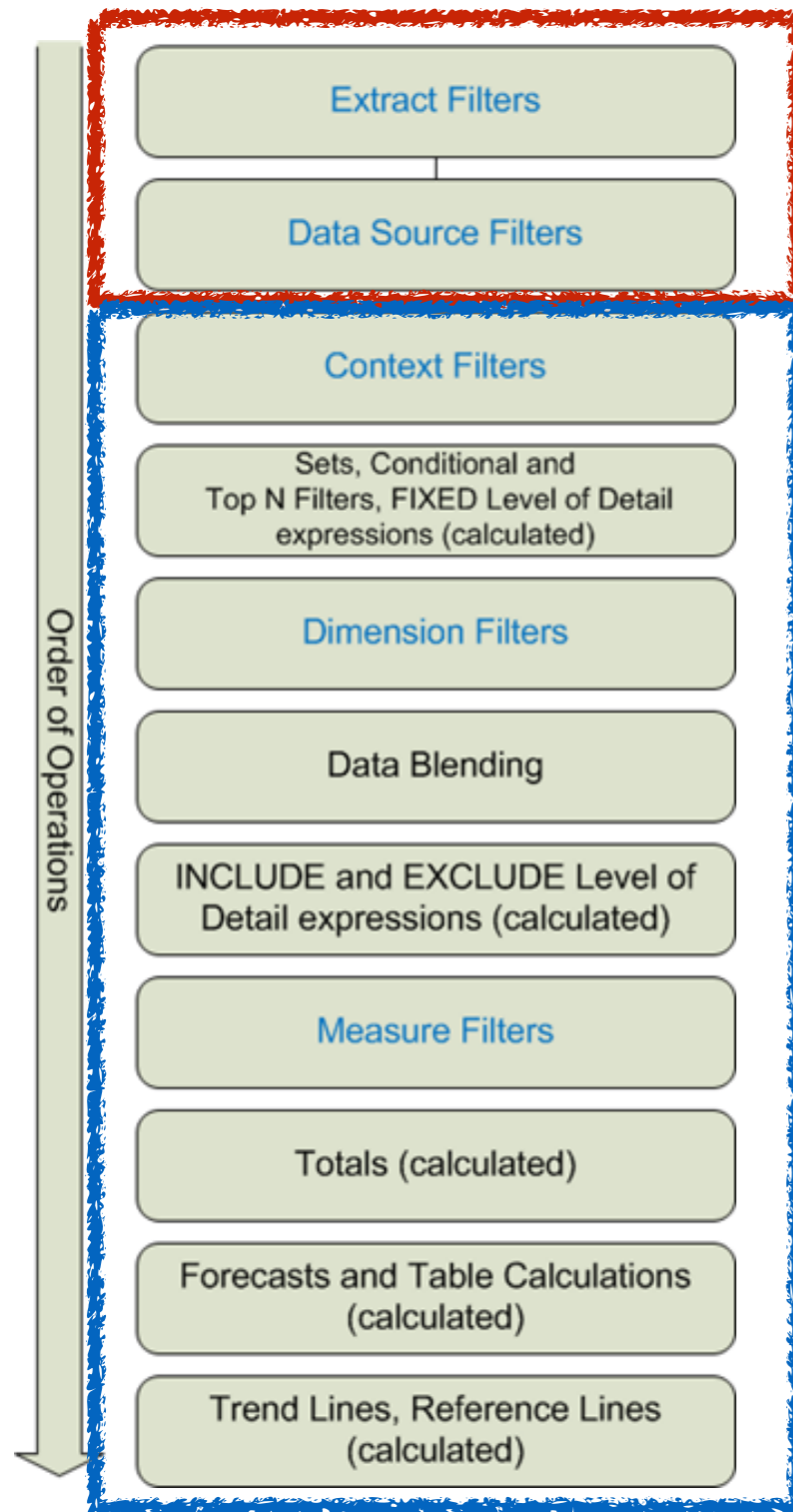
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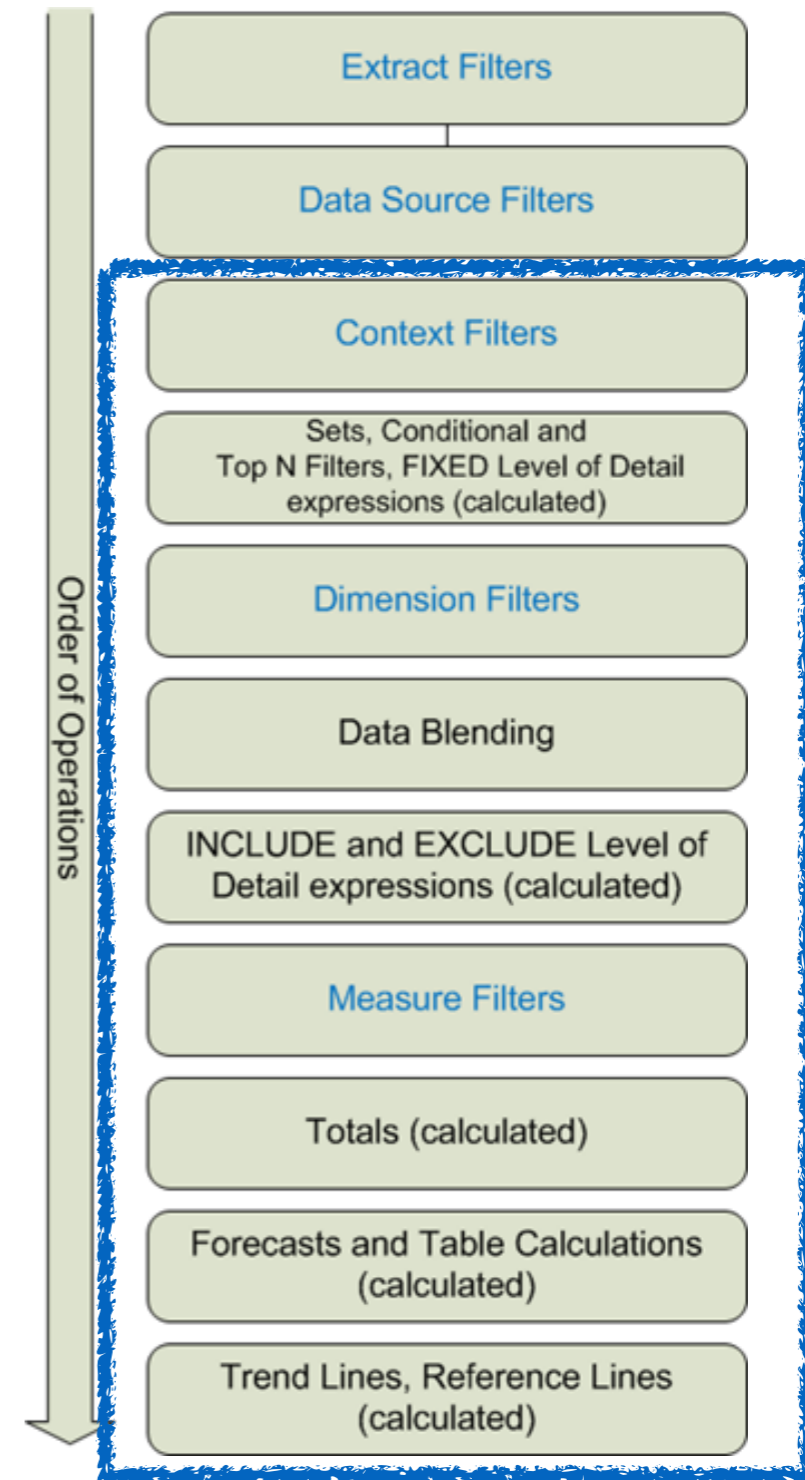


# Order of operations



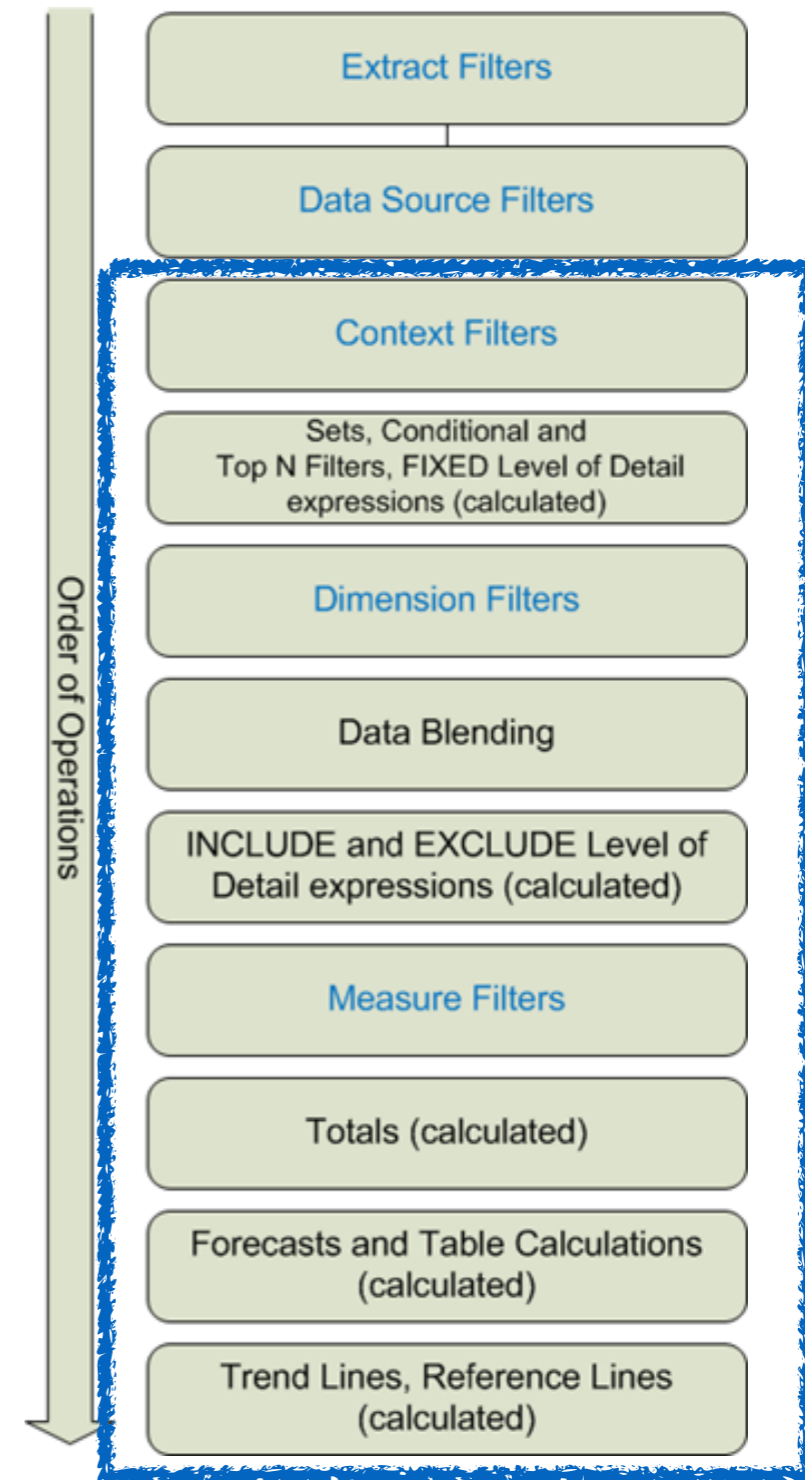
**Data blending** is one way of combining data from multiple data sources into a single view. Instead of joining the data at the row level like a cross-database join, data blending sends separate queries to the separate data sources and aggregates the results to a common level back in Tableau

# Order of operations



# Order of operations

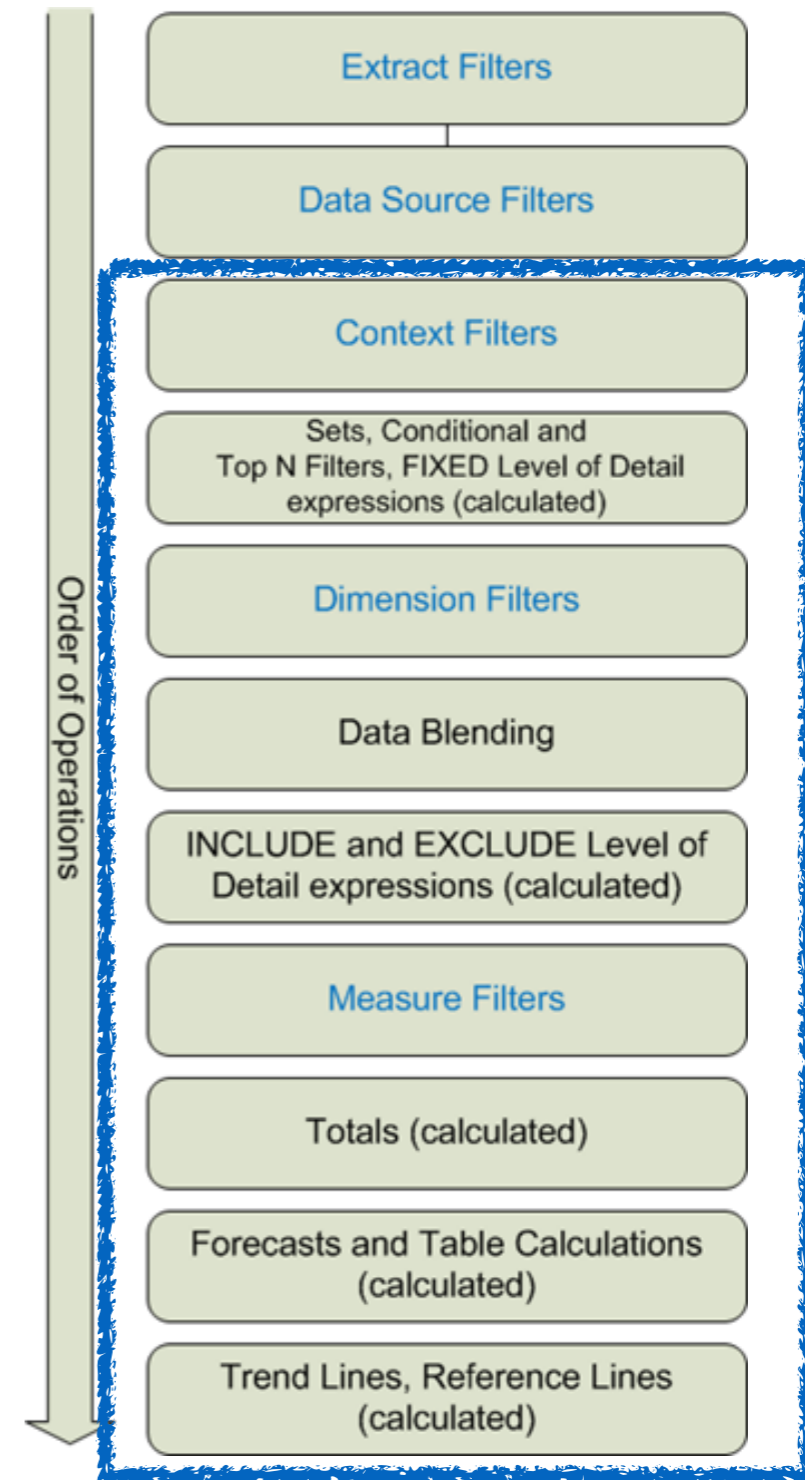
All filters are independent !



# Order of operations

All filters are independent !

They are computed independently



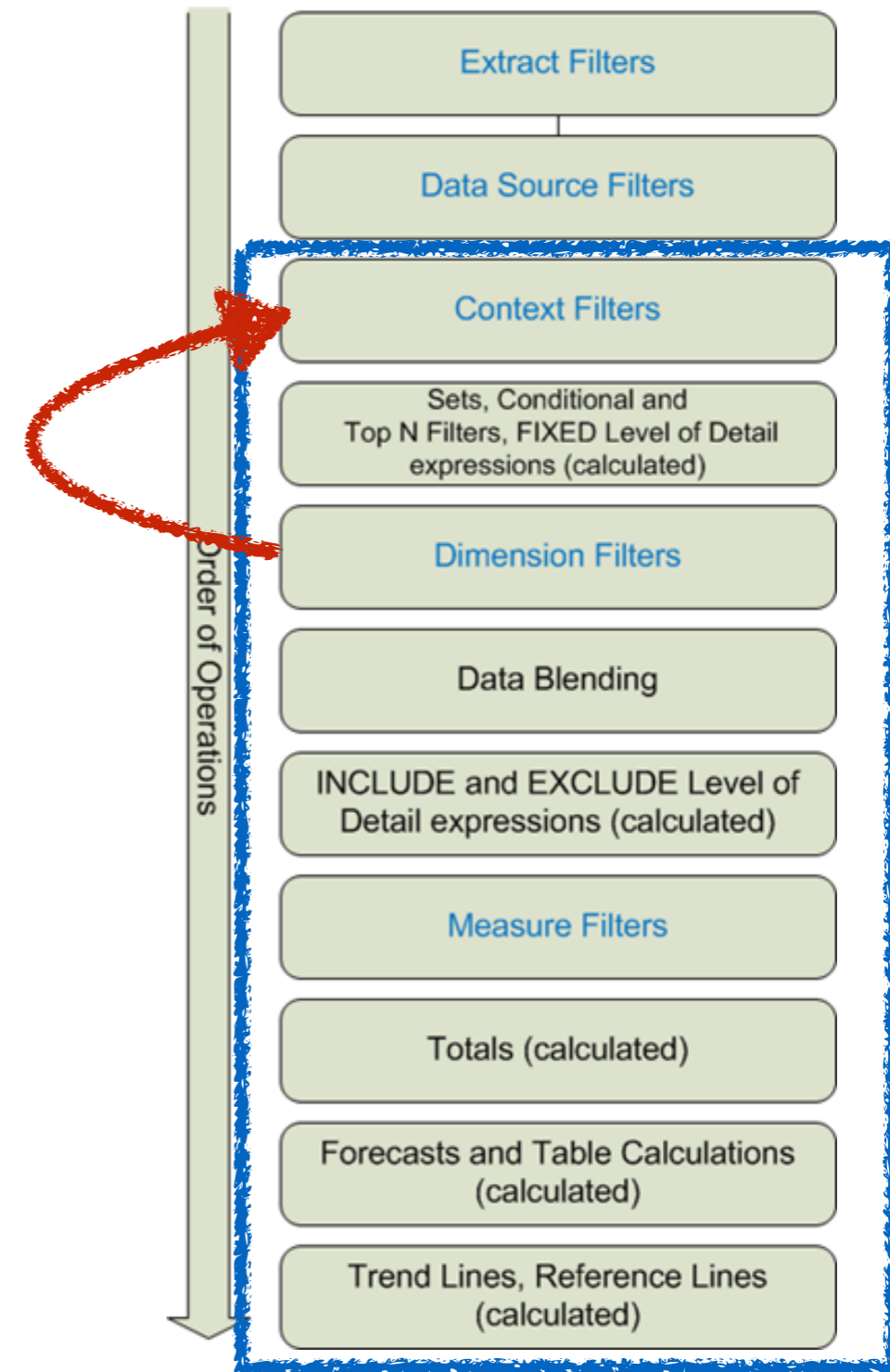


# Order of operations

All filters are independent !

They are computed independently

We can move some **dimension filters** to **context filters**



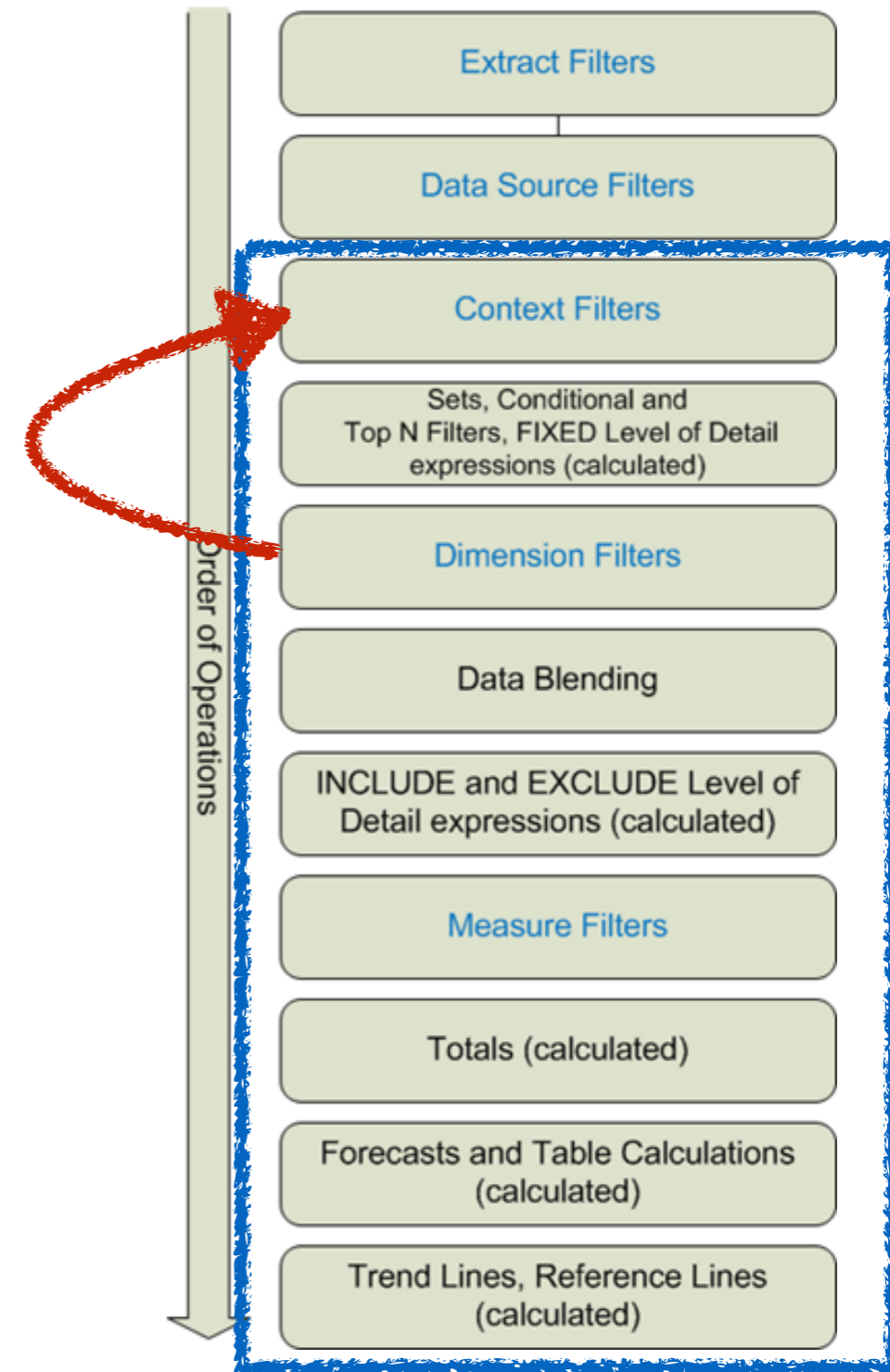
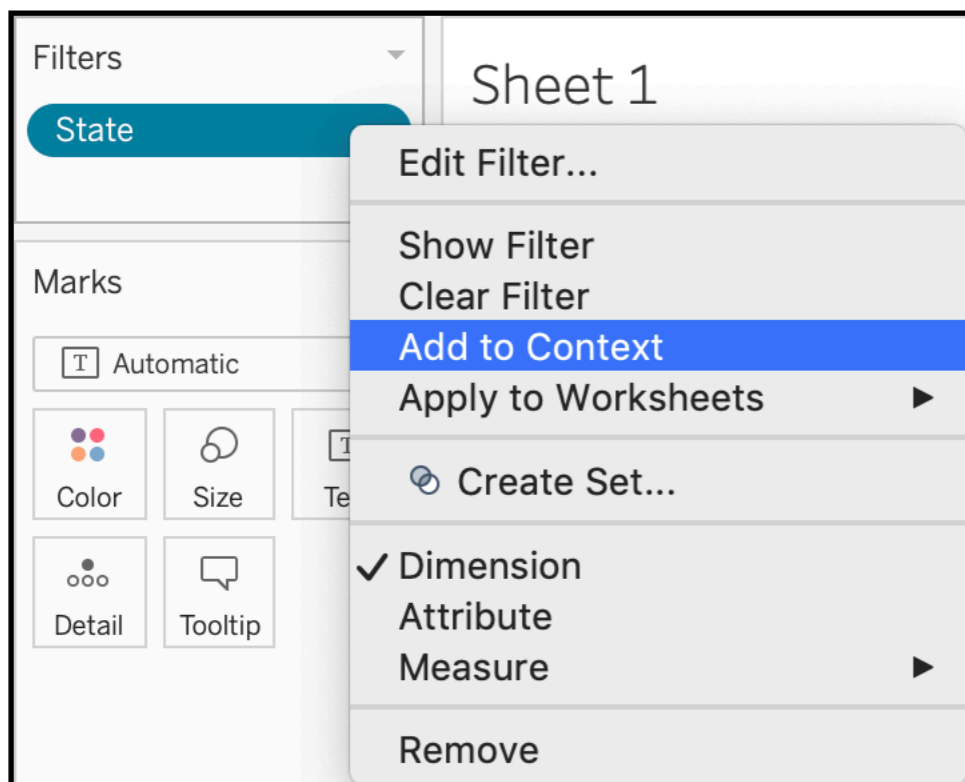


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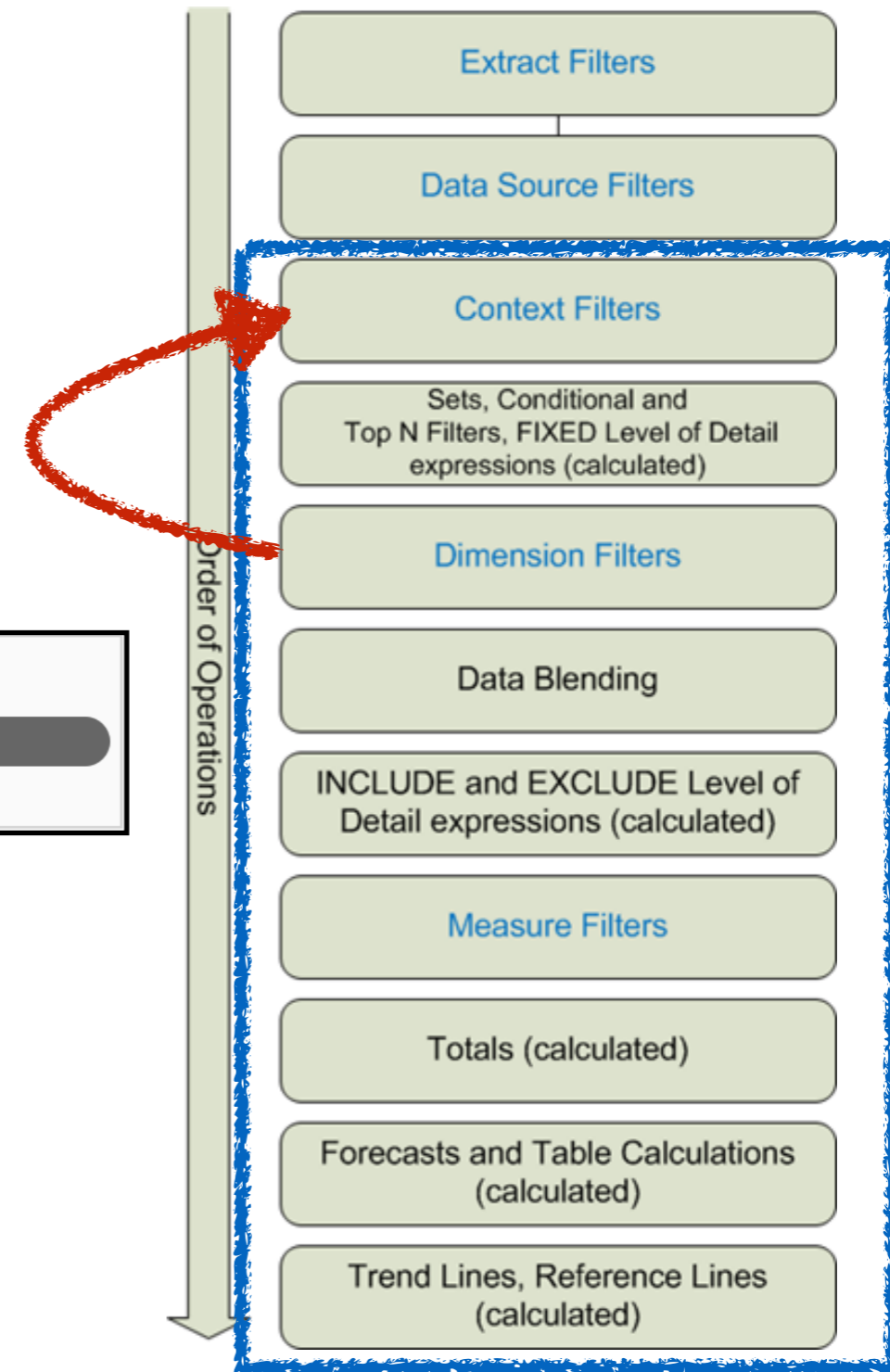
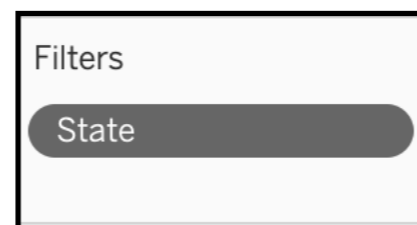
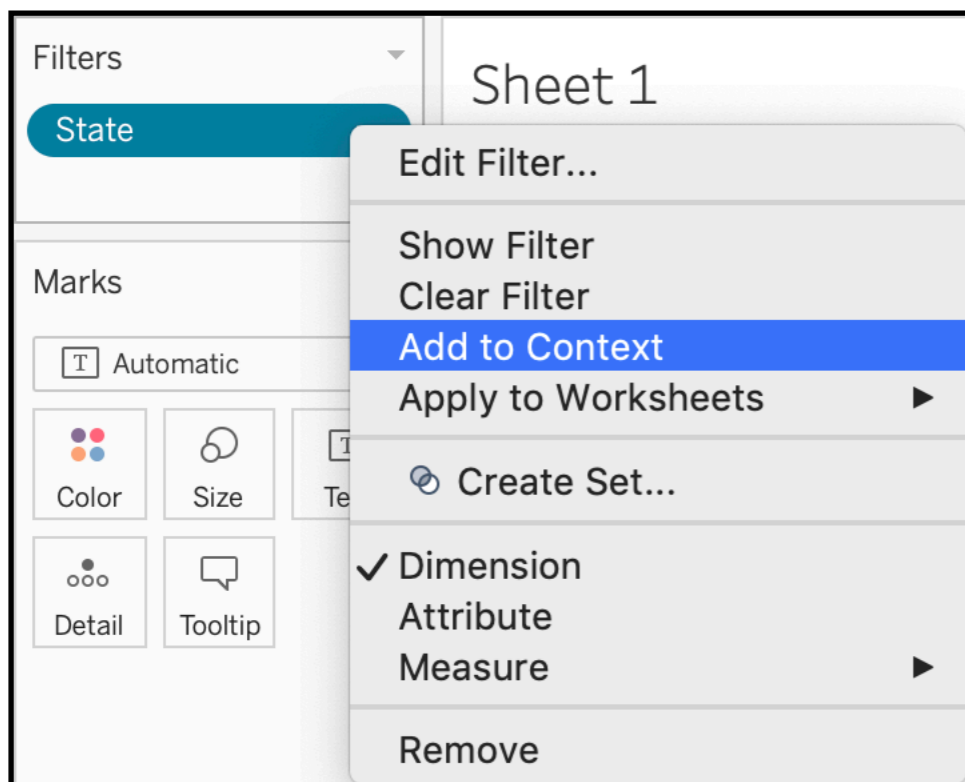


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We can move some **dimension filters** to **context filters**

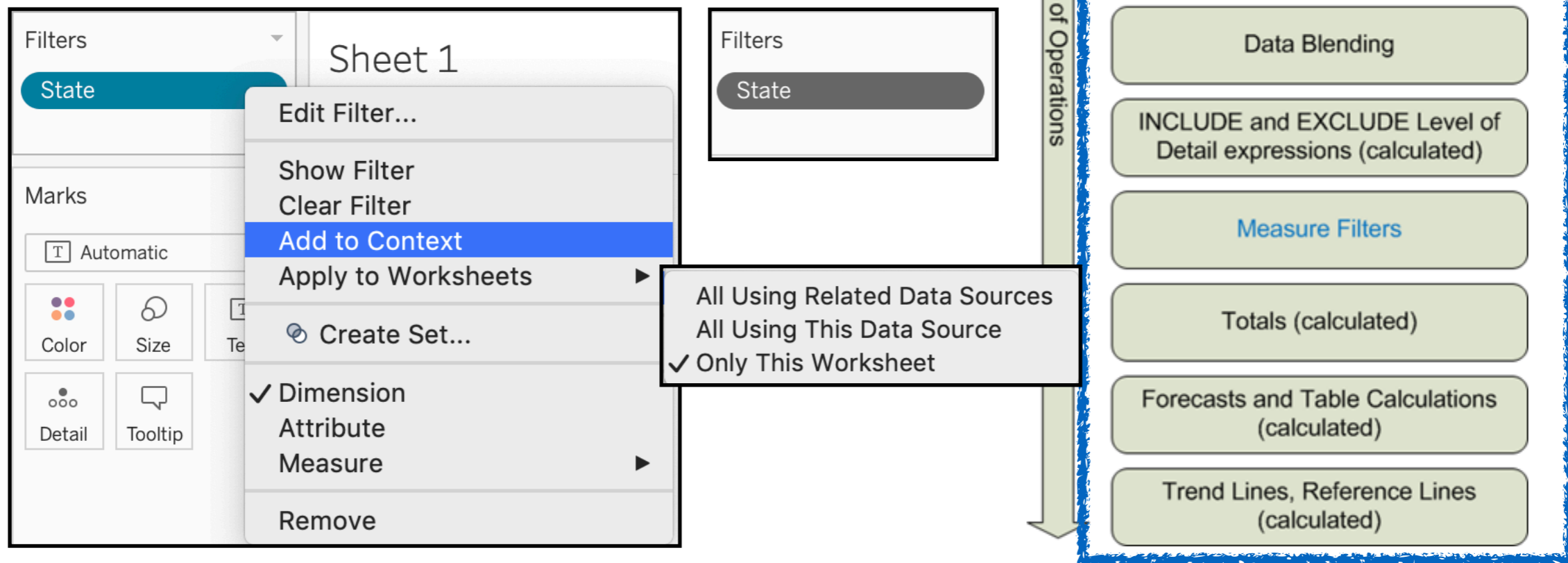


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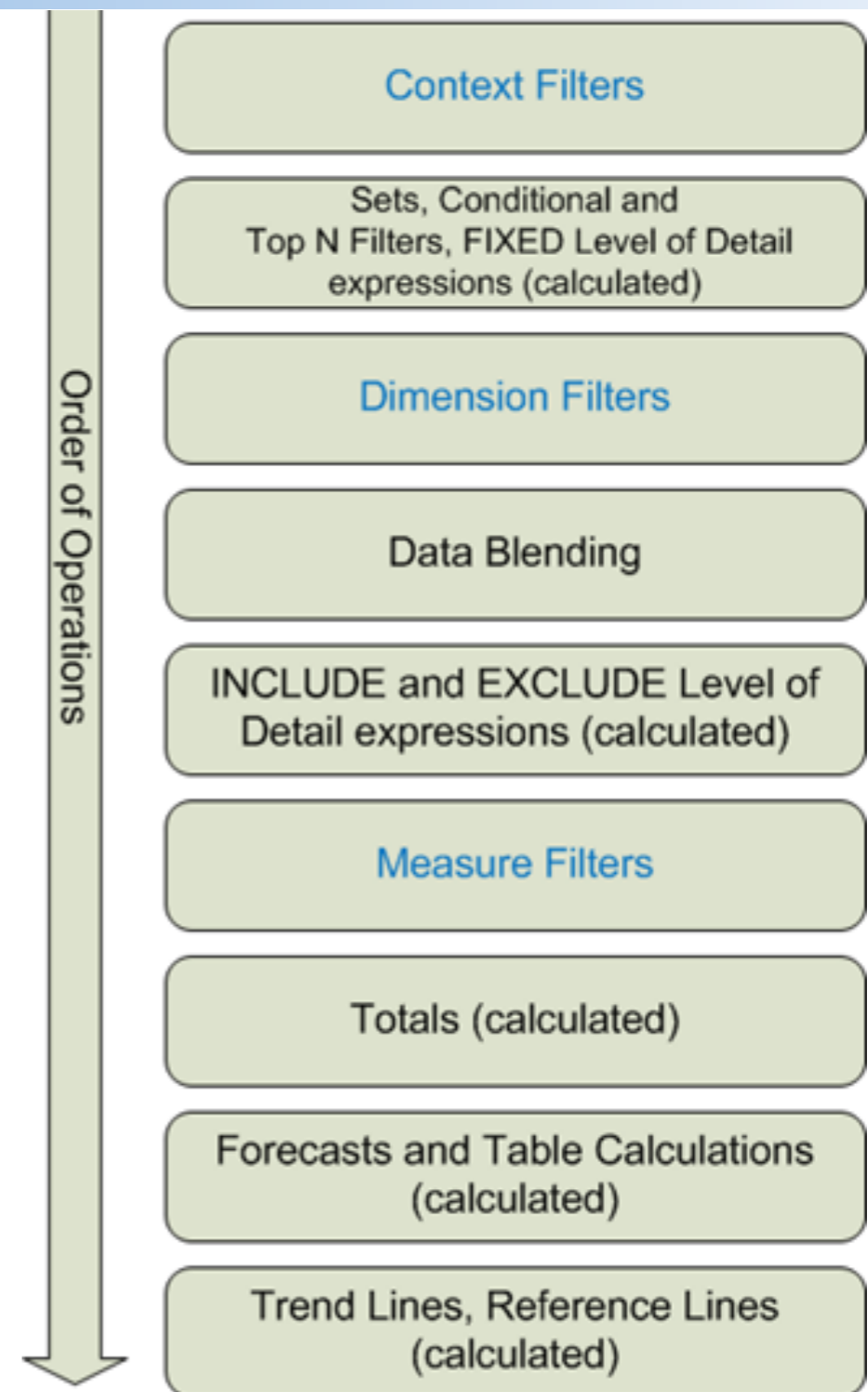
We can move some **dimension filters** to **context filters**



# Order of operations

Who are the top 10 customers, by total sales, in New York City?

What is the percent of total sales by product sub-category?

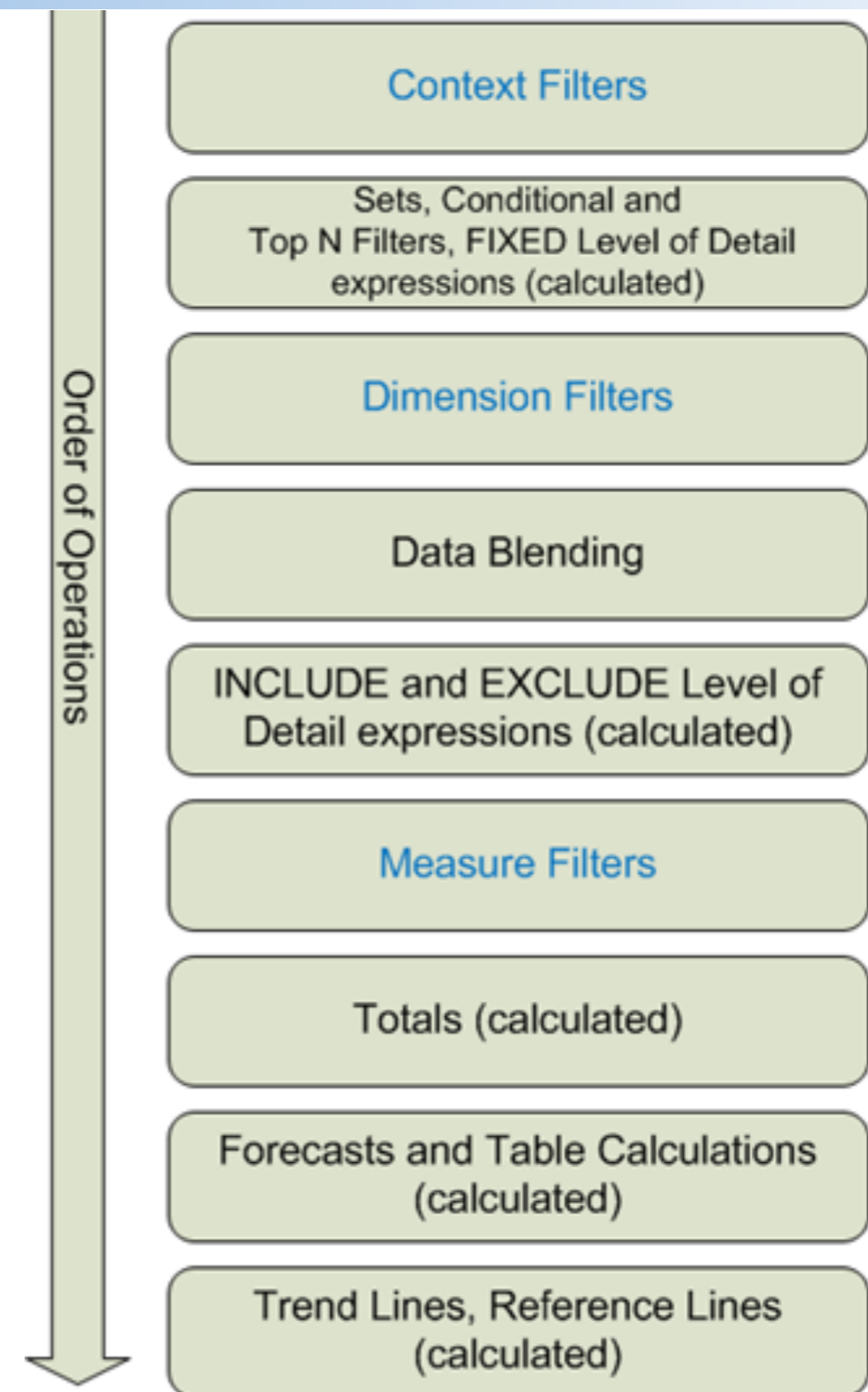


# Order of operations

It is important to set the desired calculations at the correct level !

Who are the top 10 customers, by total sales, in New York City?

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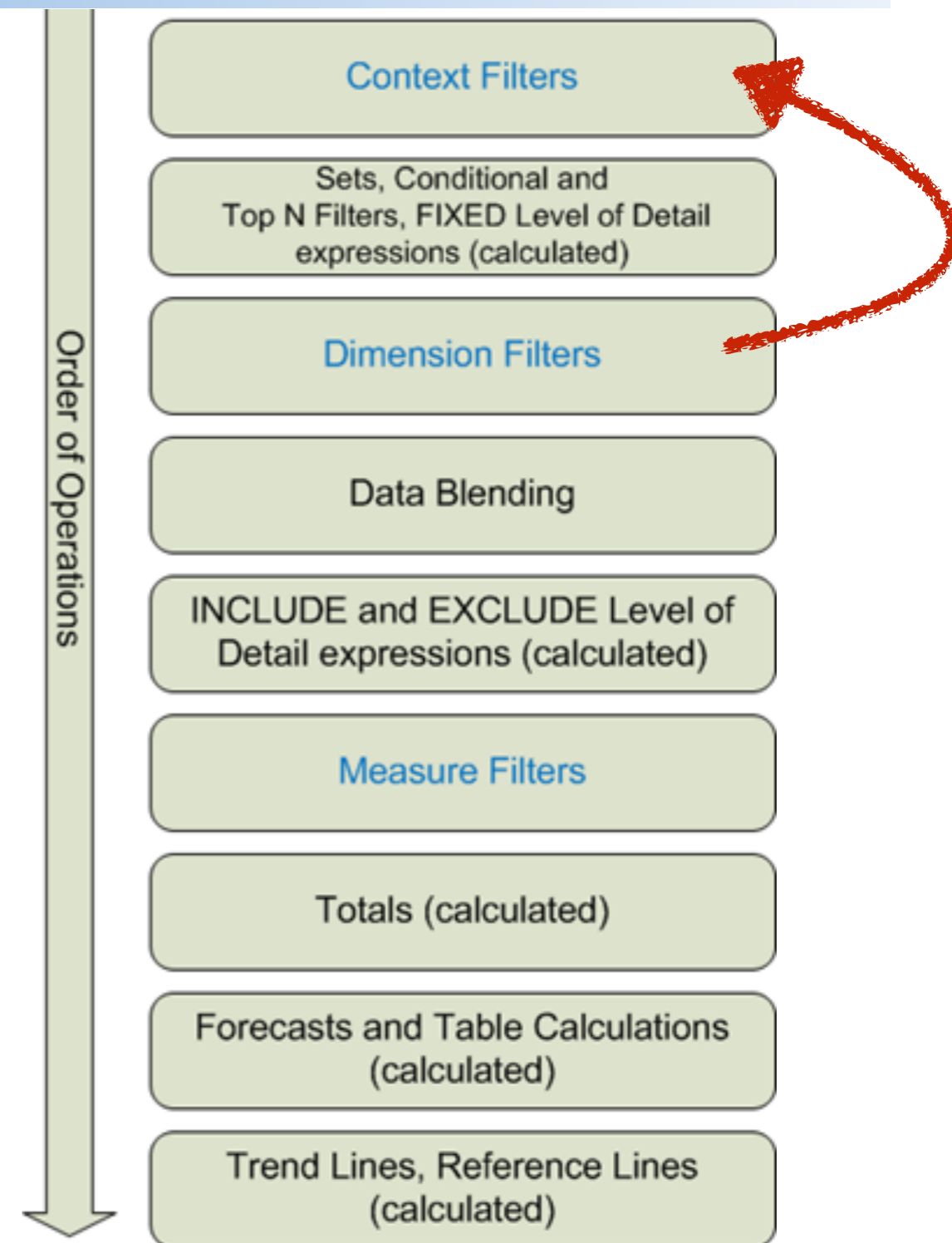


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Who are the top 10 customers, by total sales, in New York City?

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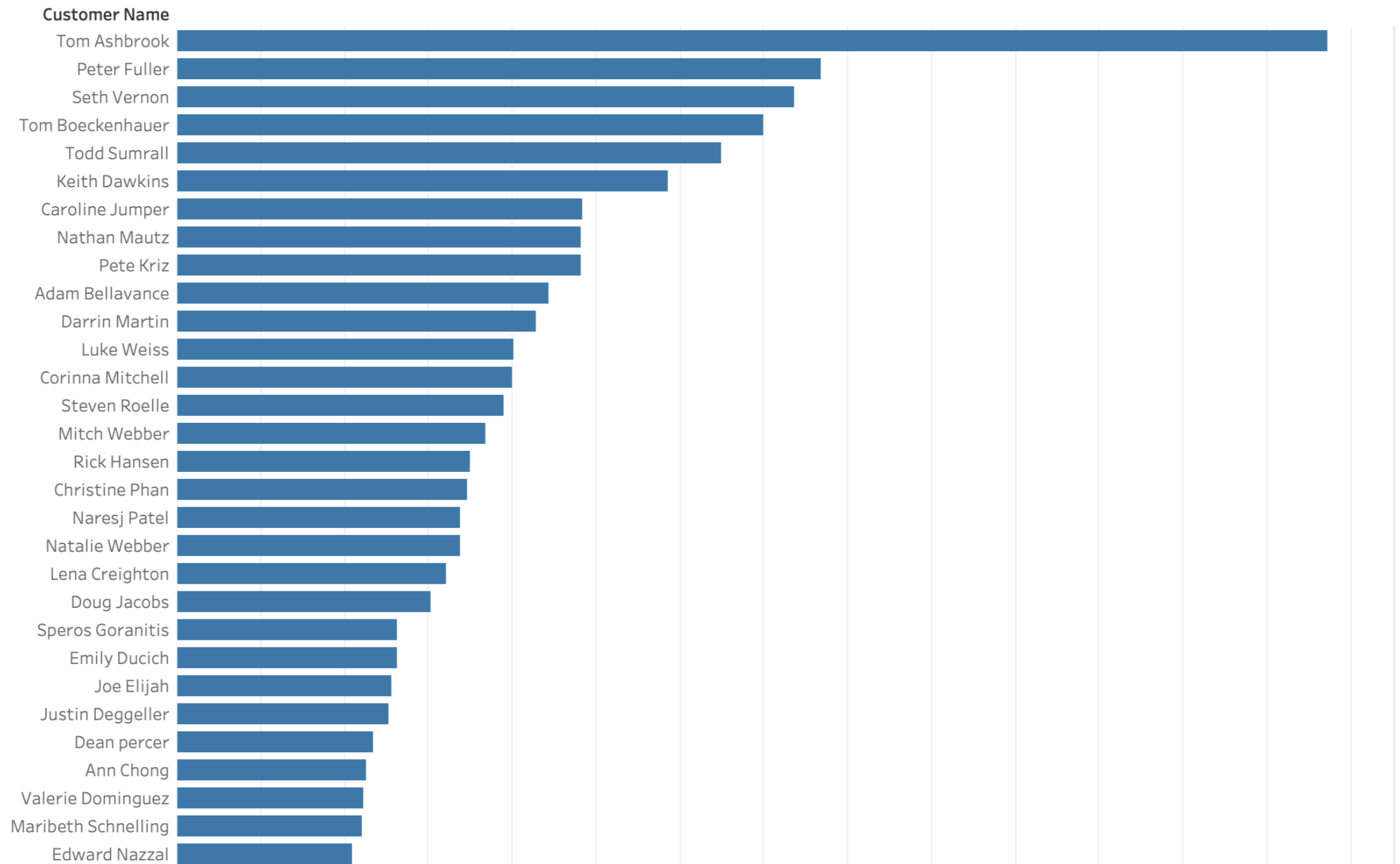


# Who are the top 10 customers, by total sales, in New York City?

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# Who are the top 10 customers, by total sales, in New York City?

1.1: Top 10 cust, by total sales, in New York City?

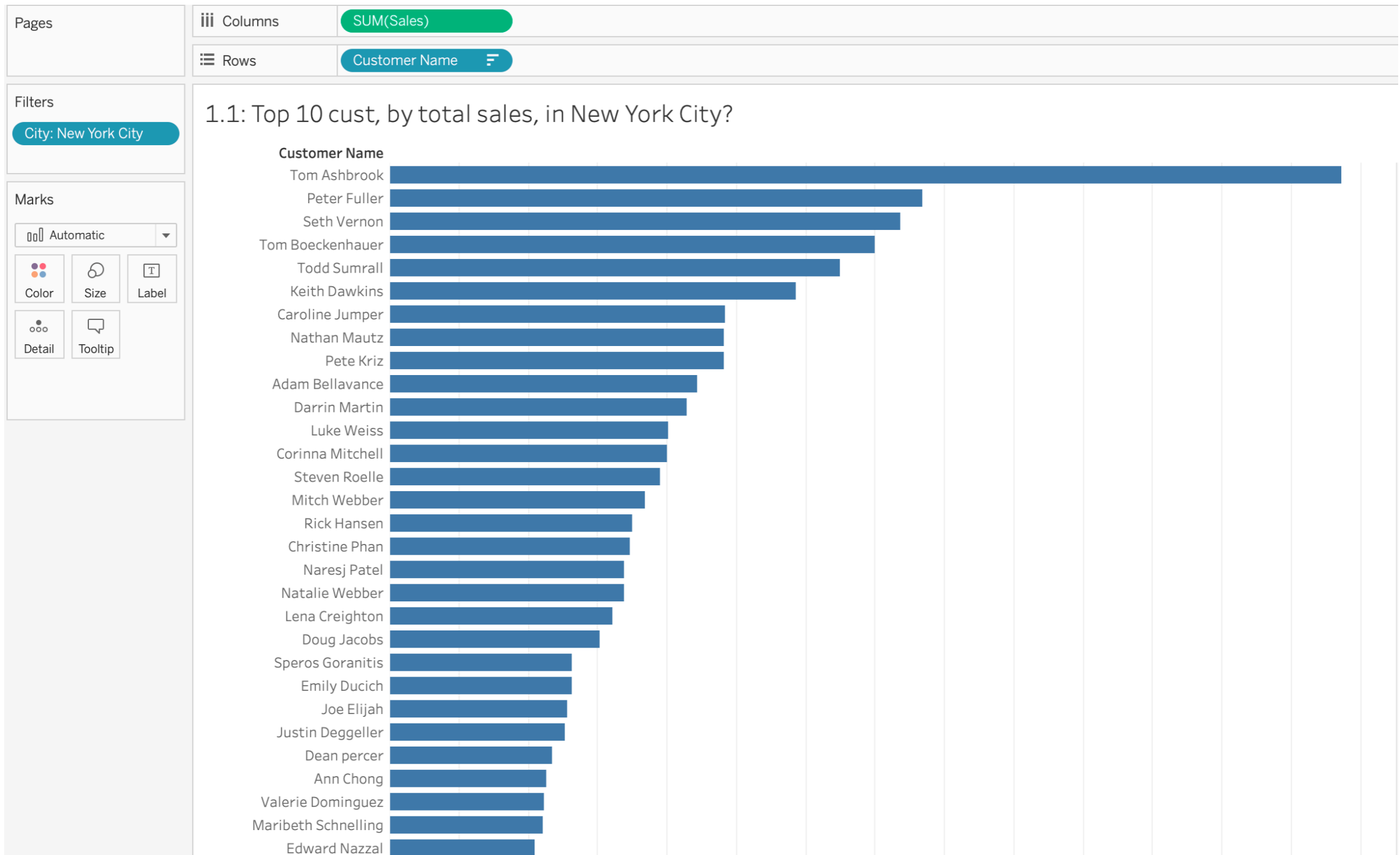




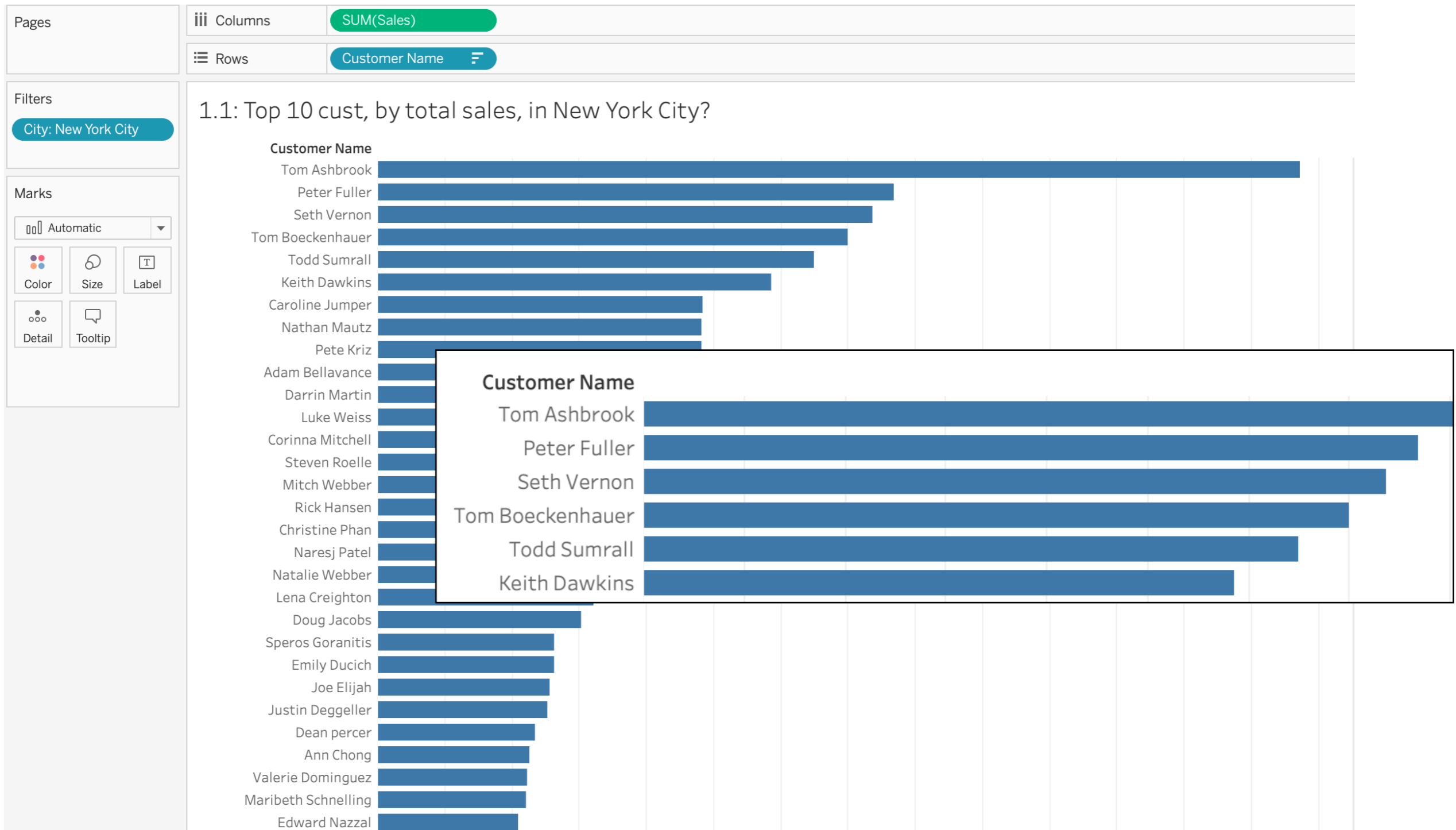
# Who are the top 10 customers, by total sales, in New York City?

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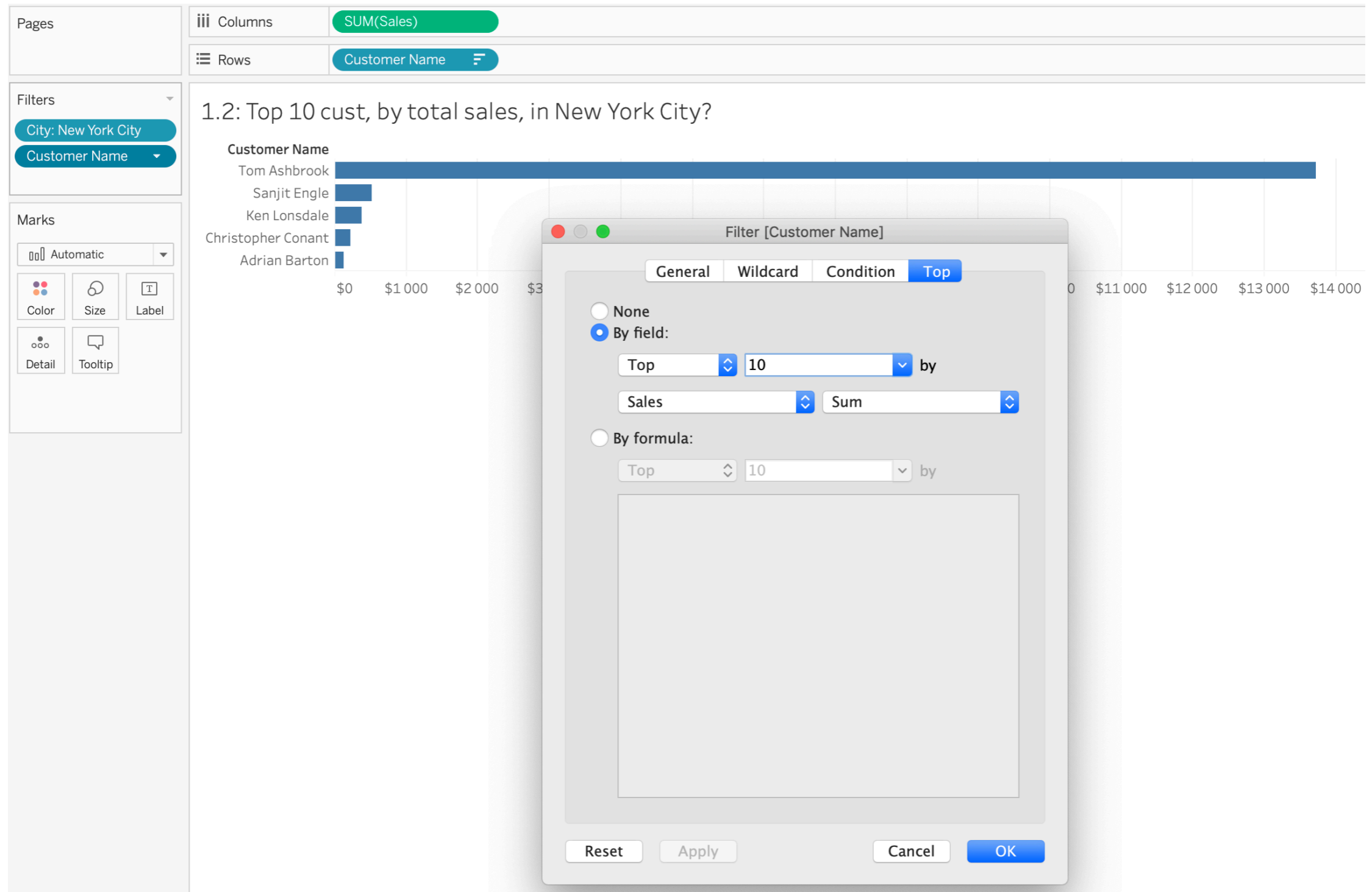
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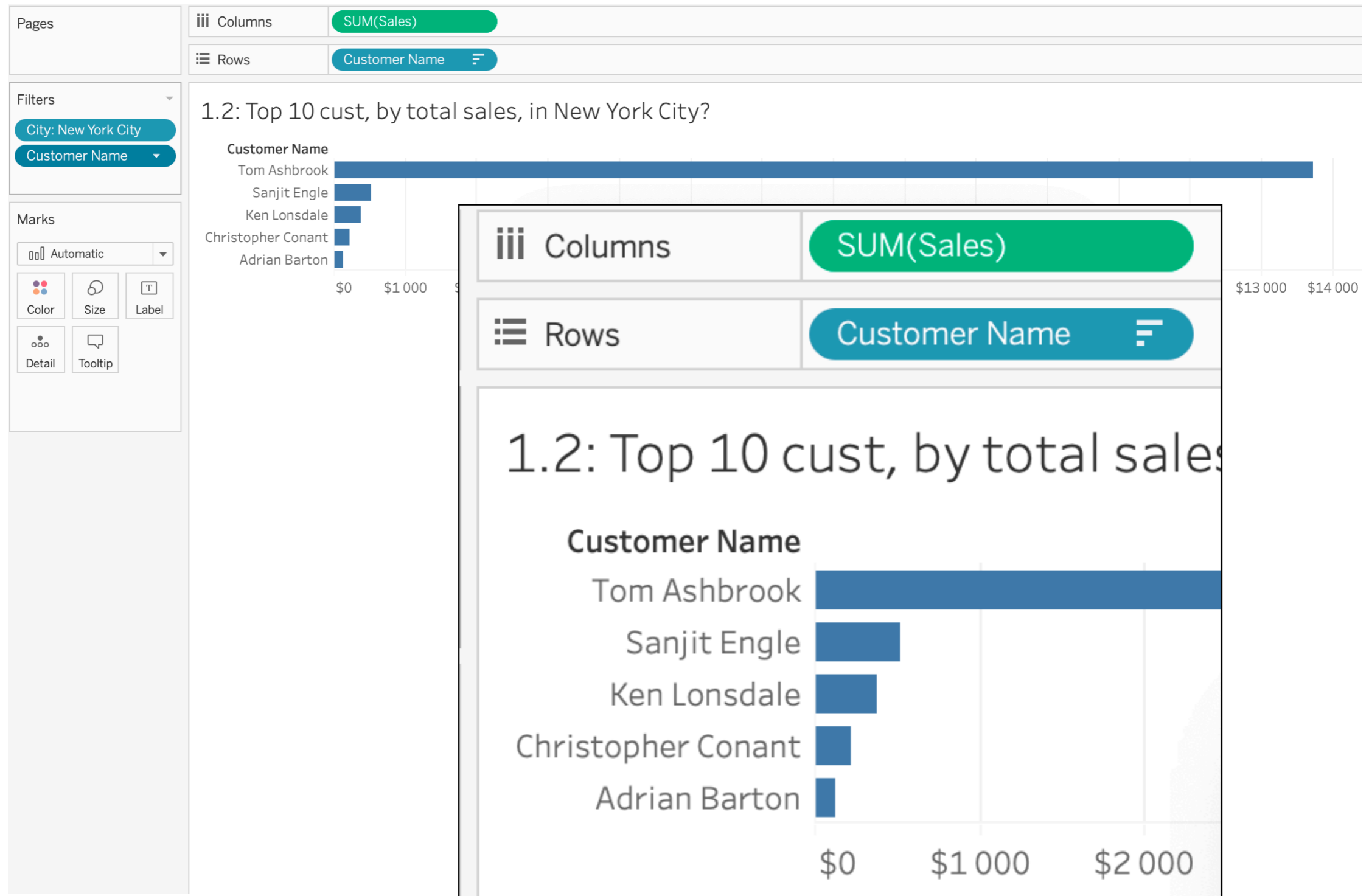
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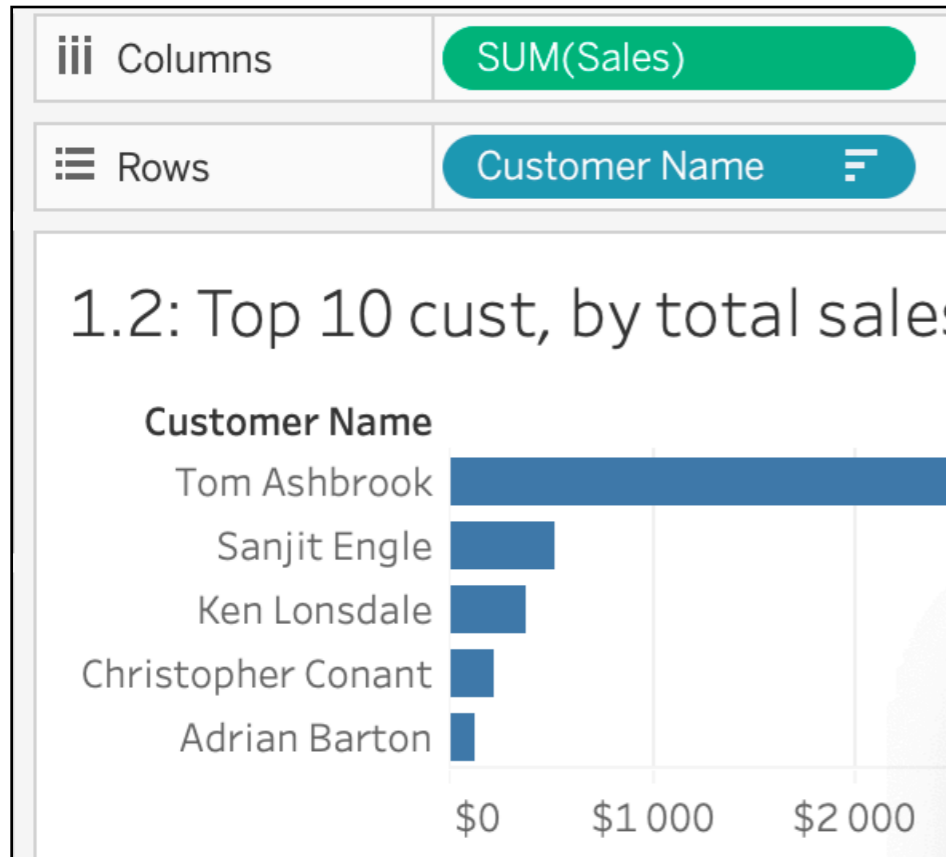
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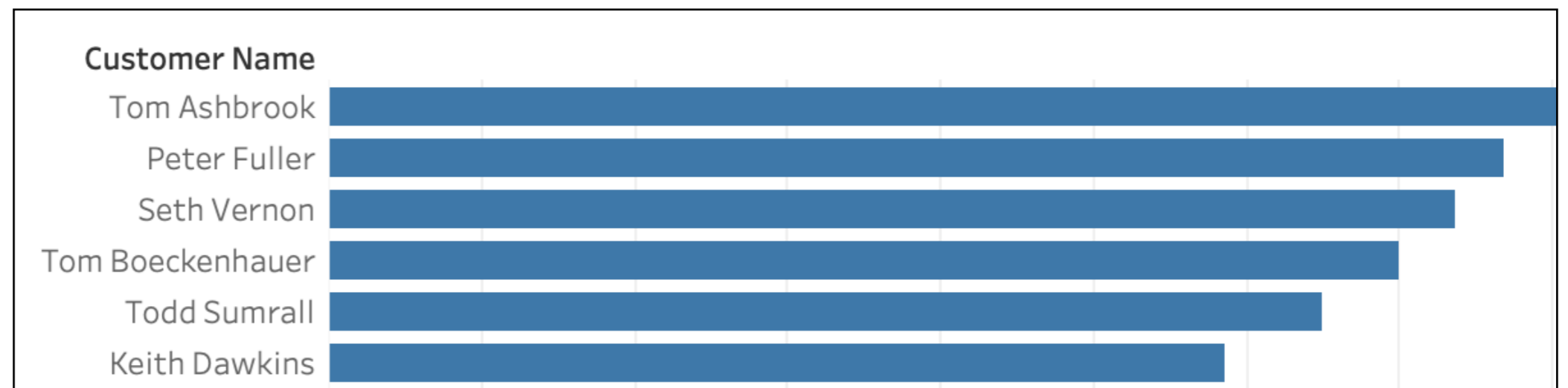


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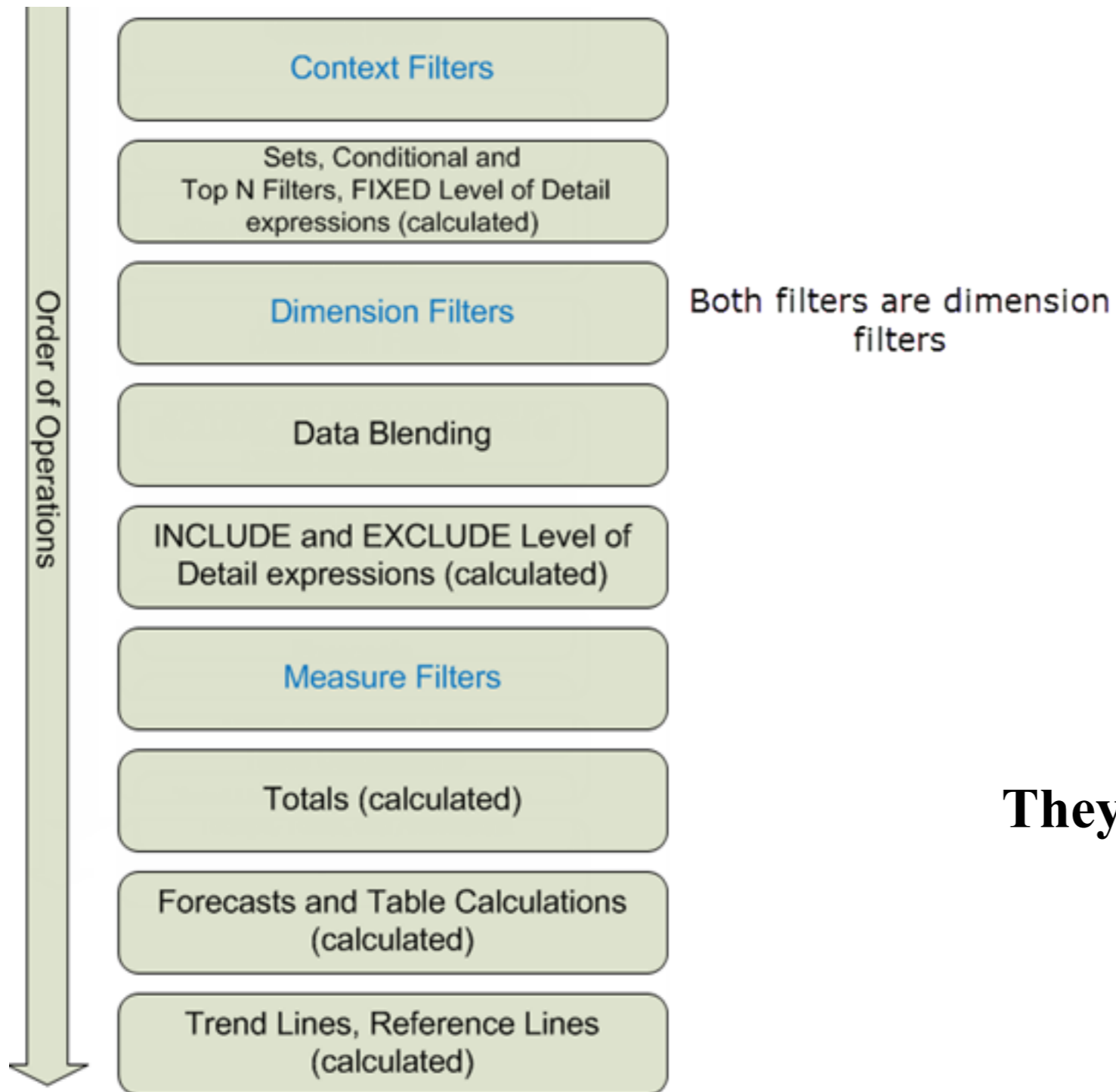


**With TOP 10 and New York City**

**New York City**



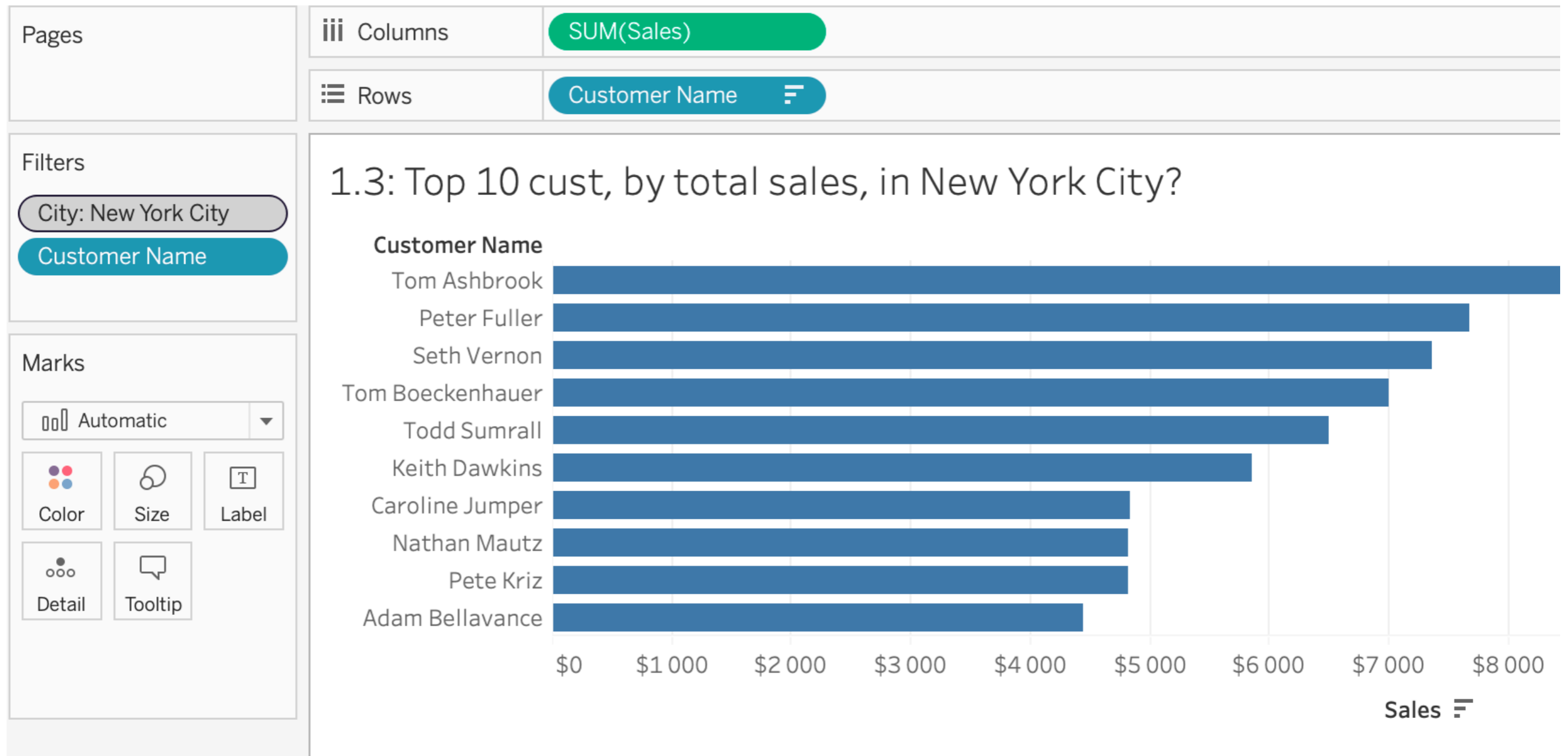
# Who are the top 10 customers, by total sales, in New York City?



**TOP 10 names by Total Sales**  
**City = 'New York City'**

**They are executed independently !**

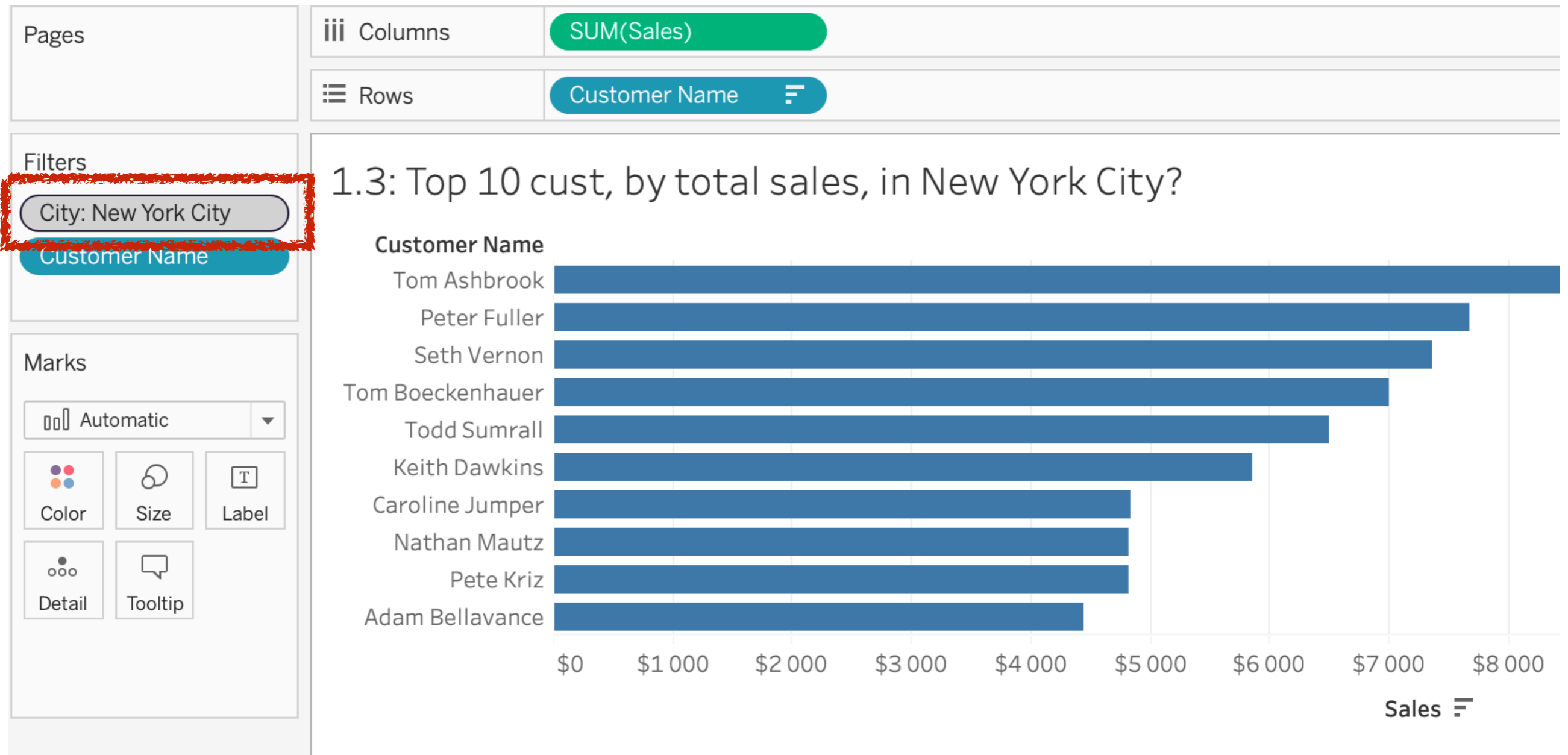
# Who are the top 10 customers, by total sales, in New York City?



Make a Dimension Filter as **Context**

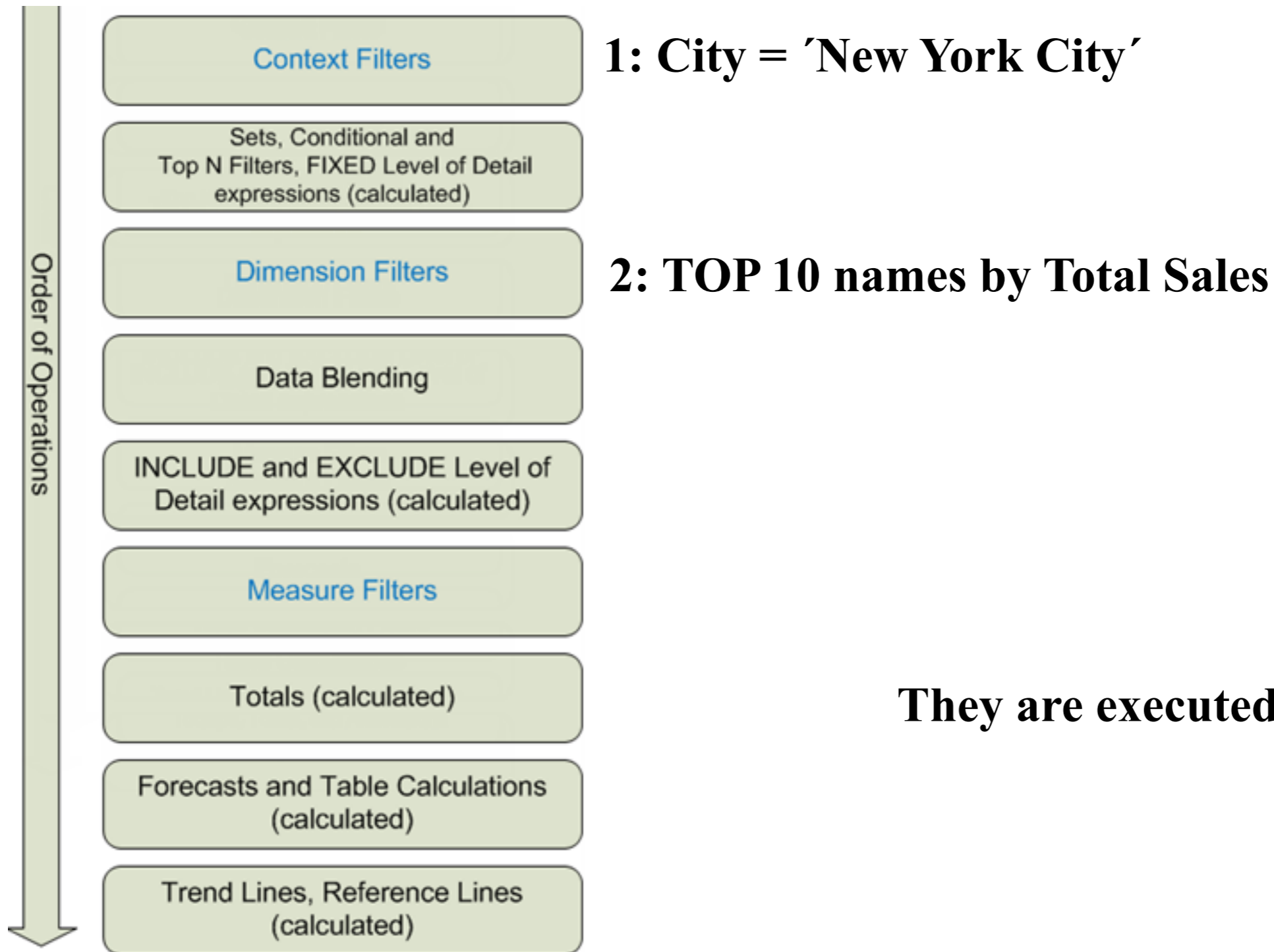


# Who are the top 10 customers, by total sales, in New York City?



Make a Dimension Filter as **Context**

# Who are the top 10 customers, by total sales, in New York City?



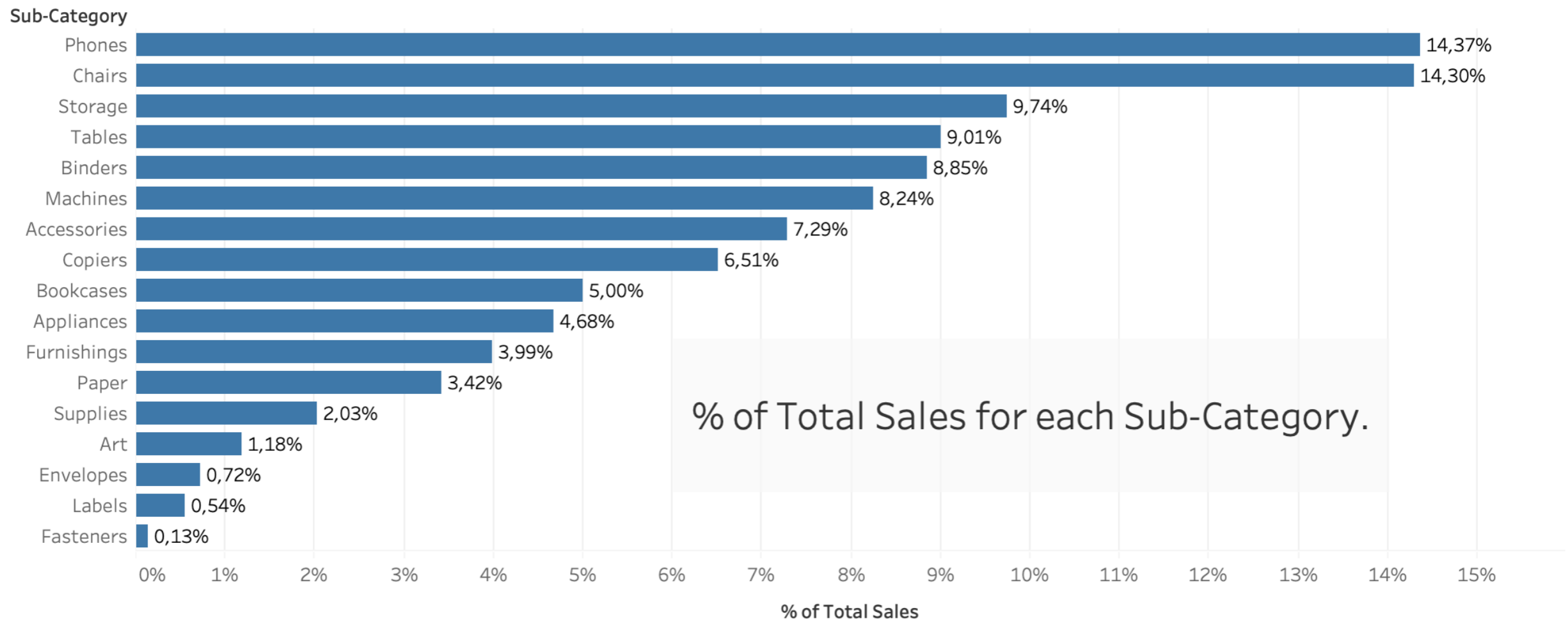
**They are executed sequentially !**

# What is the percent of total sales by product sub-category?

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# What is the percent of total sales by product sub-category?

2.1: Percent of total sales by product sub-category?



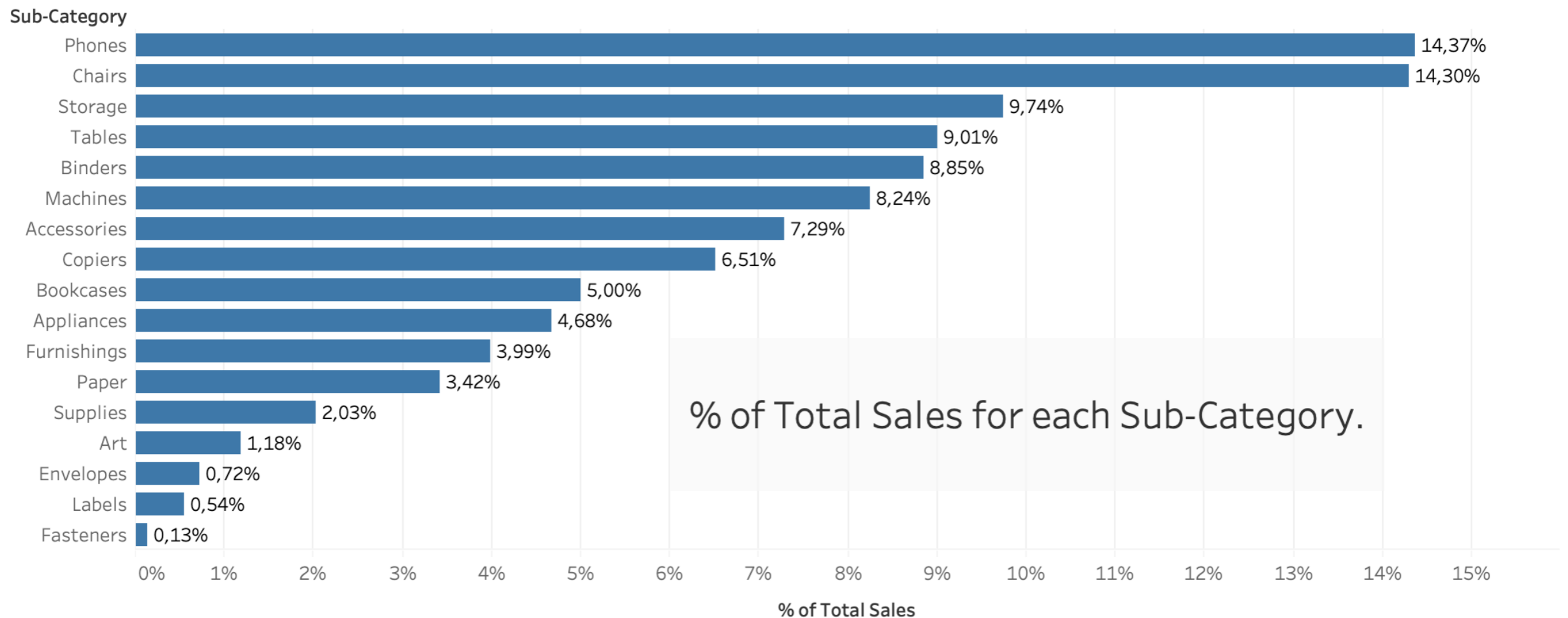
# What is the percent of total sales by product sub-category?

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Columns	SUM(Sales) <span>▲</span>
Rows	Sub-Category <span>☰</span>

## 2.1: Percent of total sales by product sub-category?

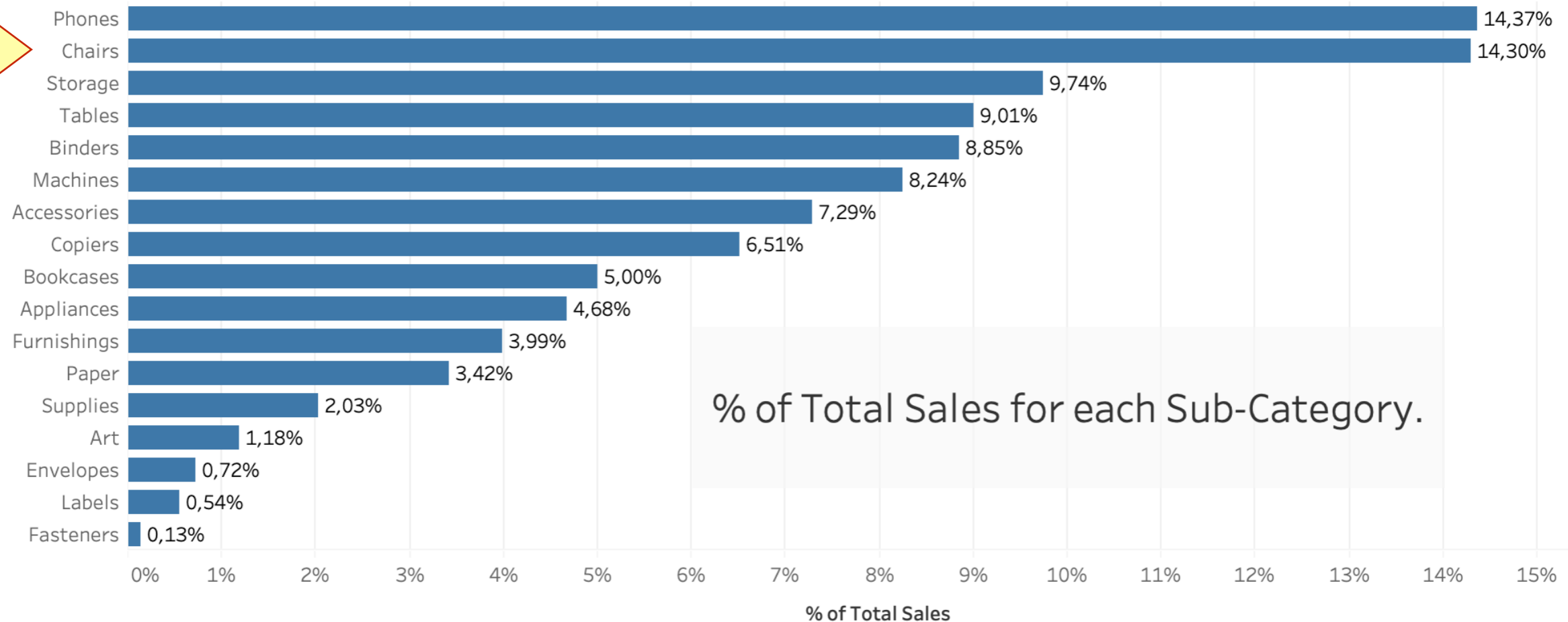


# What is the percent of total sales by product sub-category?

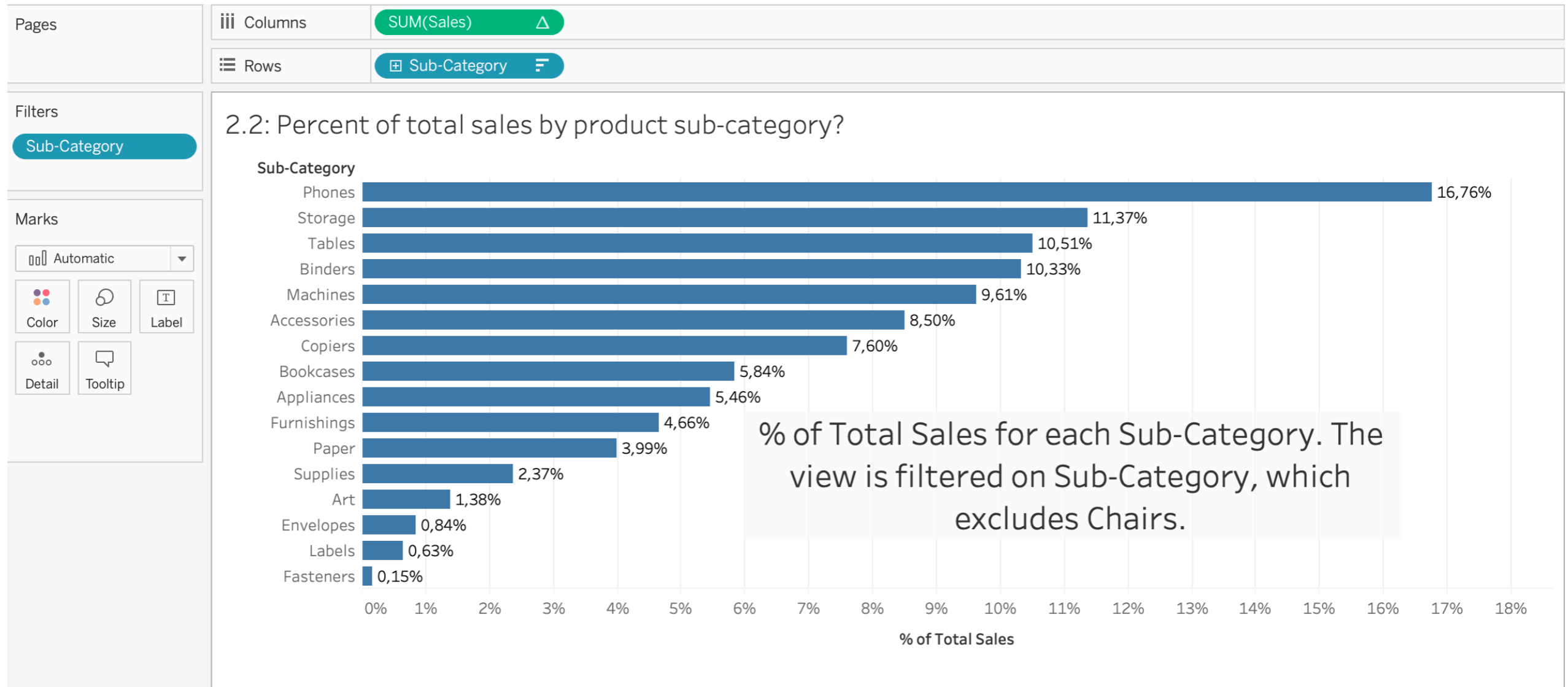
Columns	SUM(Sales)
Rows	Sub-Category

2.1: Percent of total sales by product sub-category?

Sub-Category

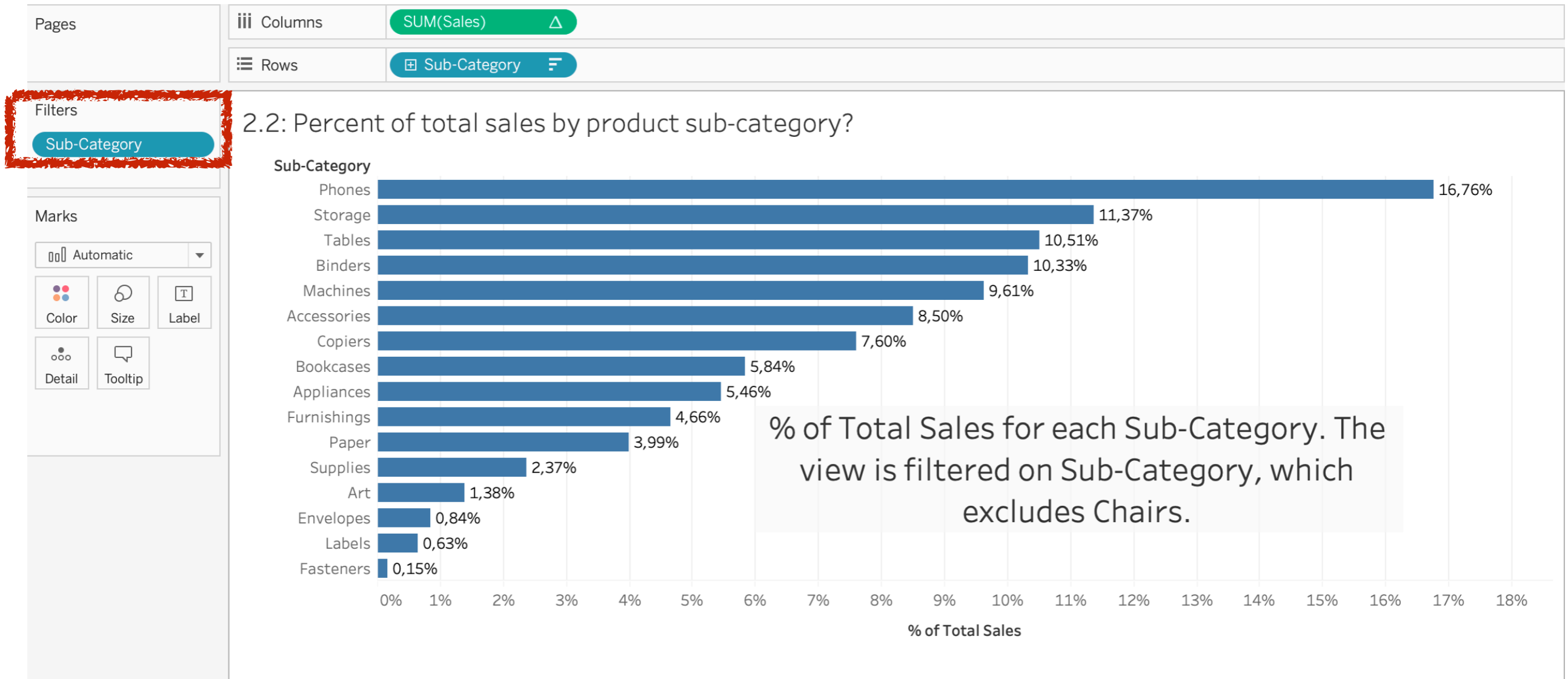


# What is the percent of total sales by product sub-category?

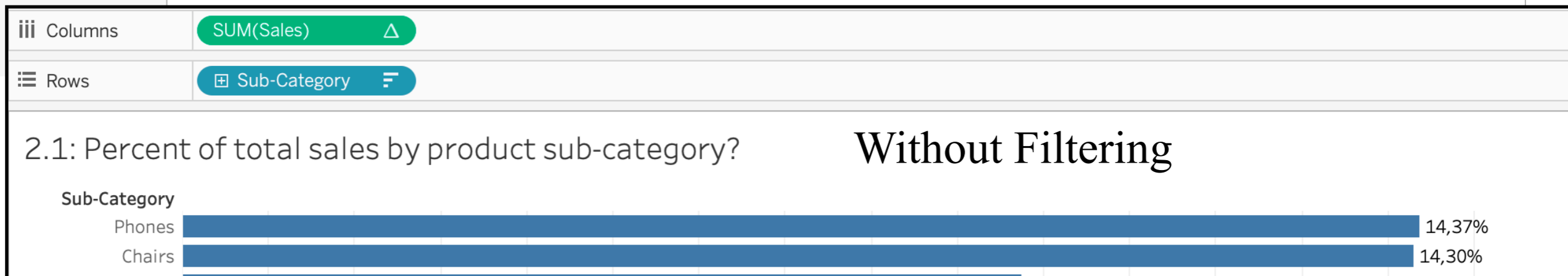
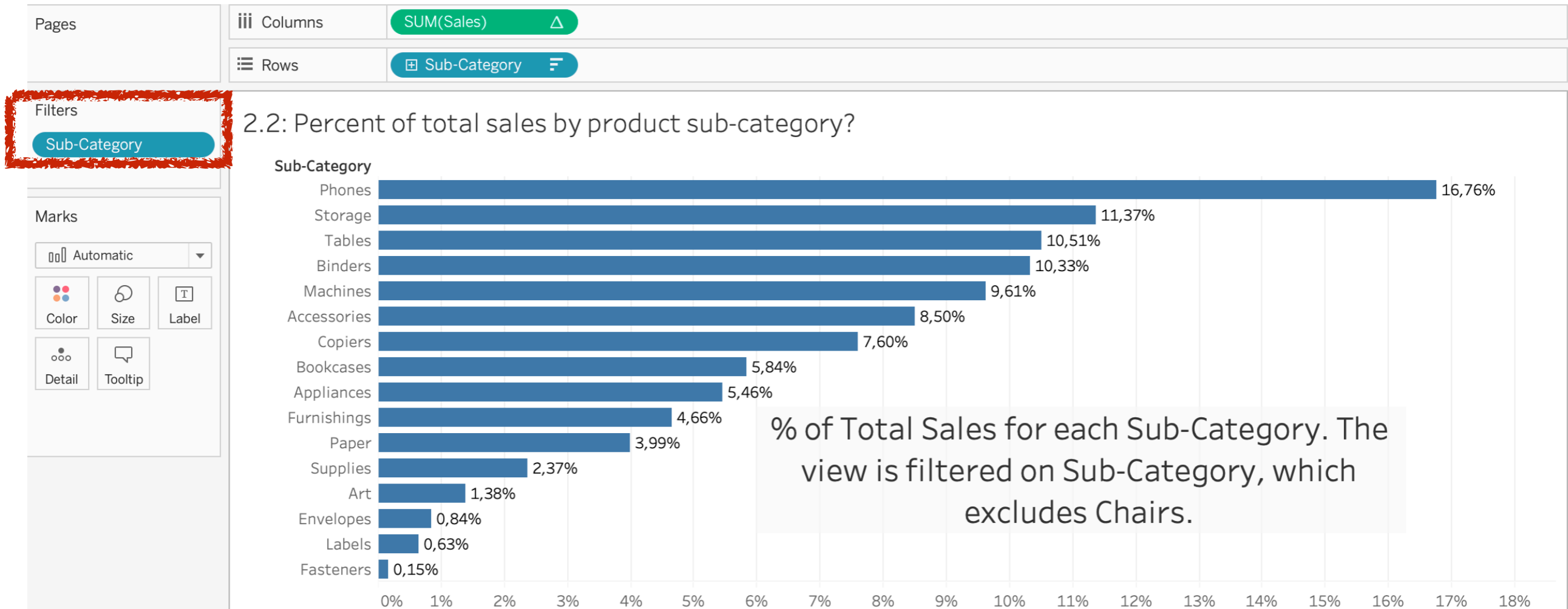




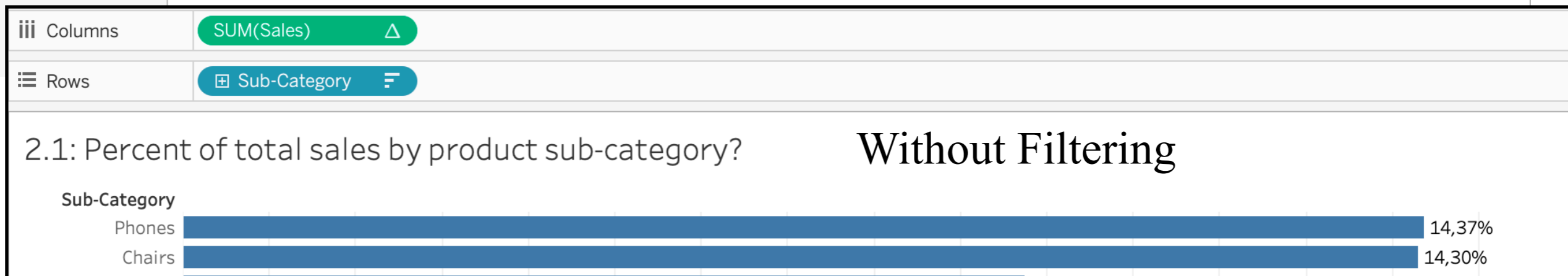
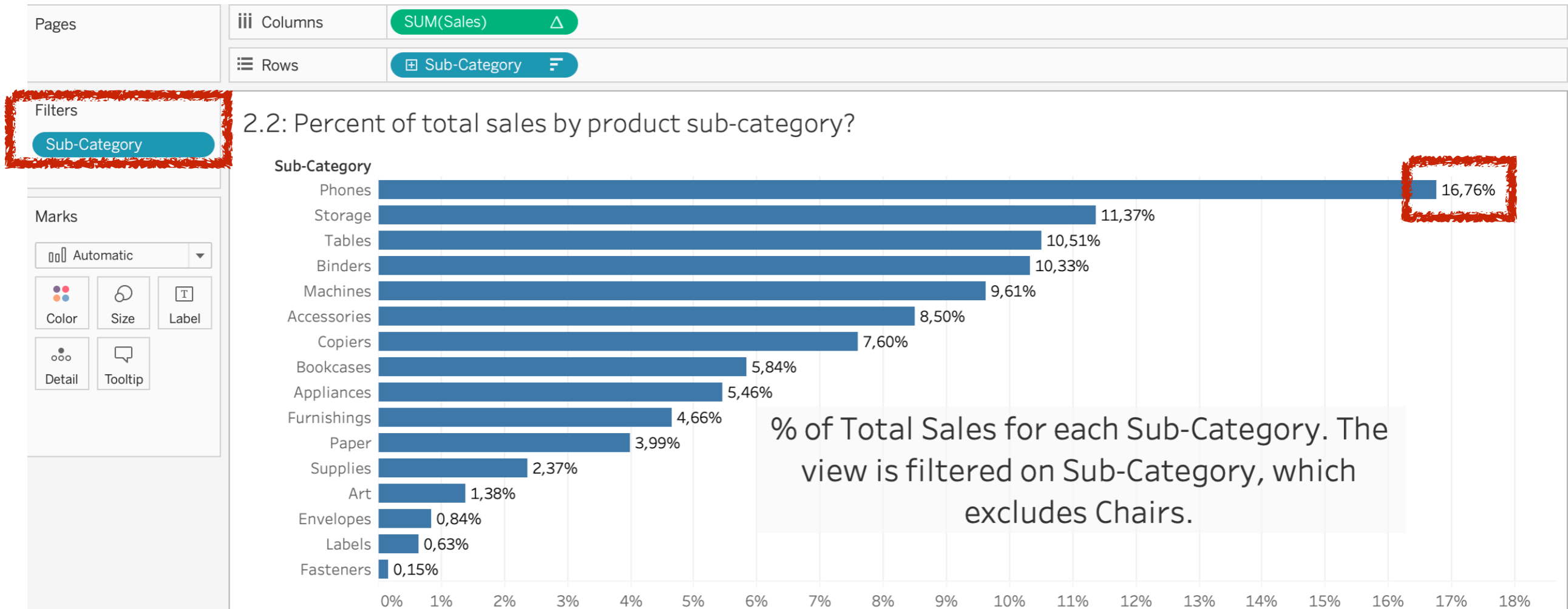
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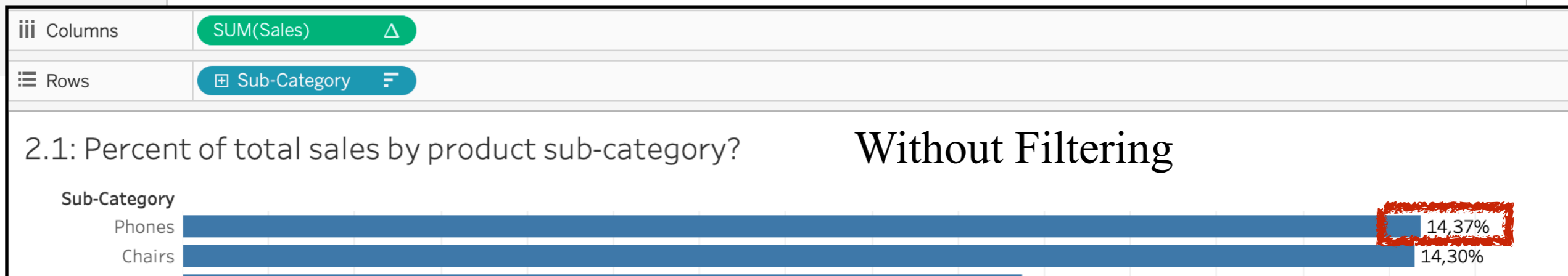
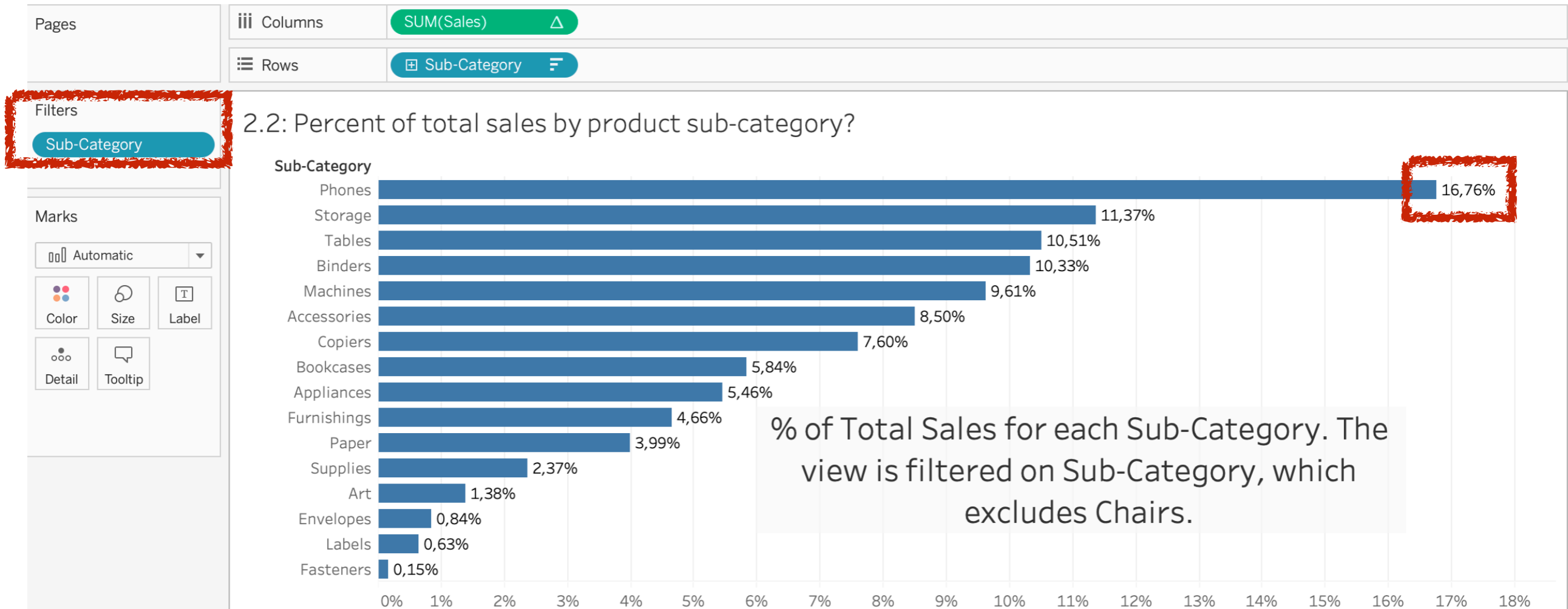
# What is the percent of total sales by product sub-category?



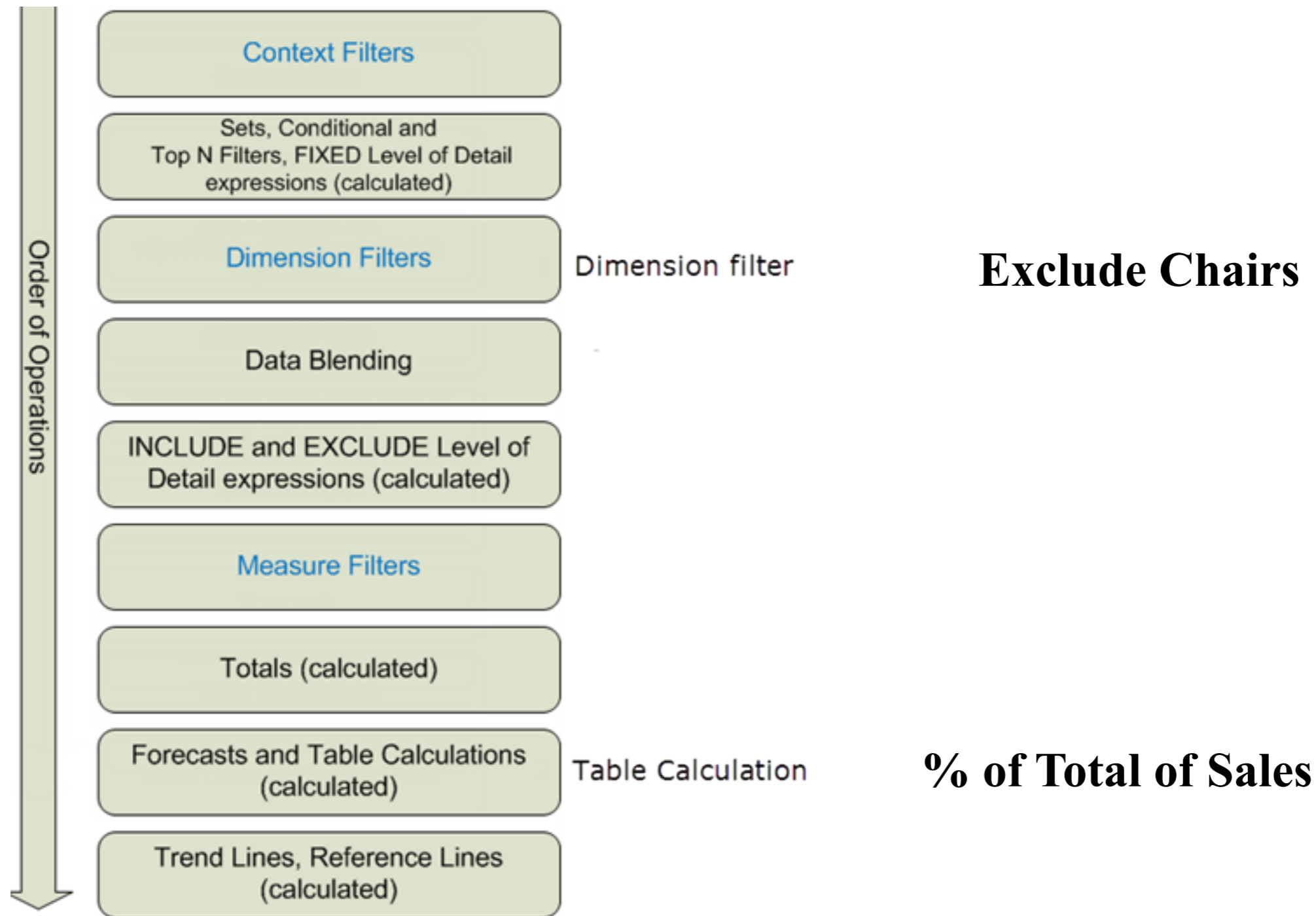
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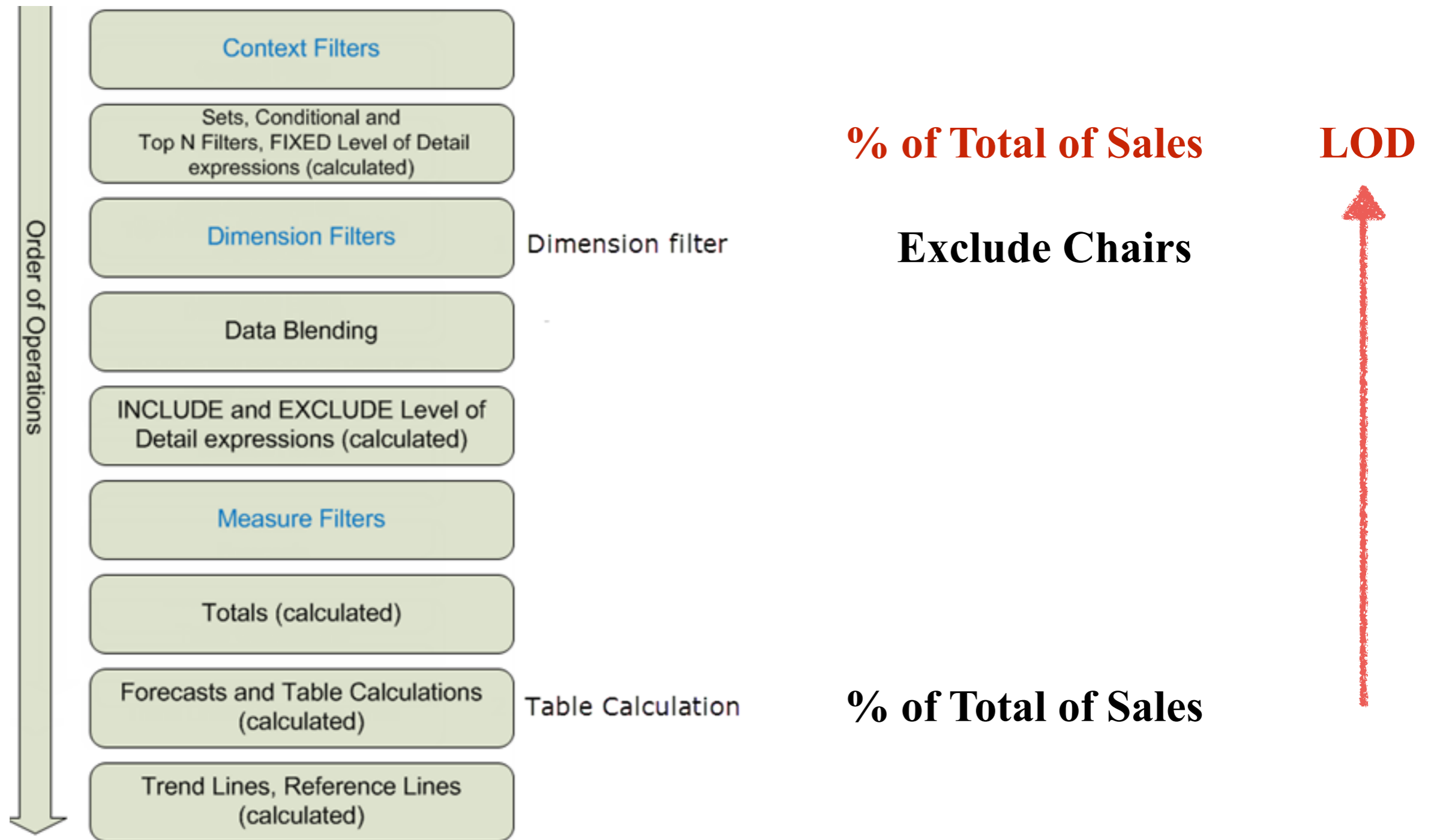
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# What is the percent of total sales by product sub-category?

LOD Percent Total of Sales per Sub-

```
SUM([Sales])/SUM({FIXED : SUM([Sales])})
```

# What is the percent of total sales by product sub-category?

LOD Percent Total of Sales per Sub-

---

$SUM([Sales]) / SUM(\{FIXED : SUM([Sales])\})$

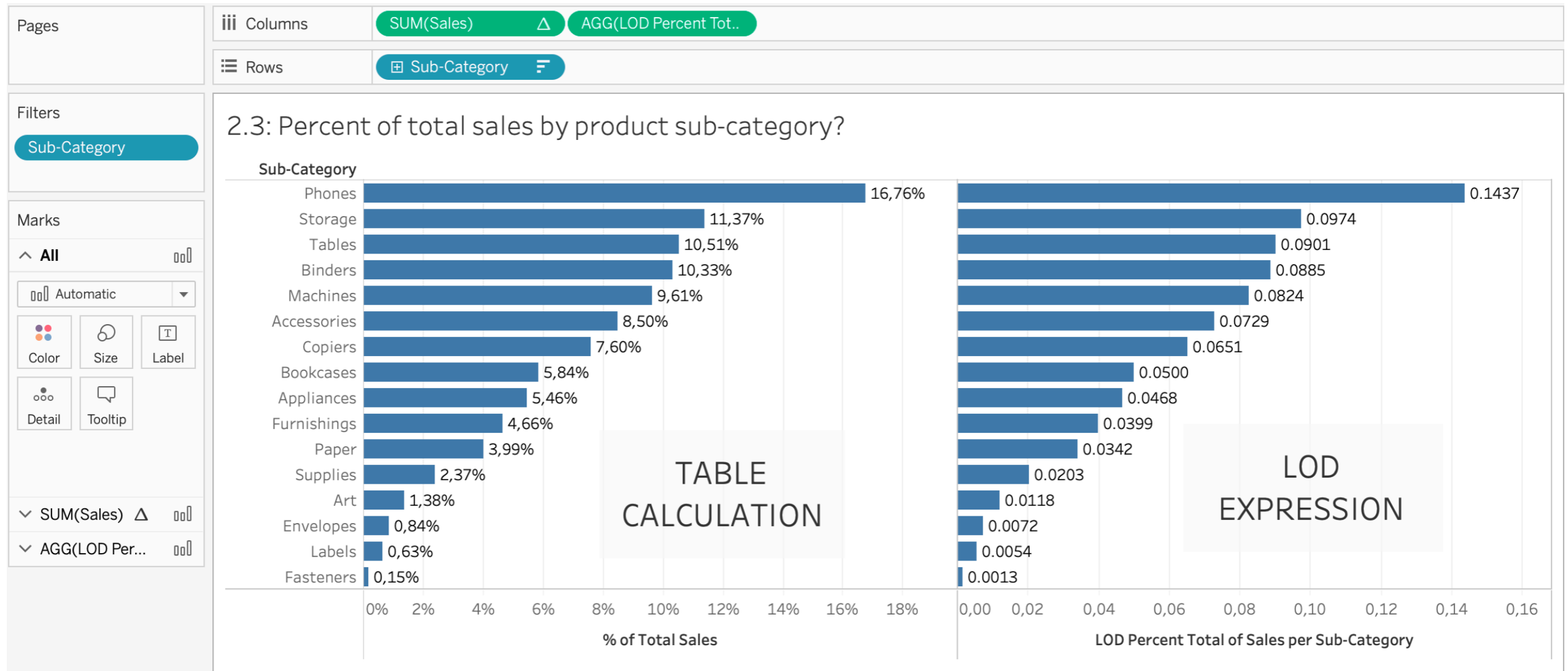
LOD Percent Total of Sales per Sub-

---

$SUM([Sales]) / SUM(\{SUM([Sales])\})$

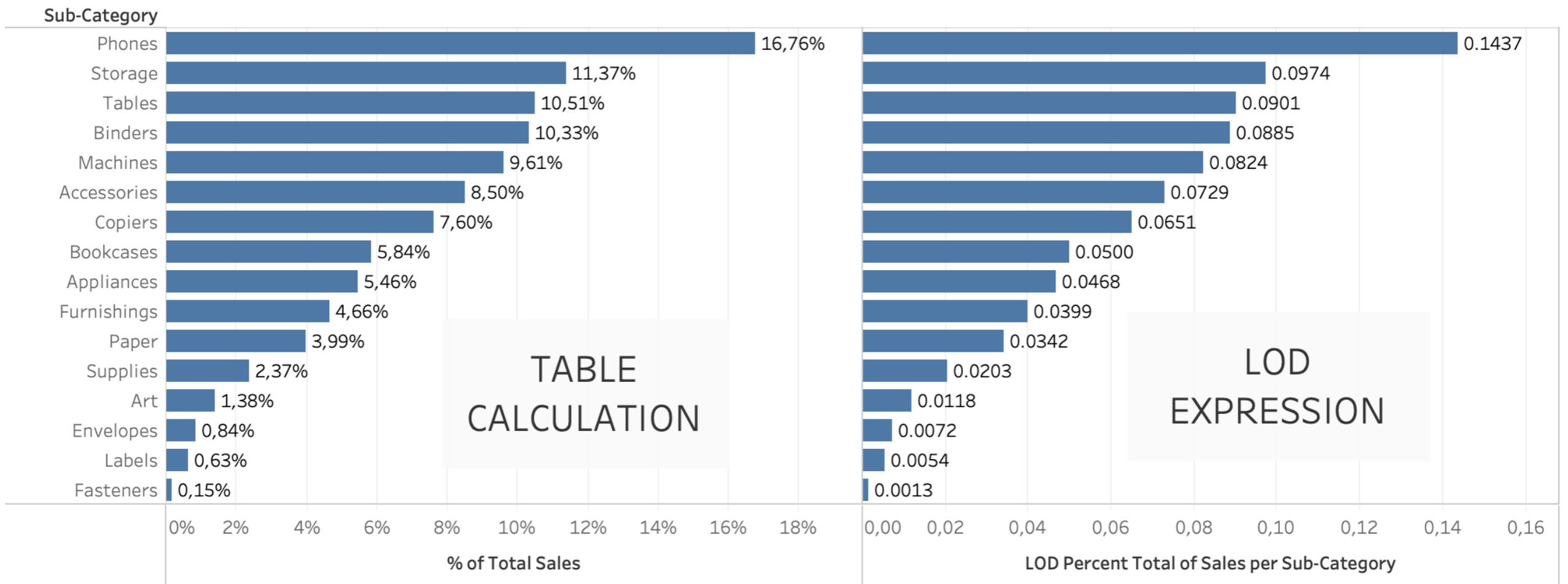


# What is the percent of total sales by product sub-category?



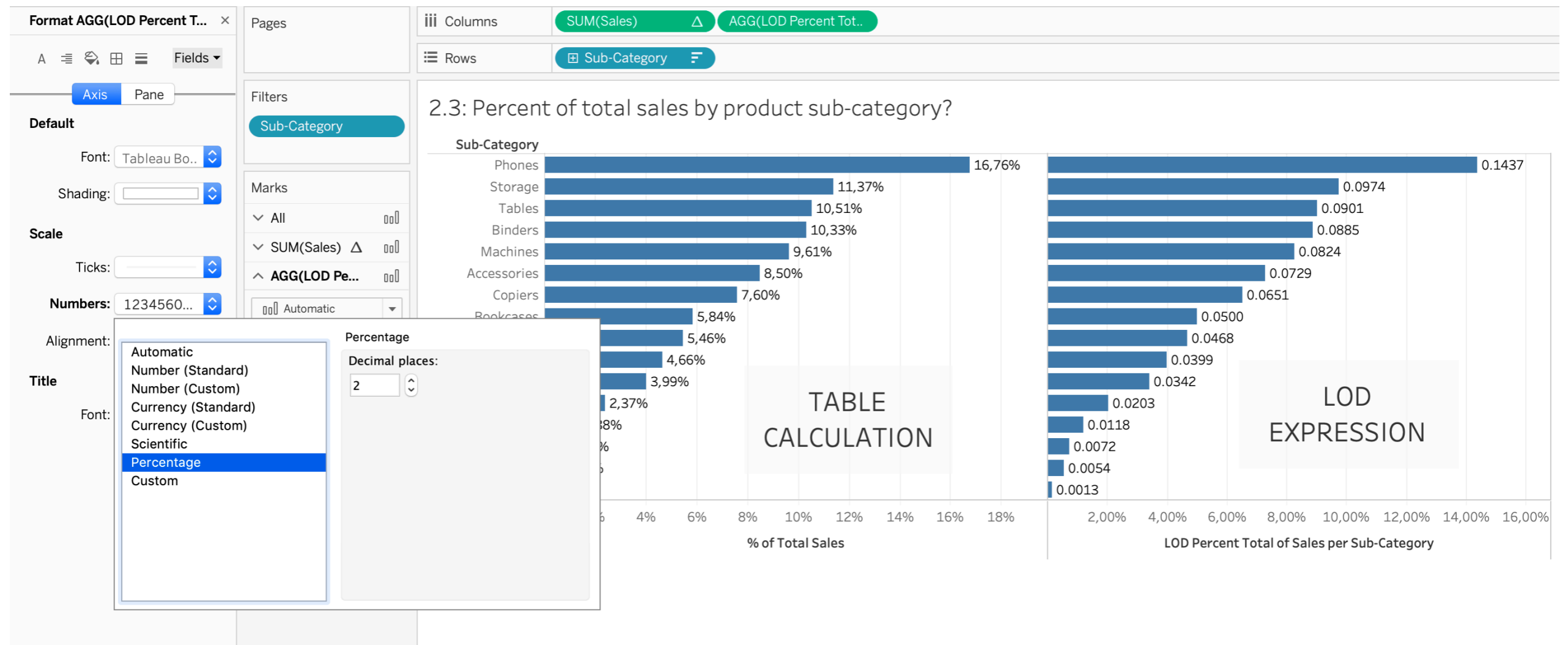
# What is the percent of total sales by product sub-category?

## 2.3: Percent of total sales by product sub-category?



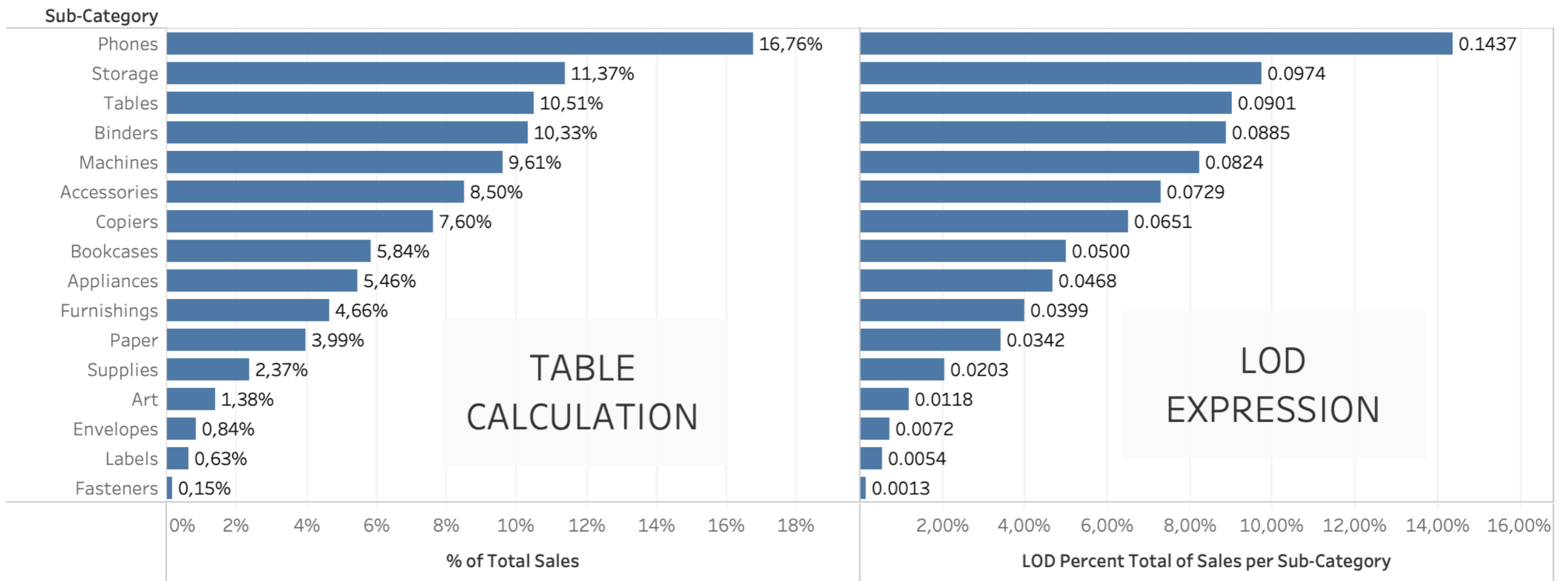
% of Total Sales and LOD Percent Total of Sales per Sub-Category for each Sub-Category. The view is filtered on Sub-Category, which excludes Chairs.

# What is the percent of total sales by product sub-category?



# What is the percent of total sales by product sub-category?

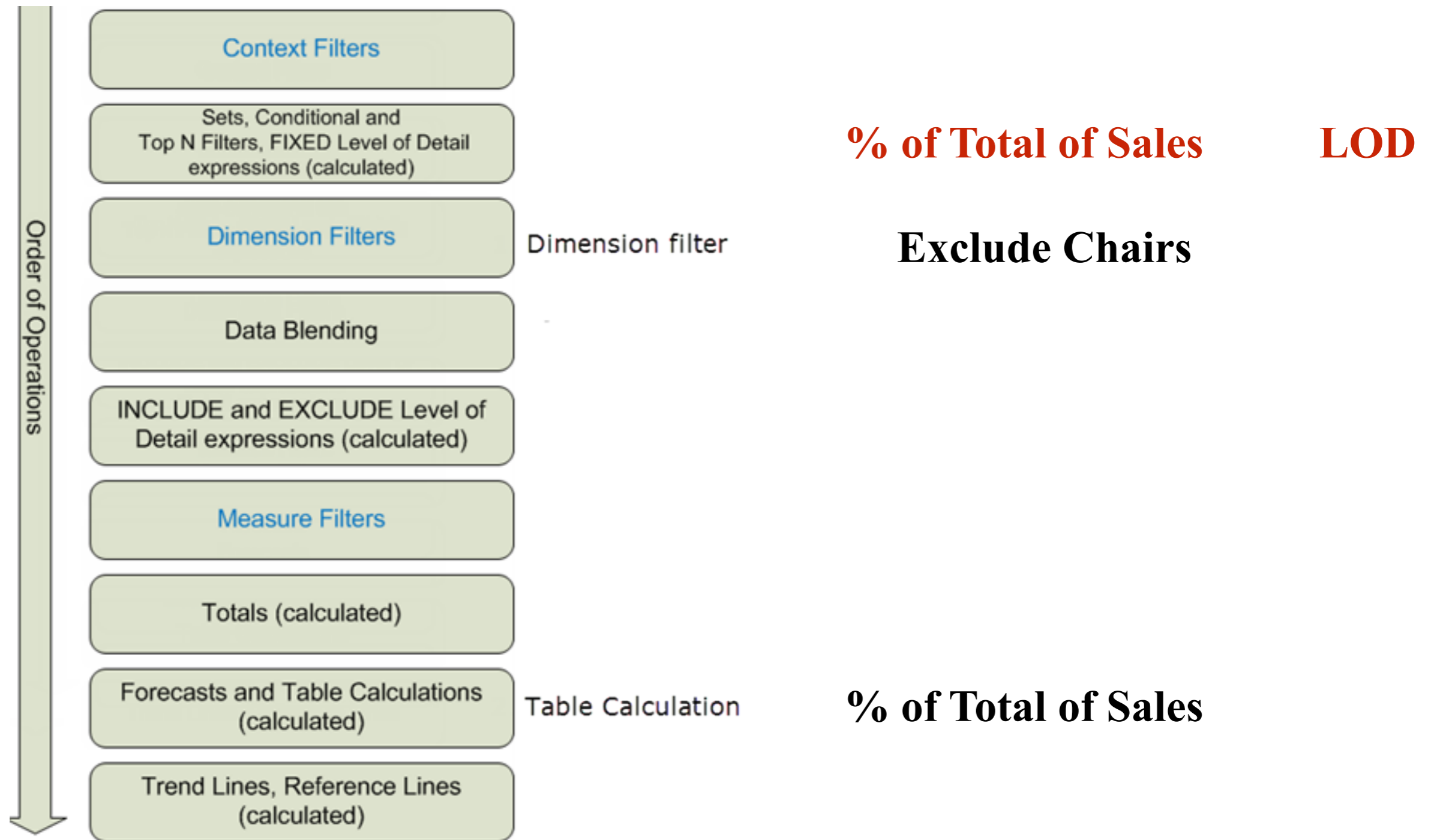
## 2.3: Percent of total sales by product sub-category?



% of Total Sales and LOD Percent Total of Sales per Sub-Category for each Sub-Category. The view is filtered on Sub-Category, which excludes Chairs.

## Exclude Chairs

# What is the percent of total sales by product sub-category?



# Recommended Activity

[https://youtu.be/fyDY0\\_Ivy54](https://youtu.be/fyDY0_Ivy54)

**TABLEAU CONFERENCE**

## The Query Pipeline (2018.2)

EX1 - Query Pipeline

- Extract Filters**
- Data Source Filters**
- Context Filters**
- Dimension Filters**
  - 1: Sets, Conditional Filters, **Top N**, Fixed LOD
  - 2: Dimension Filter – City (Iowa City)
- Measure Filters**
  - Include/Exclude LOD, Simple Aggregations, Data Blending
- Table Calc Filters**
  - Forecasts, Table Calcs, Clustering
  - Trend Lines, Reference Lines, Pages

Top 10 Description by Total

## Filtering data in tableau

# Types of Filters and Order of Operation

- **Extract Filters**
- **Data Source Filters**
- **Context Filters**
- **Dimension Filters**
- **Measure Filters**



# Extract Filters

Connection

Live

Extract

[Edit](#)

Extract will include all data.

Extract Data

Specify how to store data in the extract:

Data Storage

Single table  Multiple tables

Store data in your extract together using a single table. [Learn more](#)

Use this option if you need to use extract filters, aggregation, top N, etc.

Specify how much data to extract:

Filters (optional)

Filter	Details
--------	---------

Add... Edit... Remove

Aggregation

Aggregate data for visible dimensions

Roll up dates to

Number of Rows

All rows

Incremental refresh

Top:  rows

Sample:  rows

History... Hide All Unused Fields Cancel OK

# Extract Filters

Connection

Live  Extract | [Edit](#)

Extract will include all data.

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# Extract Filters

Connection

Live       Extract | [Edit](#)

Extract will include all data.

Aggregation

Aggregate data for visible dimensions

Roll up dates to

Number of Rows

All rows

Incremental refresh

Top:  rows

Sample:  rows

History...

Hide All Unused Fields

Cancel

OK

# Data Source Filters

Connection Filters  
 Live  Extract 0 | [Add](#)

Connection Filters  
 Live  Extract | [Edit](#) Refresh 0 | [Add](#)  
Extract will include all data.

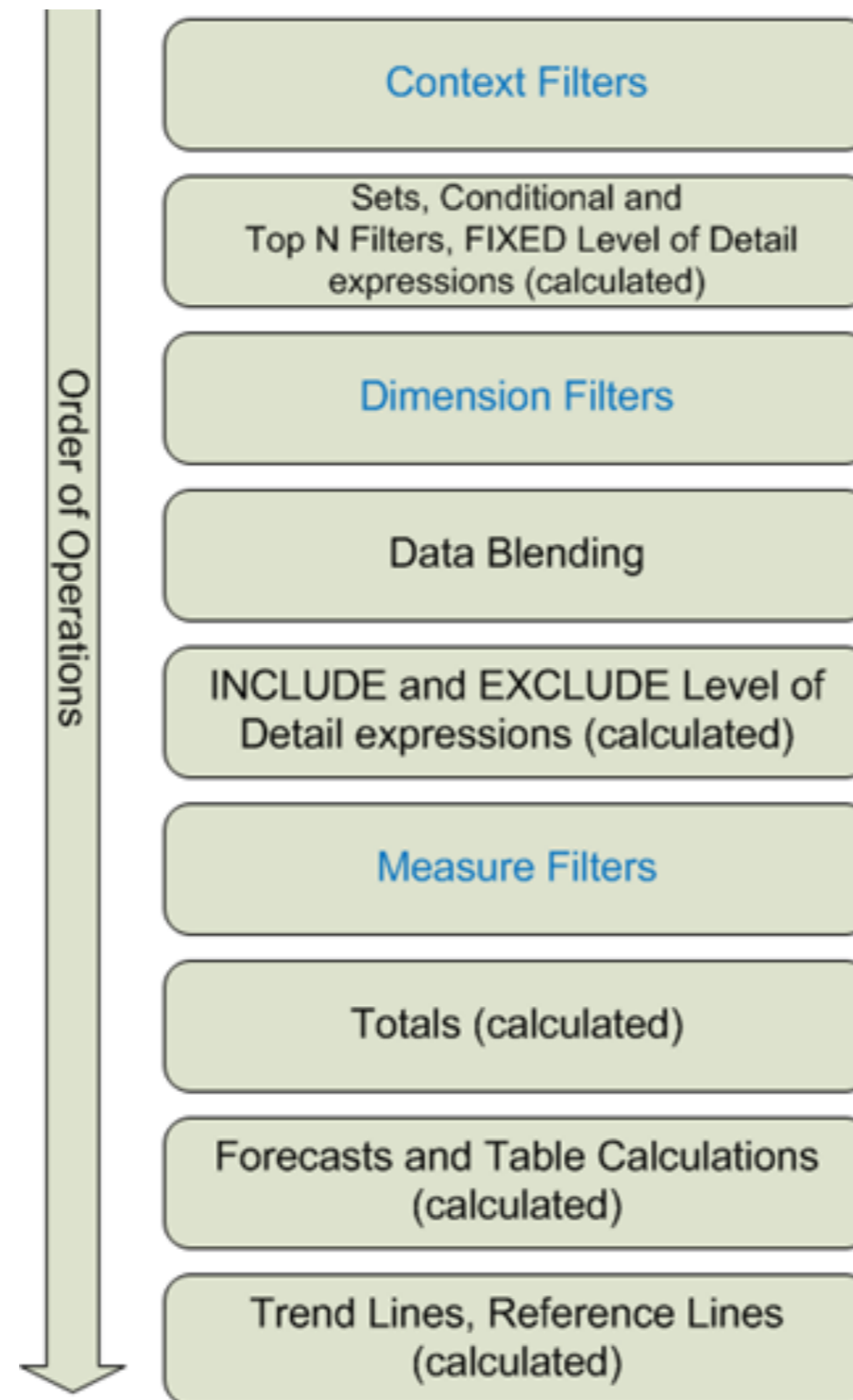
Edit Data Source Filters

Filter	Details
--------	---------

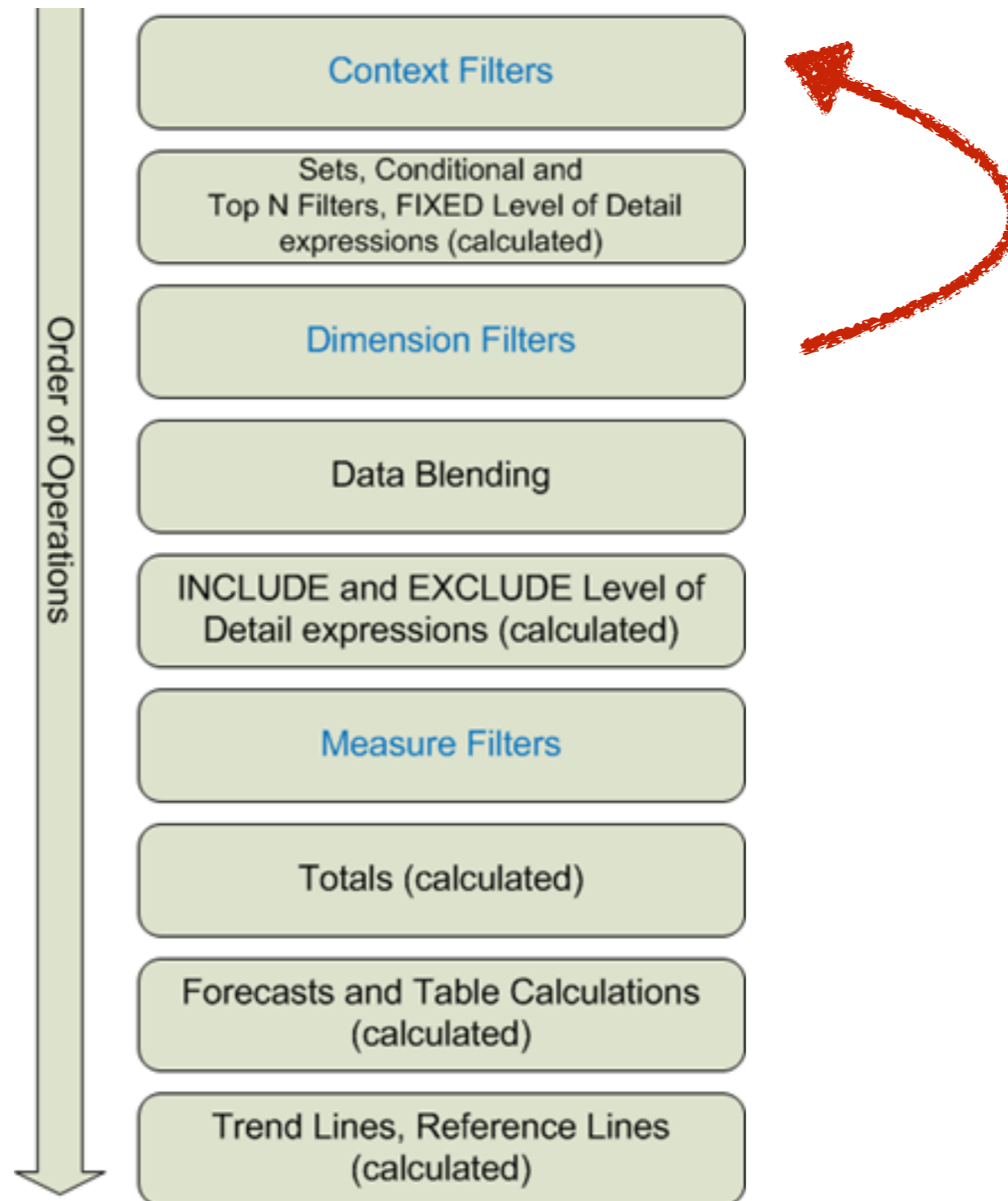
[Add...](#) [Edit...](#) [Remove](#)

[Cancel](#) [OK](#)

# Extract and Data Source Filters



# Extract and Data Source Filters

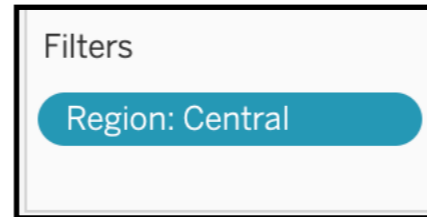


# Types of Filters and Order of Operation

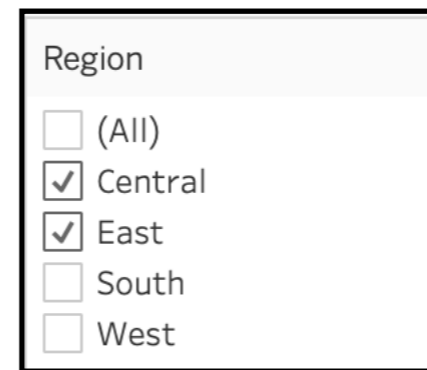
- Extract Filters
- Data Source Filters
- Context Filters
- **Dimension Filters**
- **Measure Filters**

# Ways of filtering

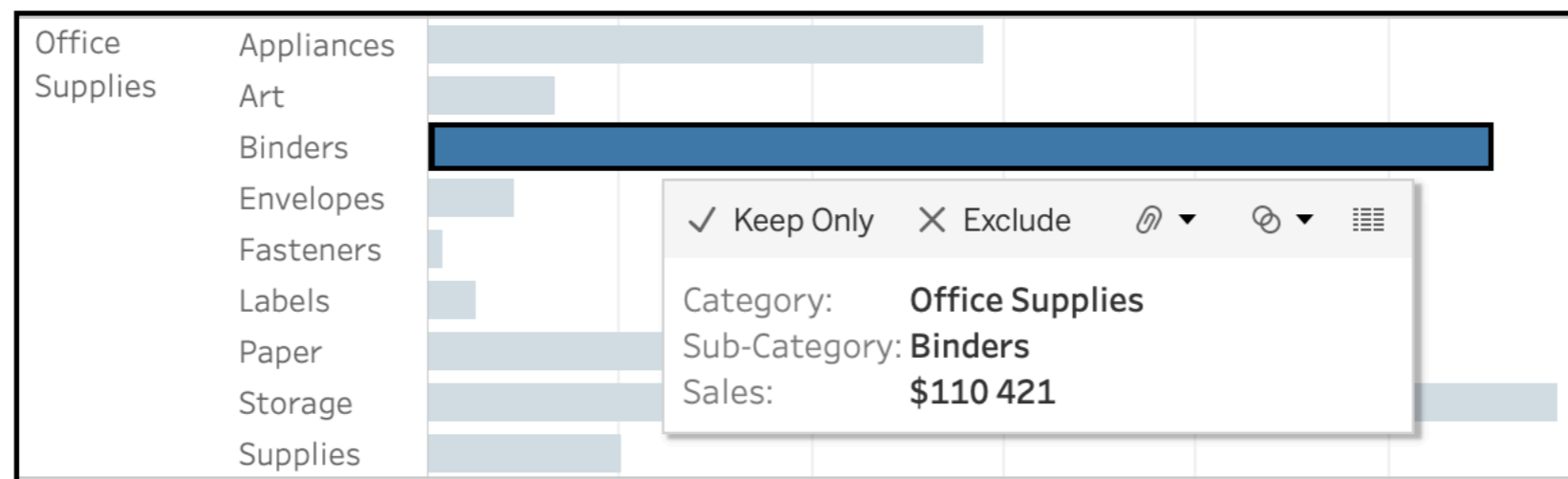
## ■ Filter Shelf



## ■ Interactive Filter



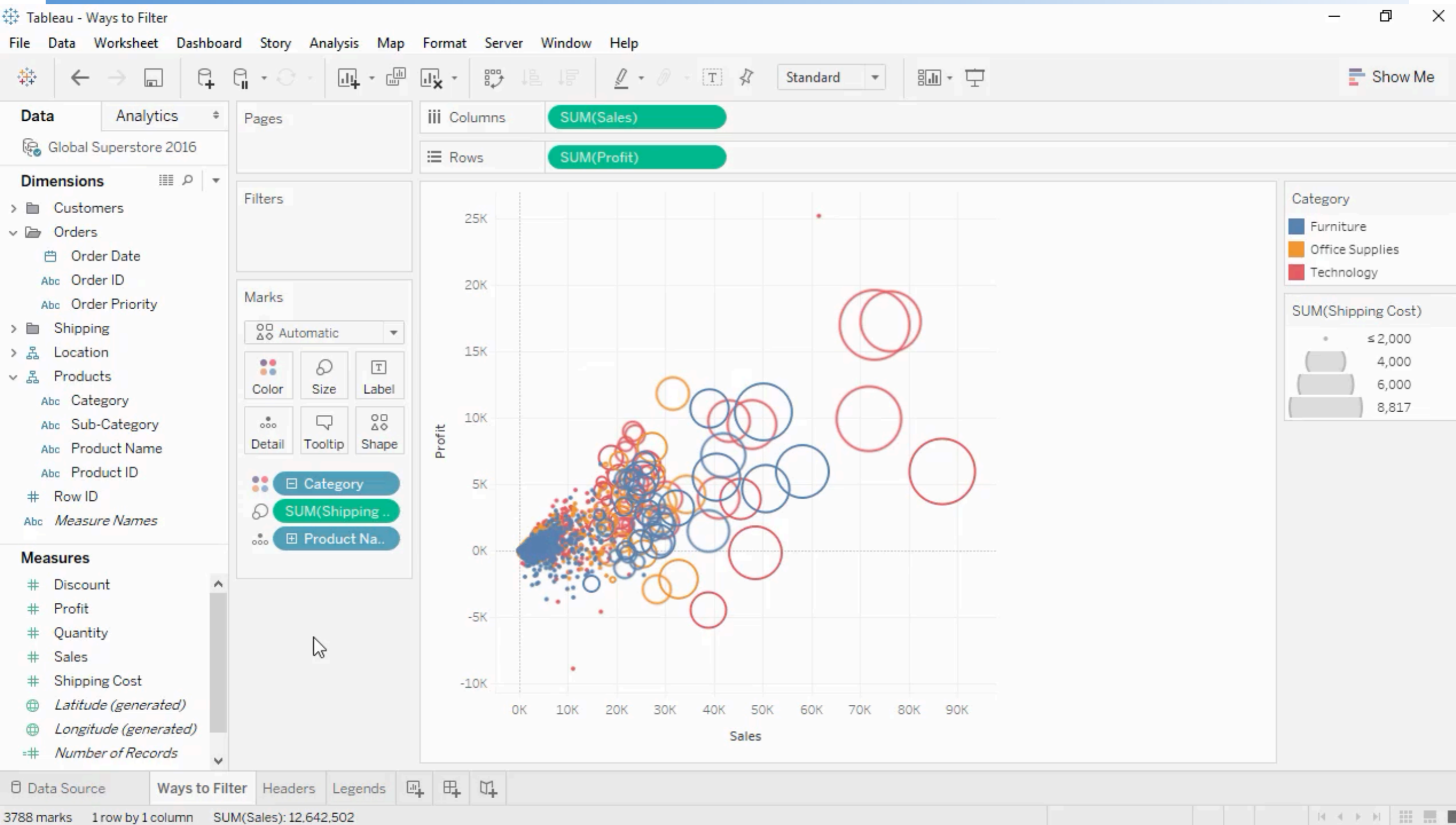
## ■ View





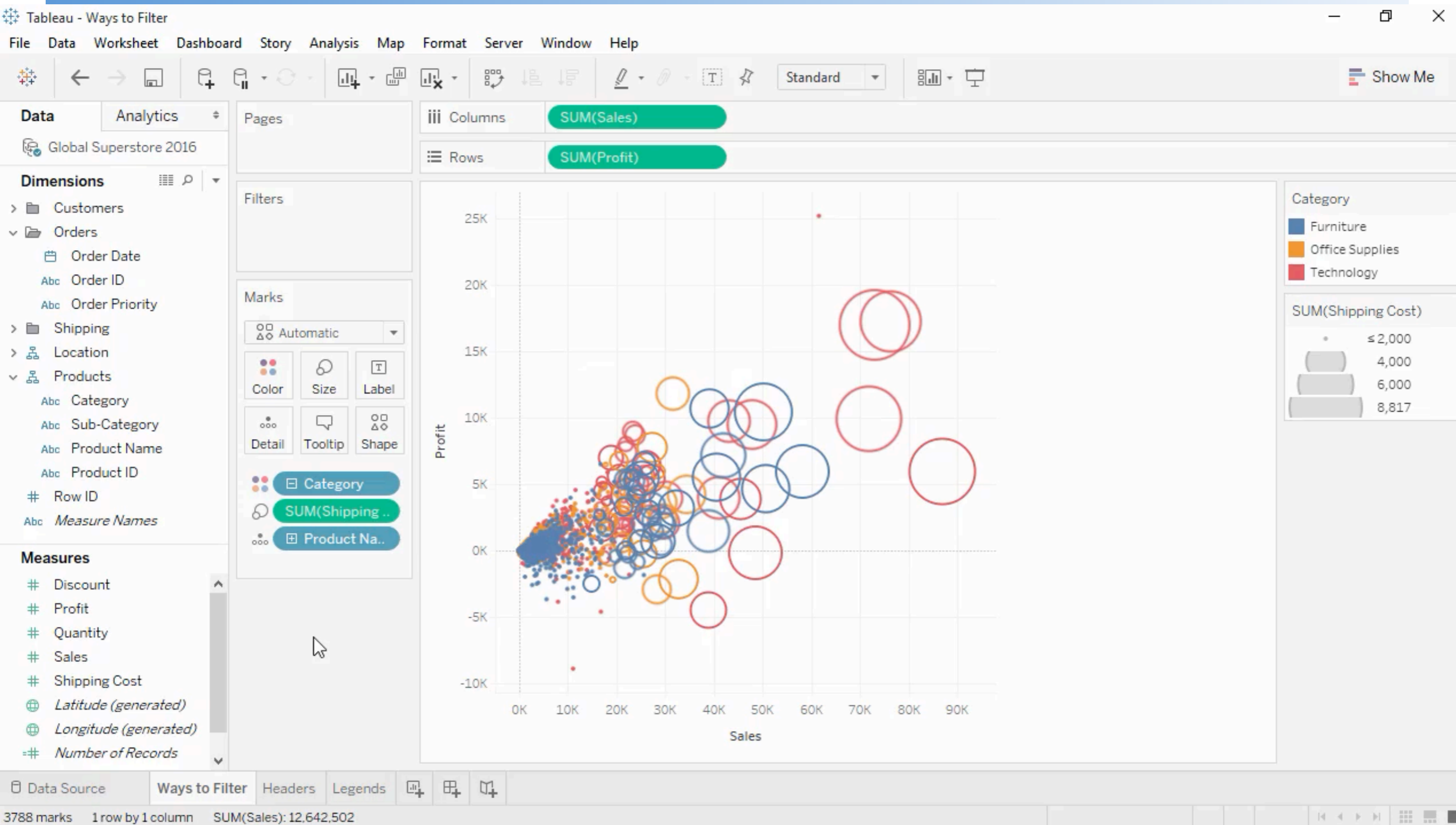
# Ways of filtering

[Link to video](#)



# Ways of filtering

[Link to video](#)



# Filtering data in tableau - Discrete Fields

- **Select from a list of values**
  - ◆ **Exclude versus include**
  - ◆ **Use All - Comprehension**

# Filtering data in tableau - Discrete Fields

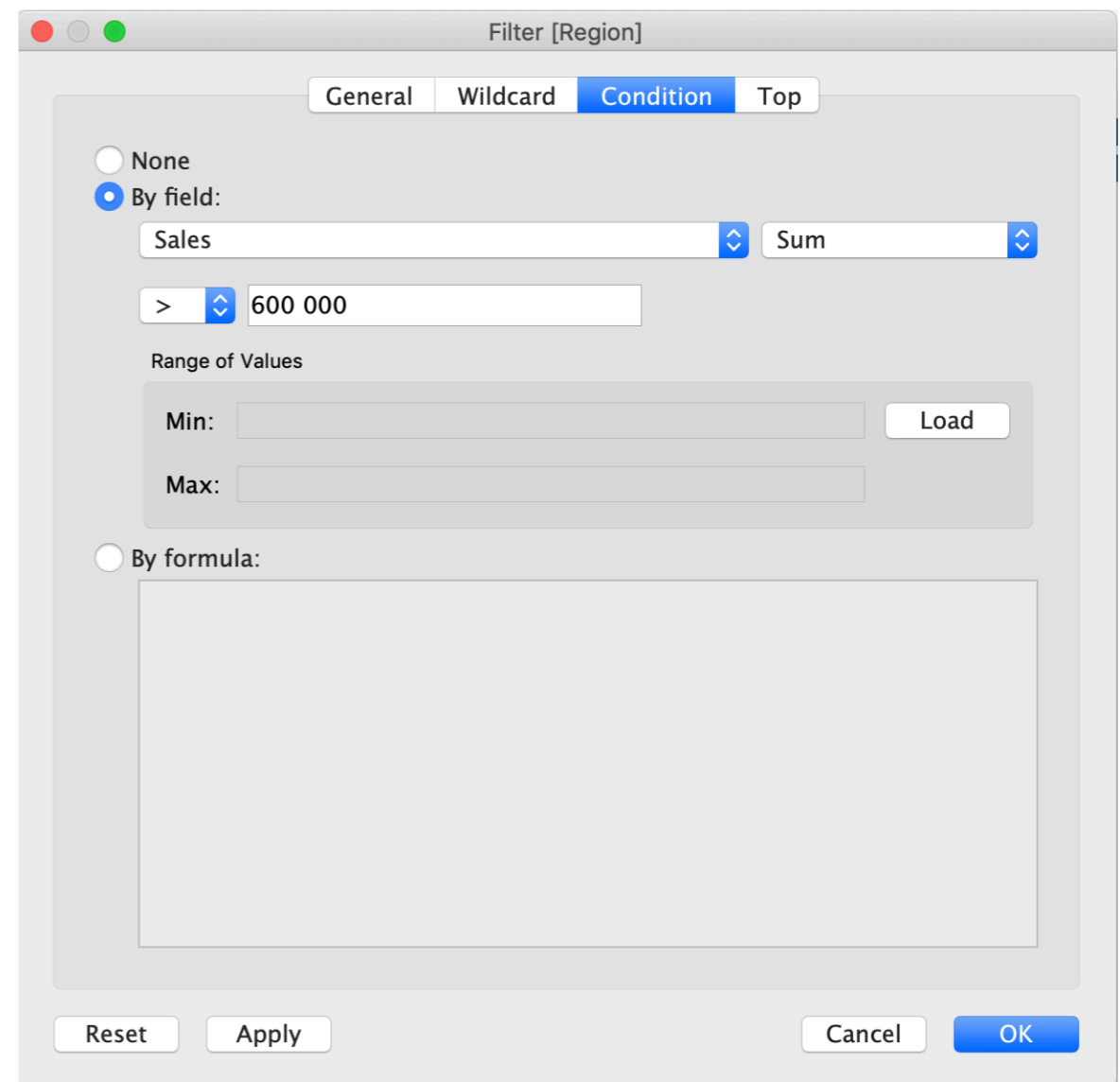
- **Select from a list of values**
  - ◆ **Exclude versus include**
  - ◆ **Use All - Comprehension**
- **Wildcard (Exclude versus include)**

# Filtering data in tableau - Discrete Fields

- **Select from a list of values**
  - ◆ **Exclude versus include**
  - ◆ **Use All - Comprehension**
- **Wildcard (Exclude versus include)**
- **Condition**
  - ◆ **By field**
  - ◆ **By Formula**

# Filtering data in tableau - Discrete Fields

- **Select from a list of values**
    - ◆ **Exclude versus include**
    - ◆ **Use All - Comprehension**
  - **Wildcard (Exclude versus include)**
  - **Condition**
    - ◆ **By field**
    - ◆ **By Formula**
- HAVING clause**



# Filtering data in tableau - Discrete Fields

- **Select from a list of values**
  - ◆ **Exclude versus include**
  - ◆ **Use All - Comprehension**
- **Wildcard (Exclude versus include)**
- **Condition**
  - ◆ **By field**
  - ◆ **By Formula**

**HAVING clause**

**Depends on the granularity of the visualization**

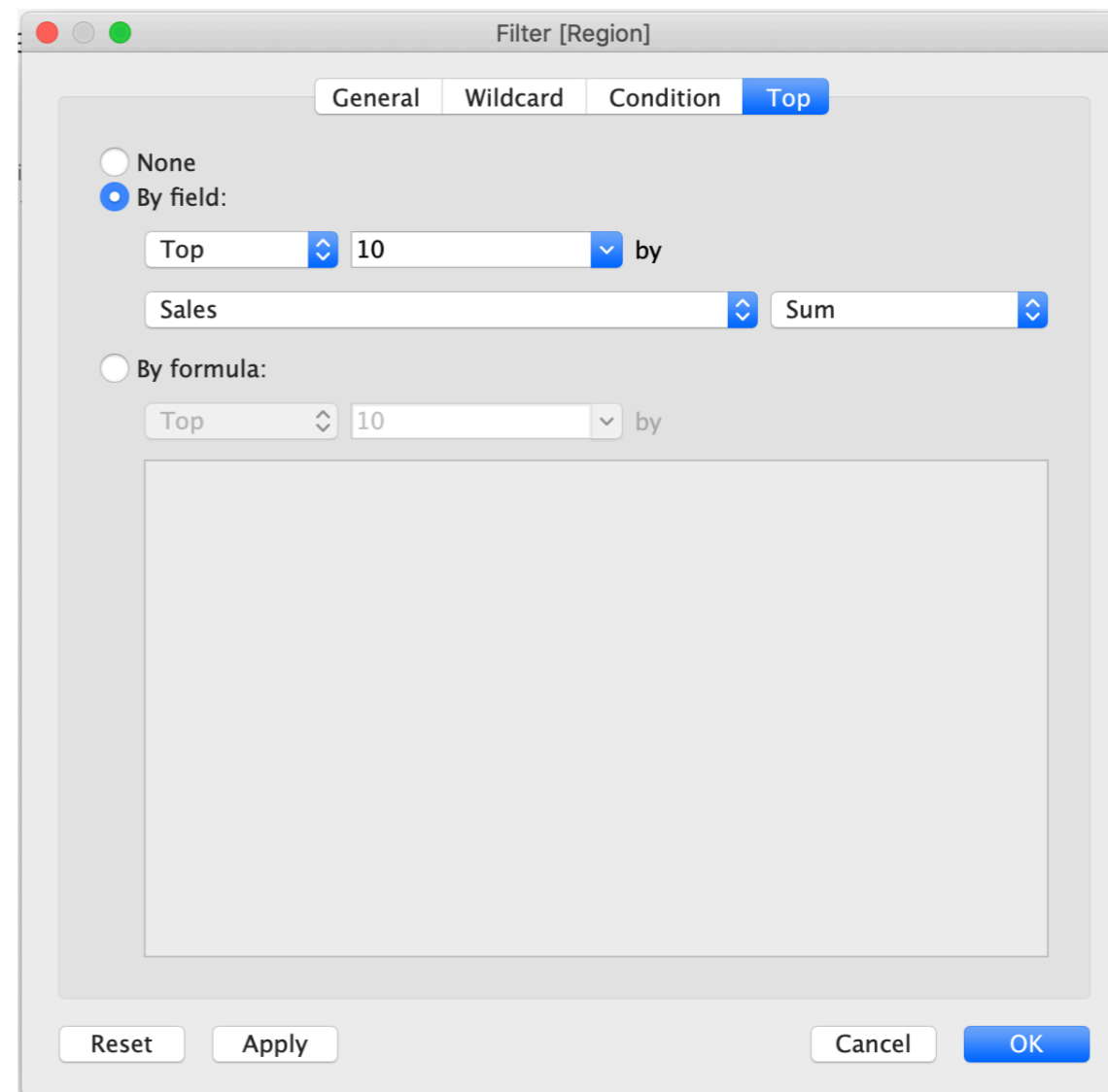
The screenshot shows the 'Filter [Region]' dialog box in Tableau, specifically the 'Condition' tab. The 'By field:' radio button is selected, and the field is set to 'Sales' with the aggregation function 'Sum'. The condition is set to '>' with a value of '600 000'. There are also 'Range of Values' fields for 'Min' and 'Max', and a 'By formula:' section. Buttons for 'Reset', 'Apply', 'Cancel', and 'OK' are at the bottom.

# Filtering data in tableau - Discrete Fields

## ■ TOP

◆ By field

◆ By Formula





# Filtering data in tableau - Discrete Fields

[Link to video](#)

The screenshot shows the Tableau interface with the 'Filter [Market]' dialog box open. The dialog has four tabs: 'General', 'Wildcard', 'Condition', and 'Top'. The 'General' tab is active, showing radio buttons for 'Select from list' (selected), 'Custom value list', and 'Use all'. Below this is a search box and a list of market values: Africa, Asia Pacific, Europe, LATAM, and USCA. The 'USCA' checkbox is checked. At the bottom of the dialog, there are 'All' and 'None' buttons, and an 'Exclude' checkbox which is also checked. A 'Summary' section shows: Field: [Market], Selection: Excluded 1 of 5 values, Wildcard: All, Condition: None, Limit: None. The dialog has 'Reset', 'OK', 'Cancel', and 'Apply' buttons at the bottom.

The background shows a Tableau dashboard with a bar chart. The chart has 'Market' on the vertical axis (Africa, Asia P, Europe, LATAM) and 'Product Category' on the horizontal axis (Paper, Storage, Supplies, Accessories, Copiers, Machines, Phones). The measure is 'SUM(Profit)'. A color legend for 'SUM(Profit)' is visible on the right, ranging from -19,929 to 82,237. The status bar at the bottom indicates '68 marks', '4 rows by 17 columns', and 'SUM(Profit): 1,163,243'.

# Filtering data in tableau - Discrete Fields

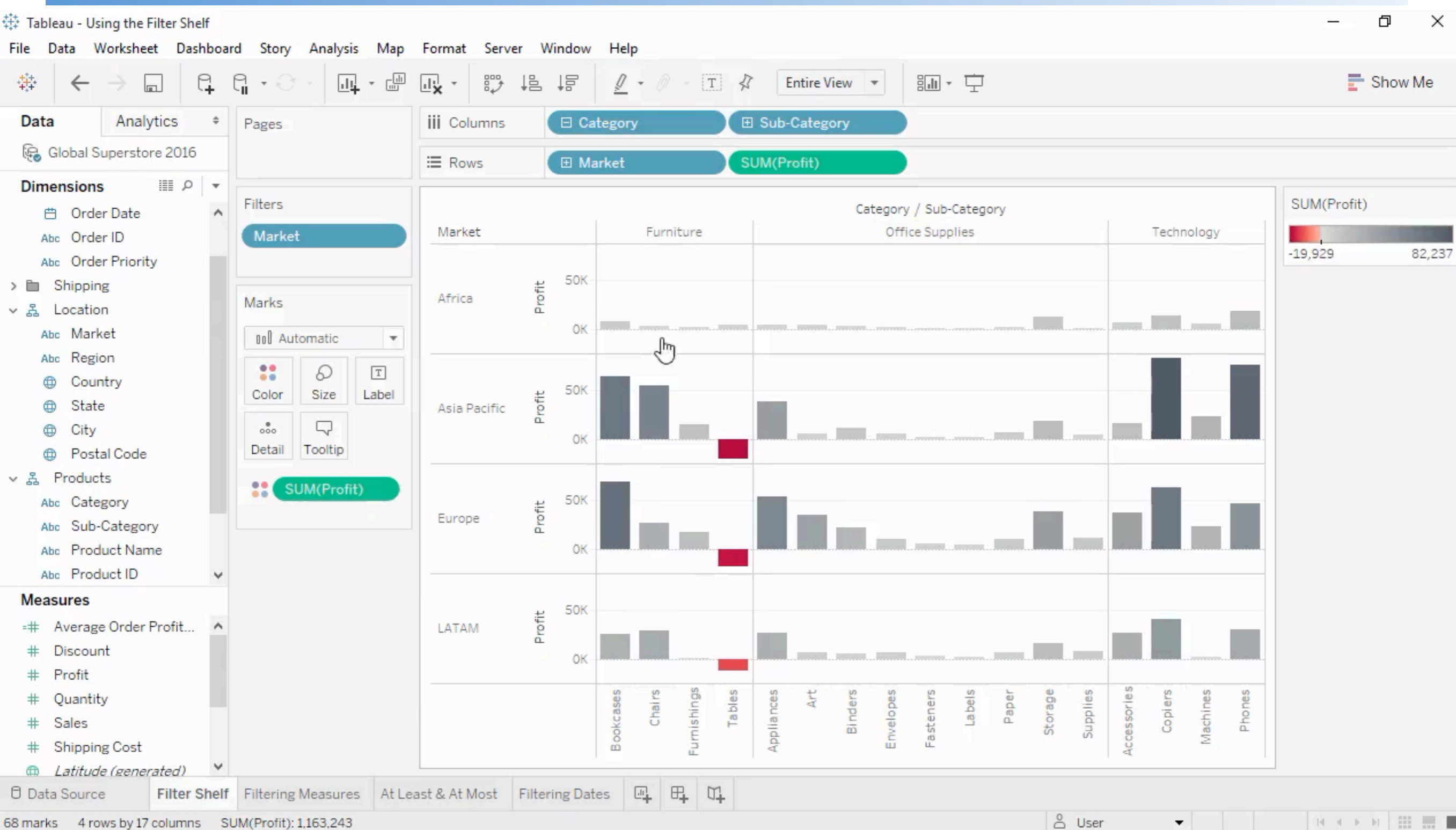
[Link to video](#)

The screenshot displays the Tableau interface with the 'Filter [Market]' dialog box open. The dialog has four tabs: 'General', 'Wildcard', 'Condition', and 'Top'. The 'General' tab is active, showing radio buttons for 'Select from list' (selected), 'Custom value list', and 'Use all'. Below this is a search box and a list of market categories: Africa, Asia Pacific, Europe, LATAM, and USCA. The 'USCA' checkbox is checked. At the bottom of the dialog, there are 'All' and 'None' buttons, and a checked 'Exclude' checkbox. A 'Summary' section shows: Field: [Market], Selection: Excluded 1 of 5 values, Wildcard: All, Condition: None, Limit: None. The dialog has 'Reset', 'OK', 'Cancel', and 'Apply' buttons at the bottom.

The background shows a Tableau worksheet with a bar chart. The chart has 'Market' on the vertical axis (Africa, Asia P, Europe, LATAM) and 'Product Category' on the horizontal axis (Paper, Storage, Supplies, Accessories, Copiers, Machines, Phones). The measure is 'SUM(Profit)'. A color legend for 'SUM(Profit)' is visible on the right, ranging from -19,929 to 82,237. The status bar at the bottom indicates '68 marks', '4 rows by 17 columns', and 'SUM(Profit): 1,163,243'.

# Filtering data in tableau - Measures

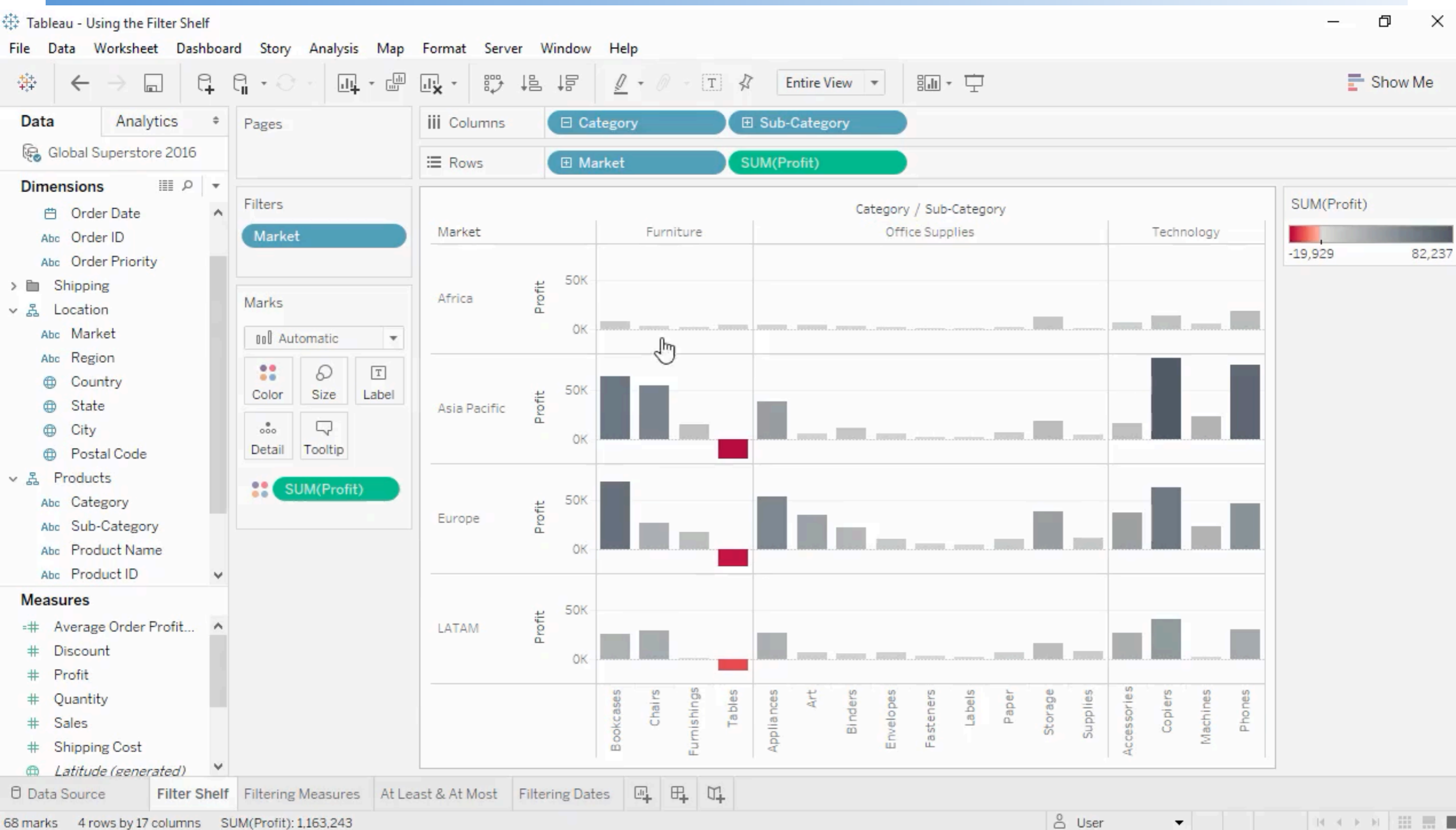
[Link to video](#)





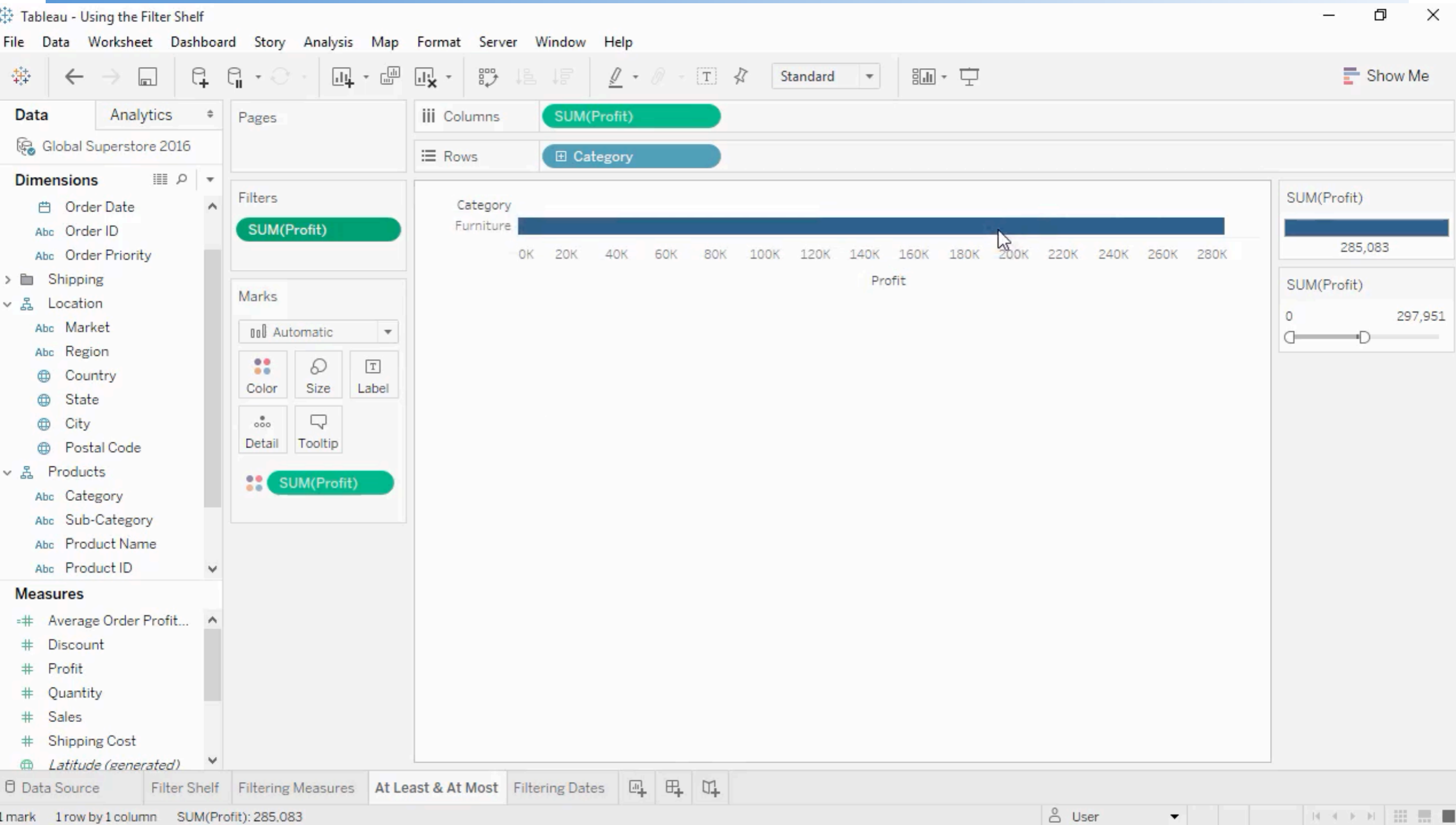
# Filtering data in tableau - Measures

[Link to video](#)



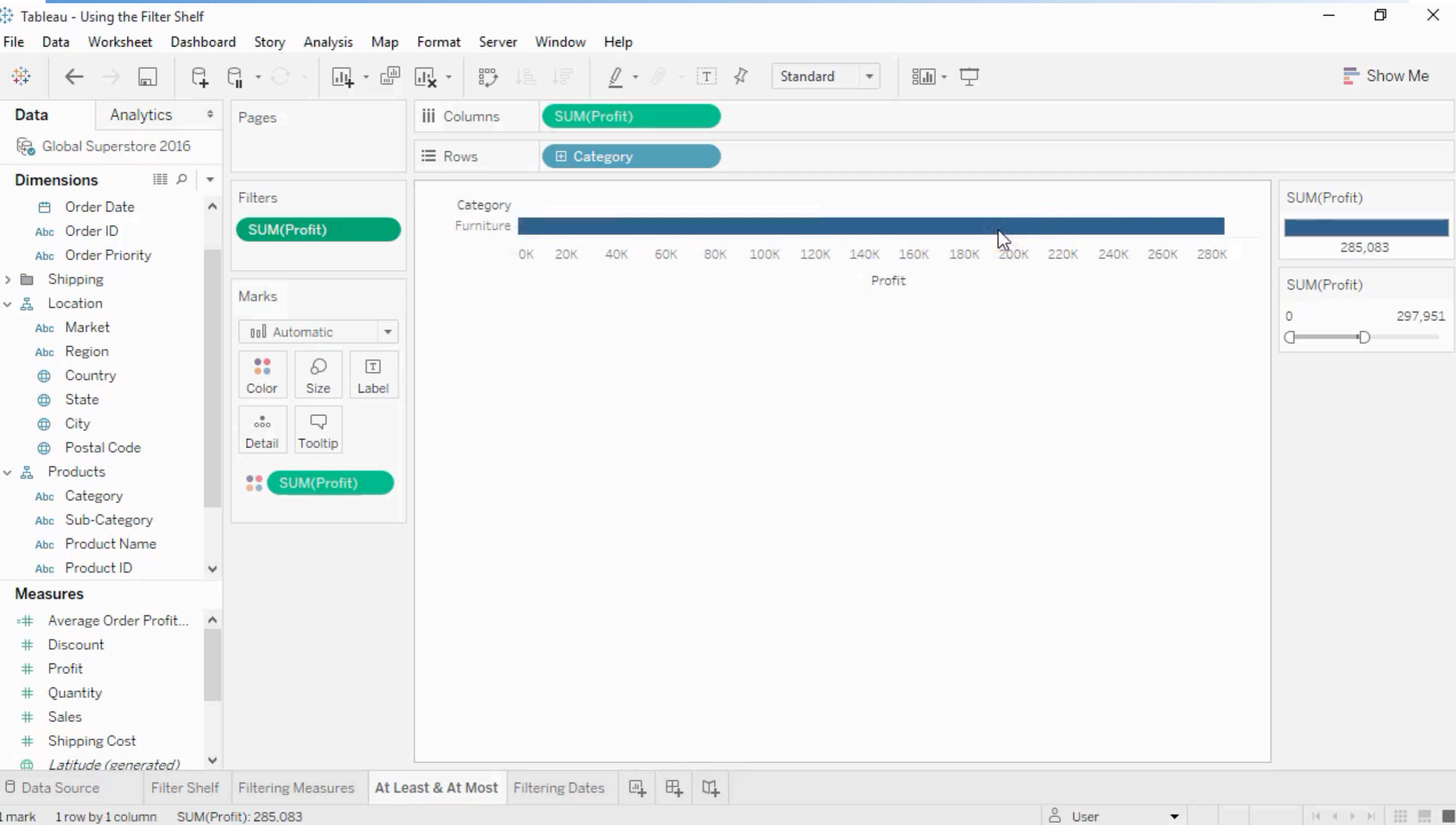
# Filtering data in tableau - Dates

[Link to video](#)

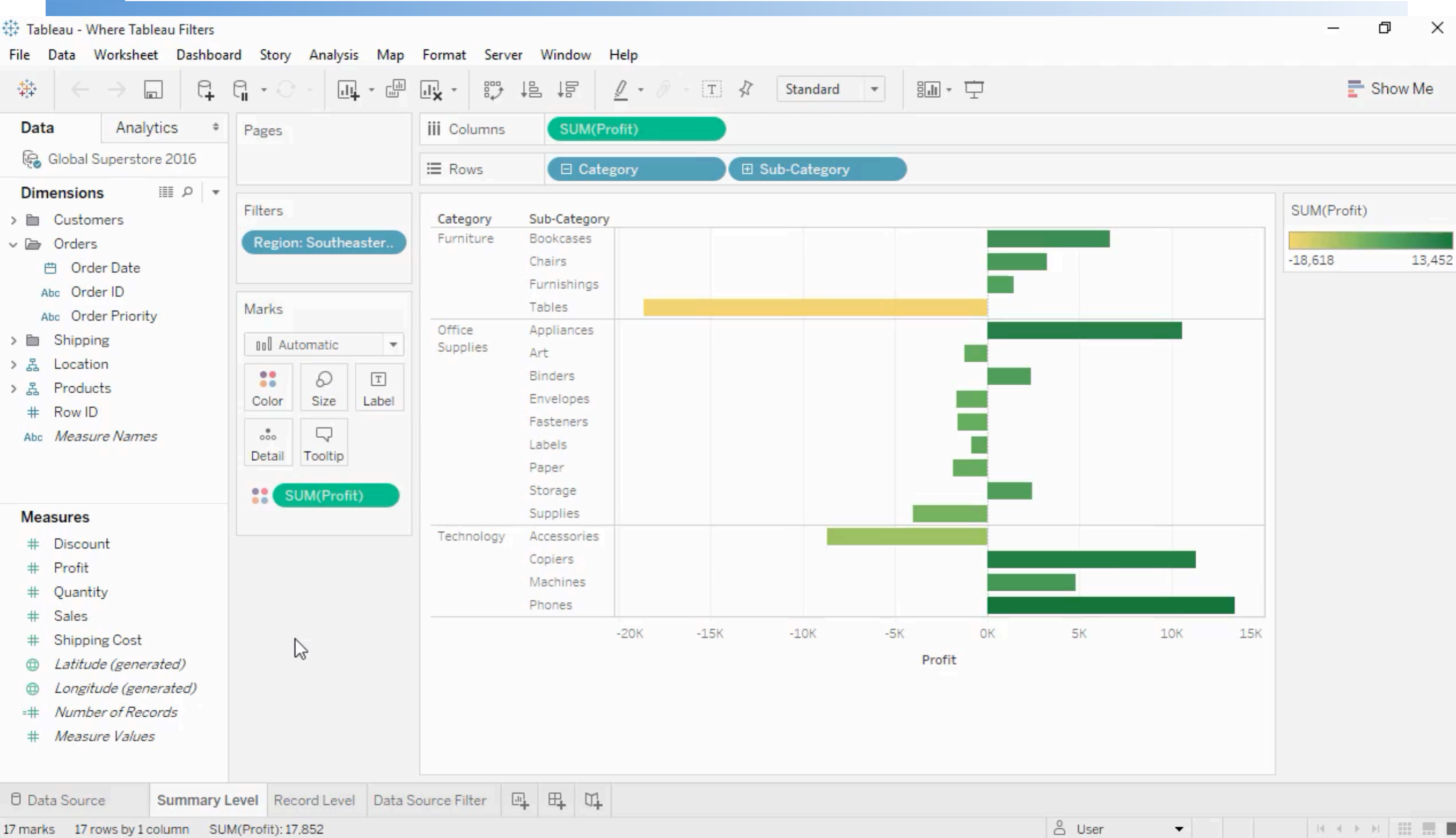


# Filtering data in tableau - Dates

[Link to video](#)

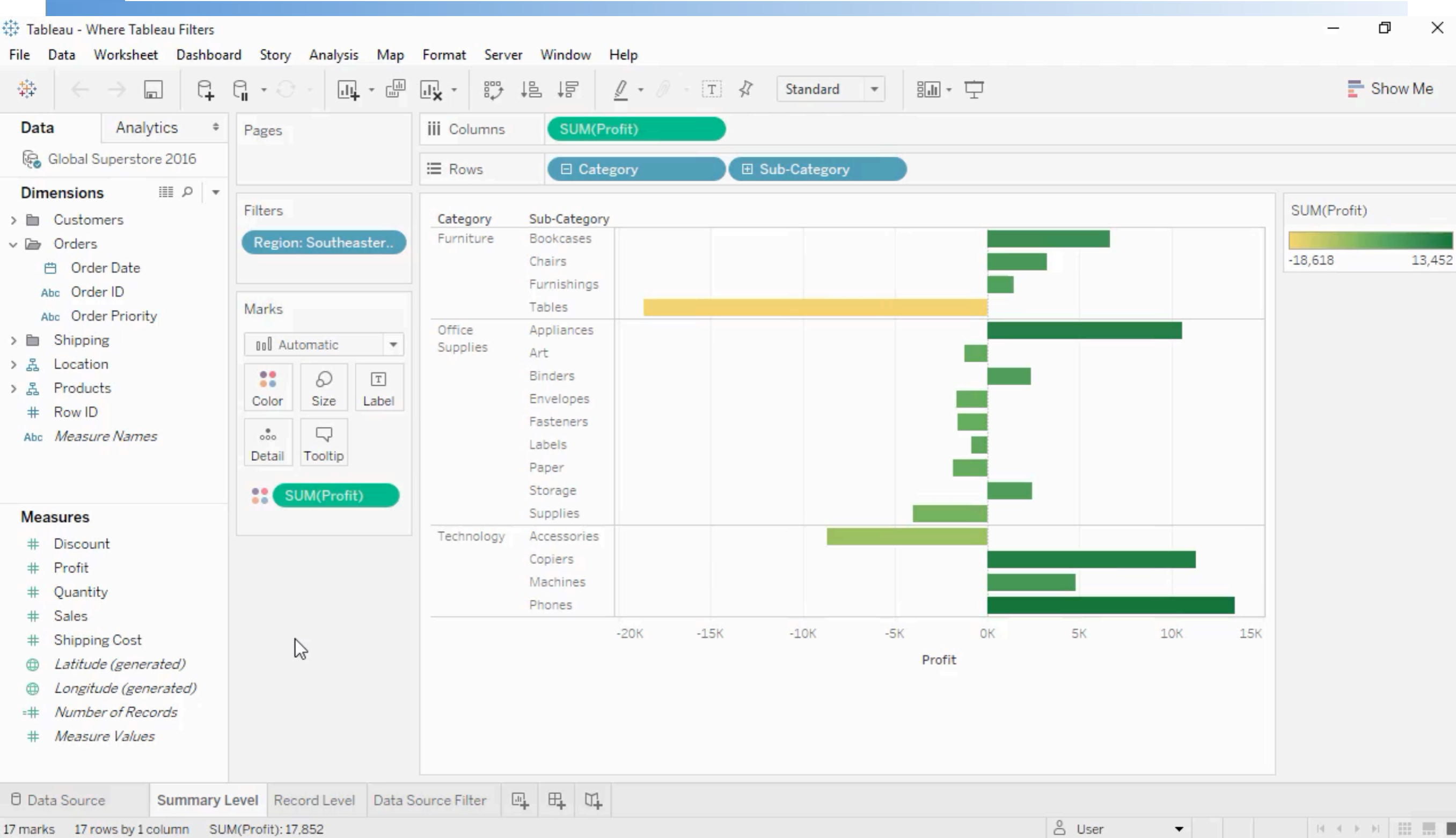


# Filtering data in tableau - Row Level versus Summary Level





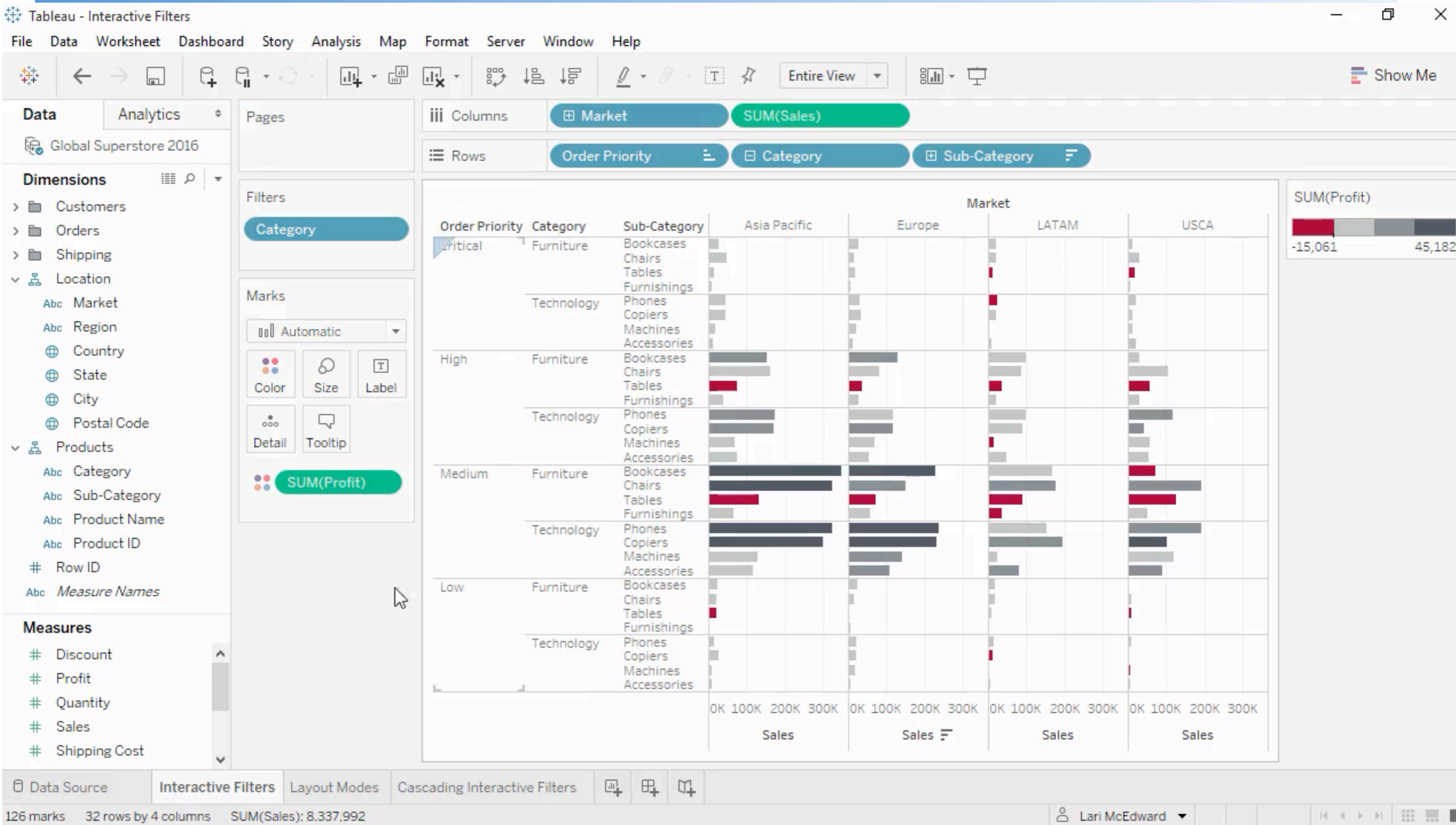
# Filtering data in tableau - Row Level versus Summary Level





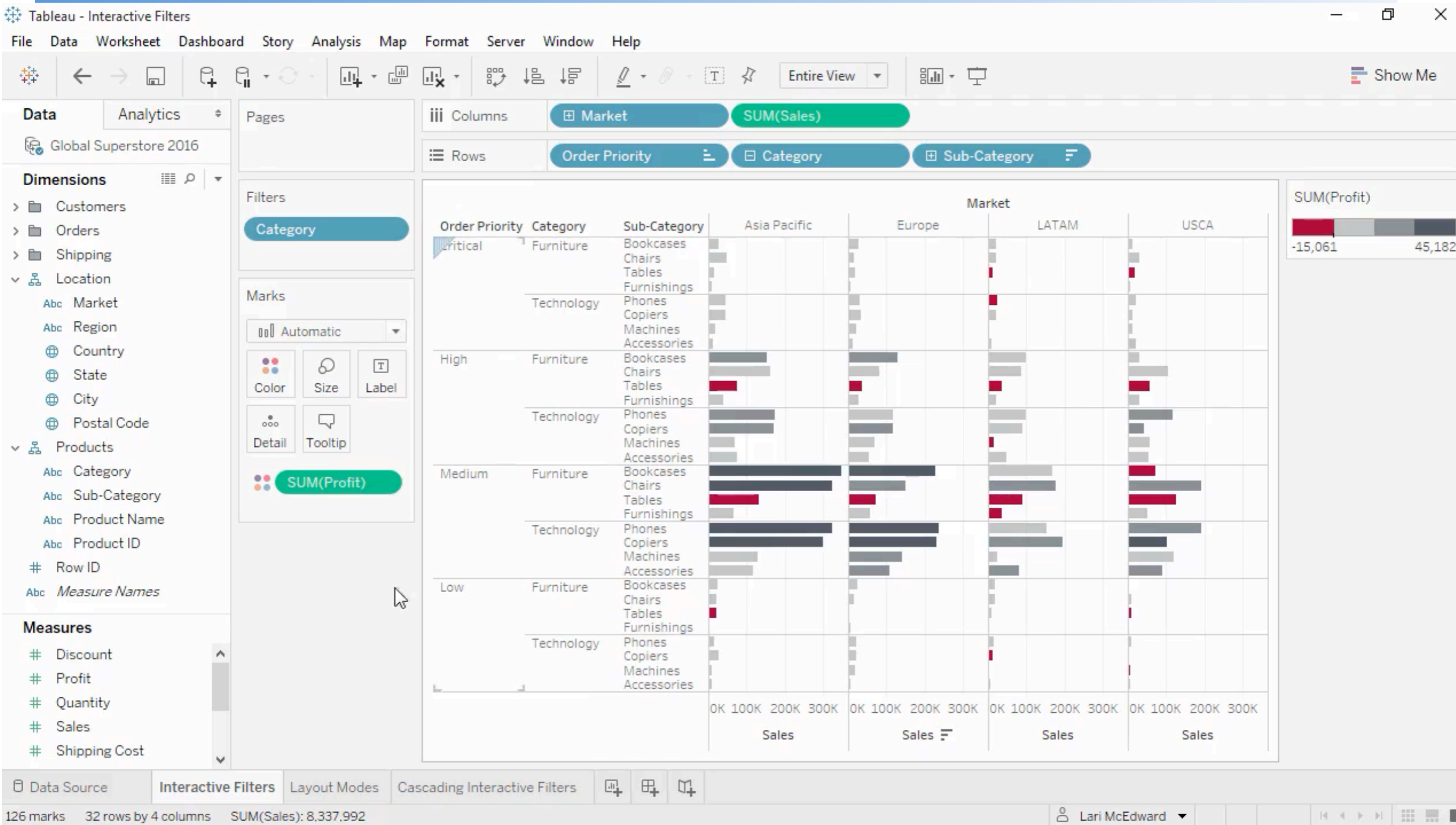
# Filtering data in tableau - Interactive Filtering

[Link to video](#)

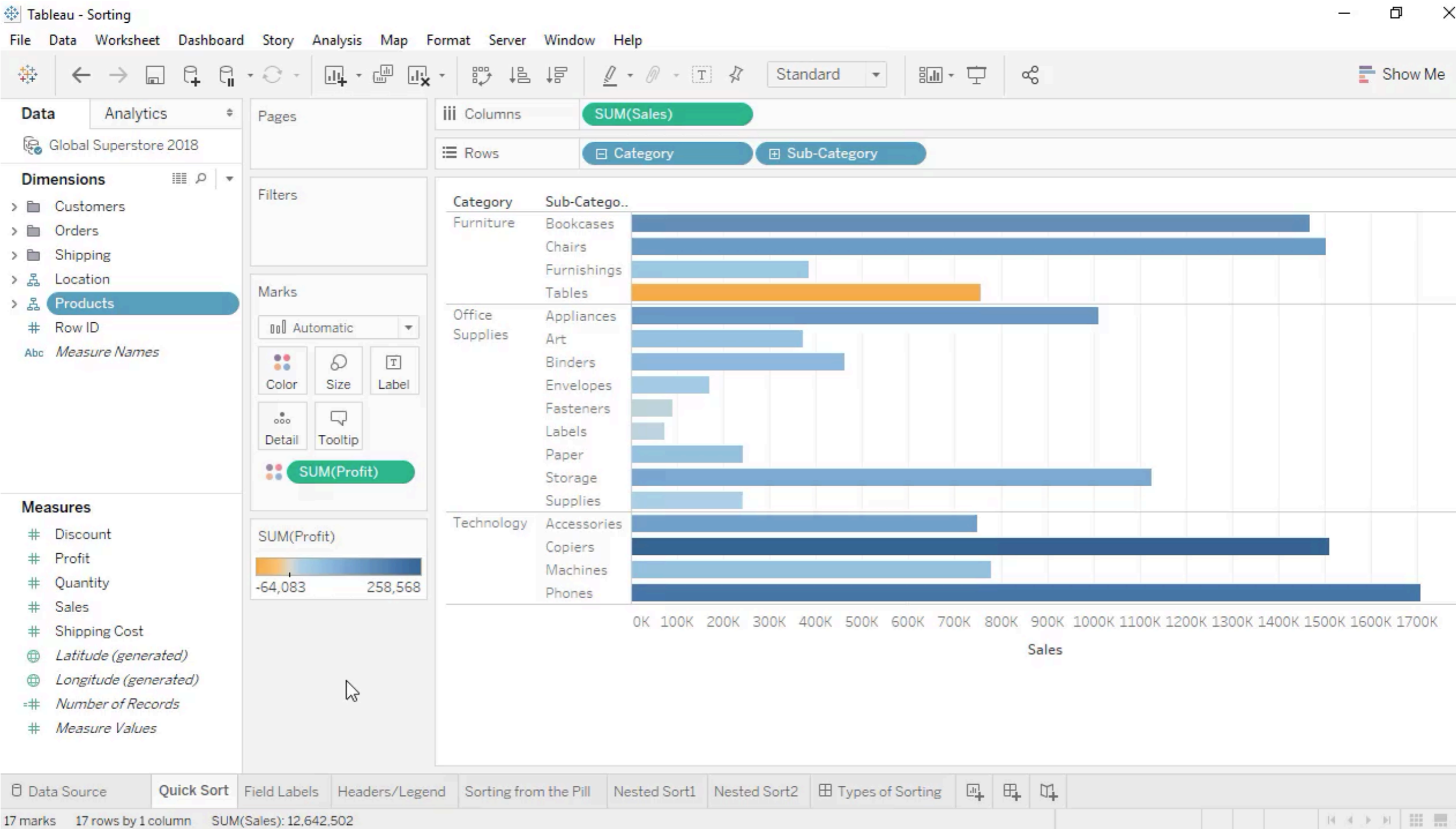


# Filtering data in tableau - Interactive Filtering

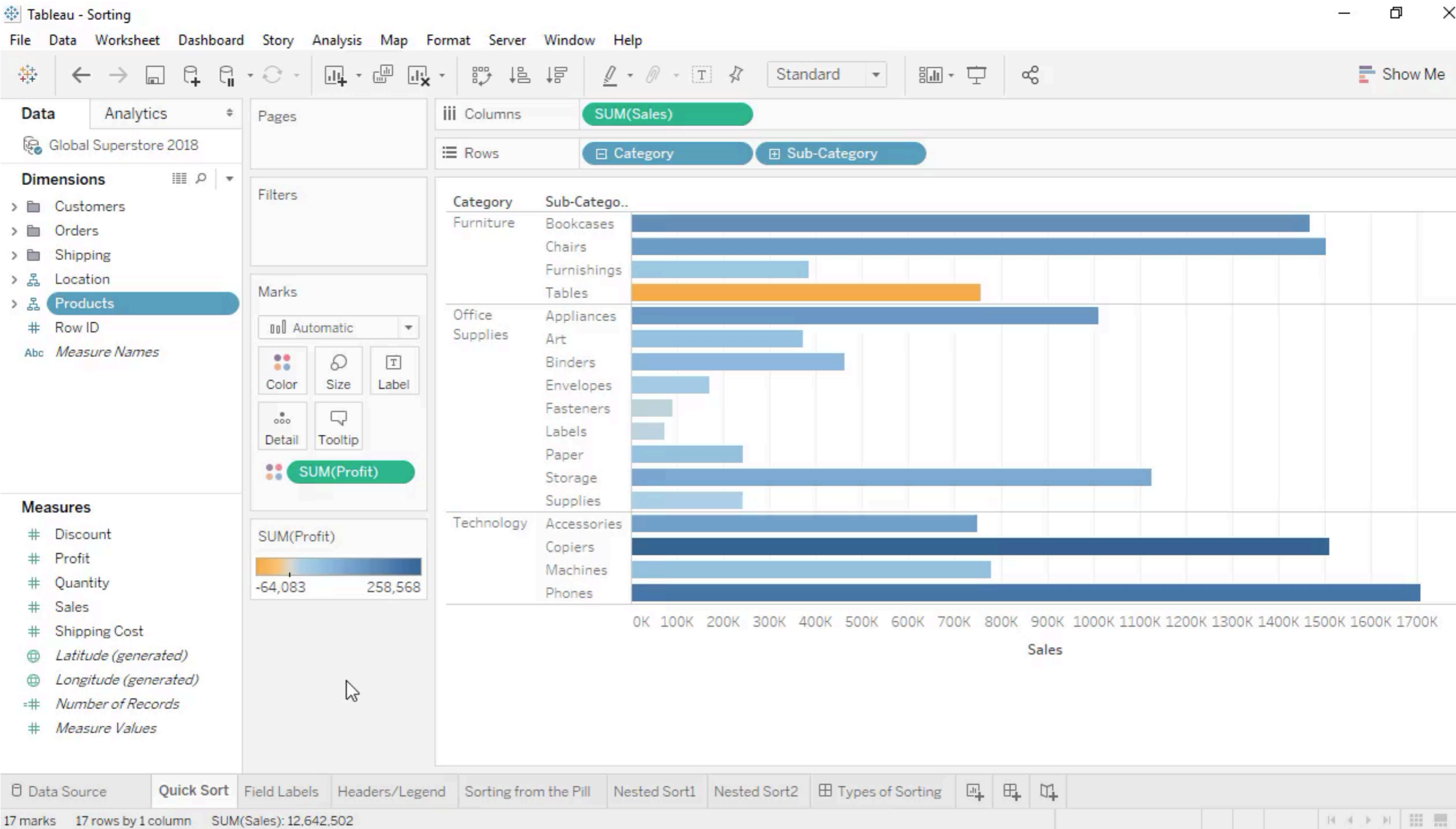
[Link to video](#)



## Sorting data in tableau







# Sorting data in tableau

- **Sorting on the Axis**
- **Sort by labels**
  - ◆ **Alphabetic ou by the available measures in the view**
- **Sorting by pill and toolbar Sort Button**
- **Custom sort**
  - ◆ **Lengend; Table Labels**
- **Sort a discreet value by ..... (feedback visual)**
- **Clear Sorts**
- **Sort by field name versus axis (nested sorted)**

# Sorting data in tableau

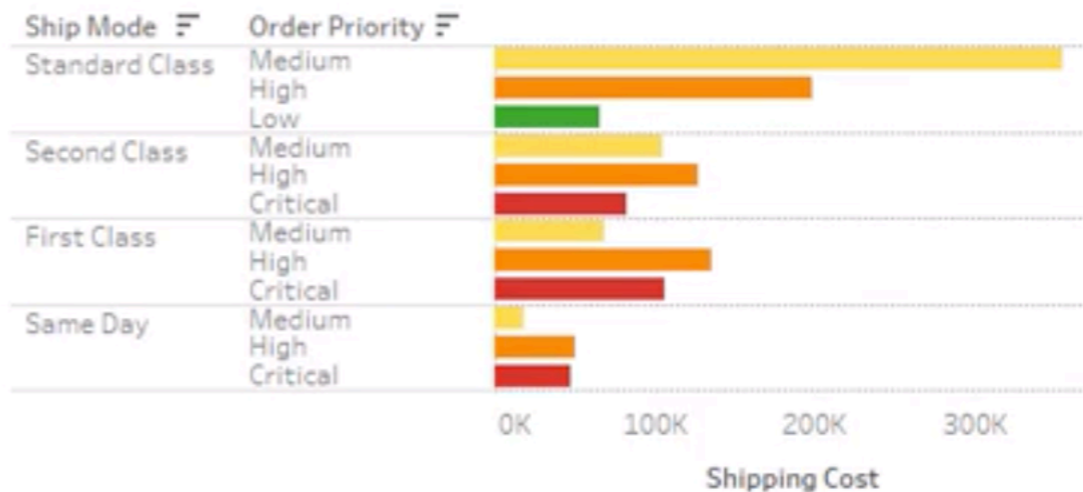
## Default Sort

Ship Mode and Order Priority both have their default sort.  
Shipping cost doesn't factor into the sorting at all. This is the behavior that occurs before a specific sort is applied to the view (usually alphabetic - ascending).



## Comparative Sort

Ship Mode and Order Priority have both been sorted by SUM(Shipping Cost).  
Each ship mode pane shows the same ordering of order priorities. Medium priority is first in every pane because it is the highest cost overall.



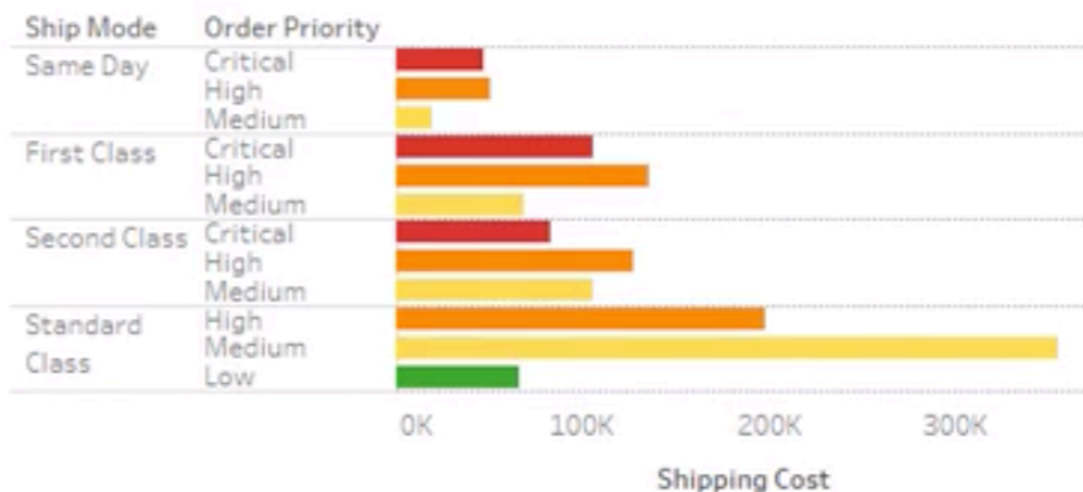
## Nested Sort

The sort was set by the quick sorting on the axis for Shipping Cost.  
Each pane was independently sorted such that the longest bar for that pane is at the top, regardless of what's happening in any other pane.



## Manual Sort

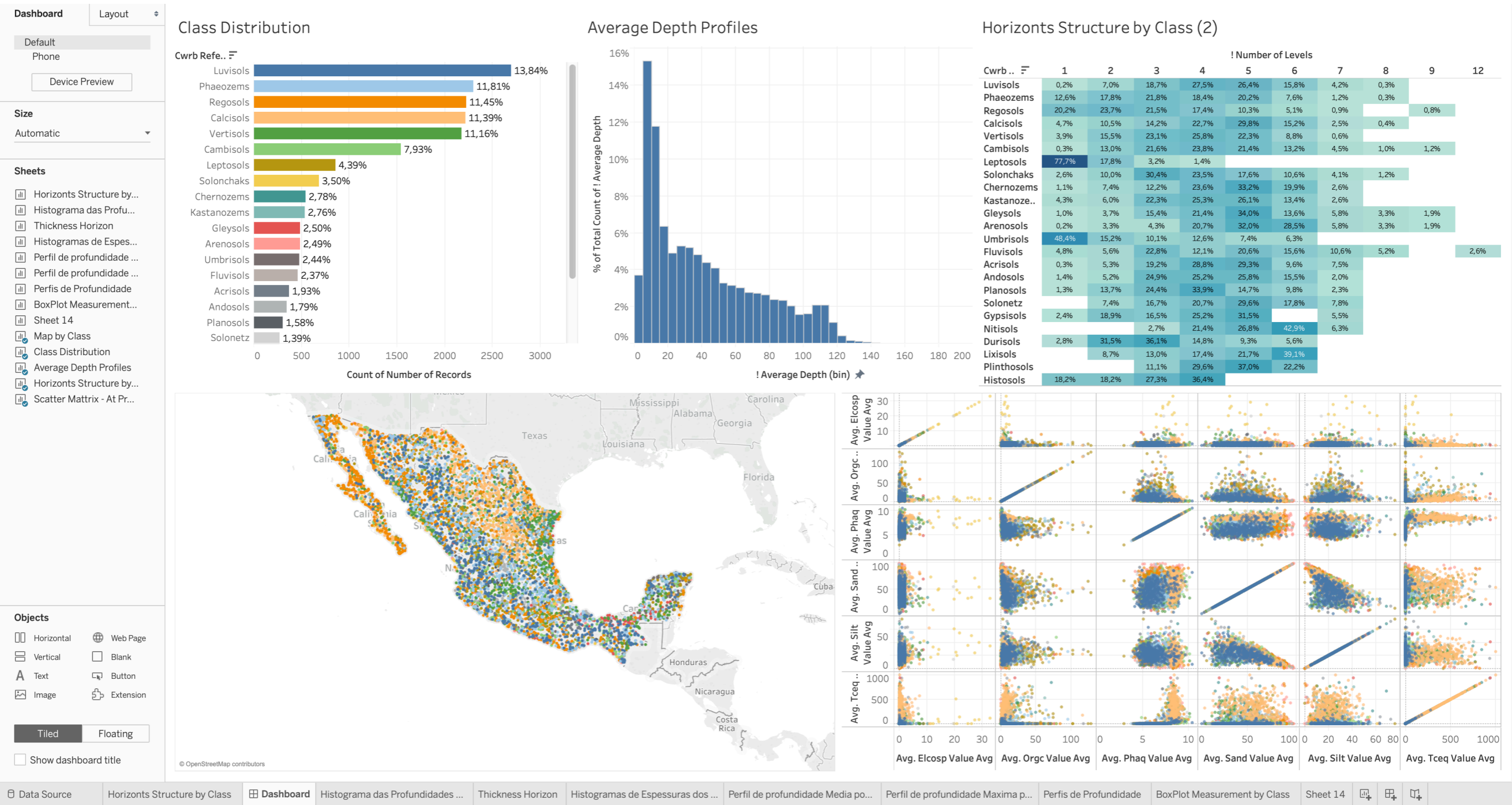
Each field was manually sorted into its real-world order.  
Ship Mode was sorted so Same Day is above First Class. Order Priority was sorted so Low is below Medium.



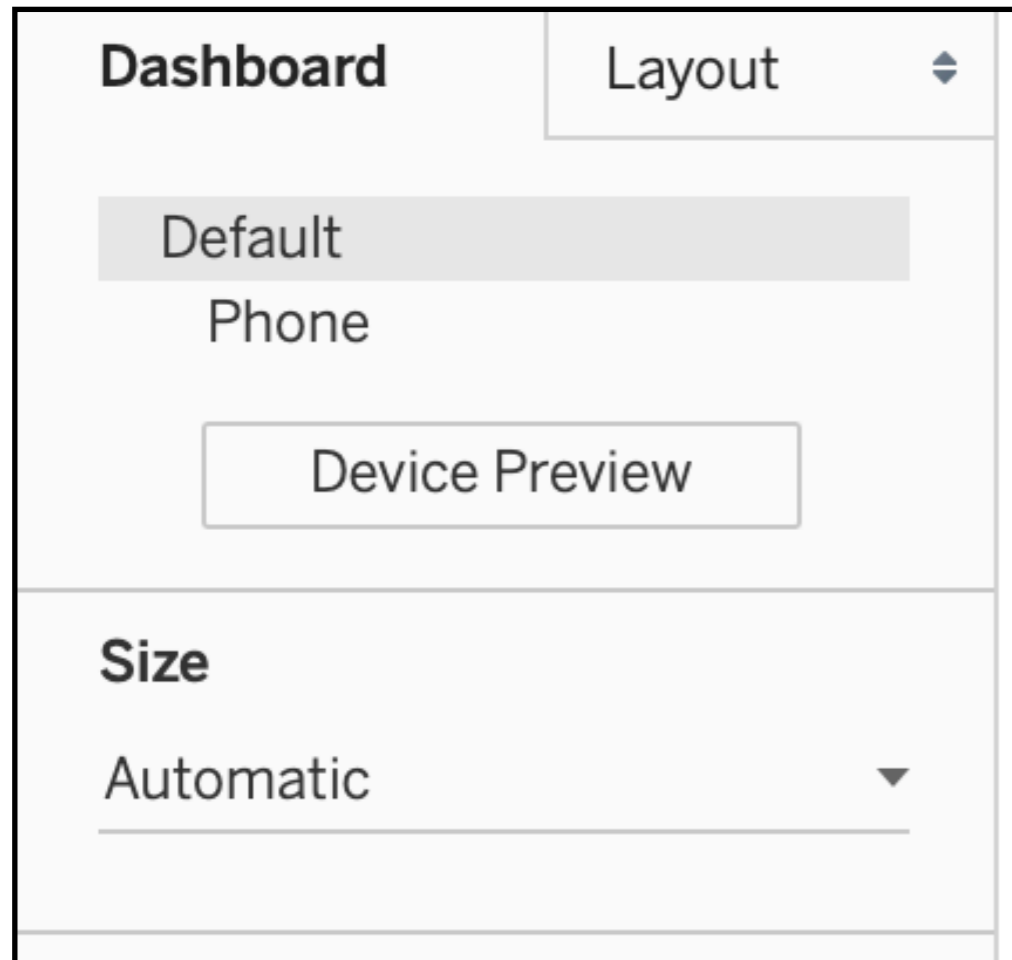
## Dashboards



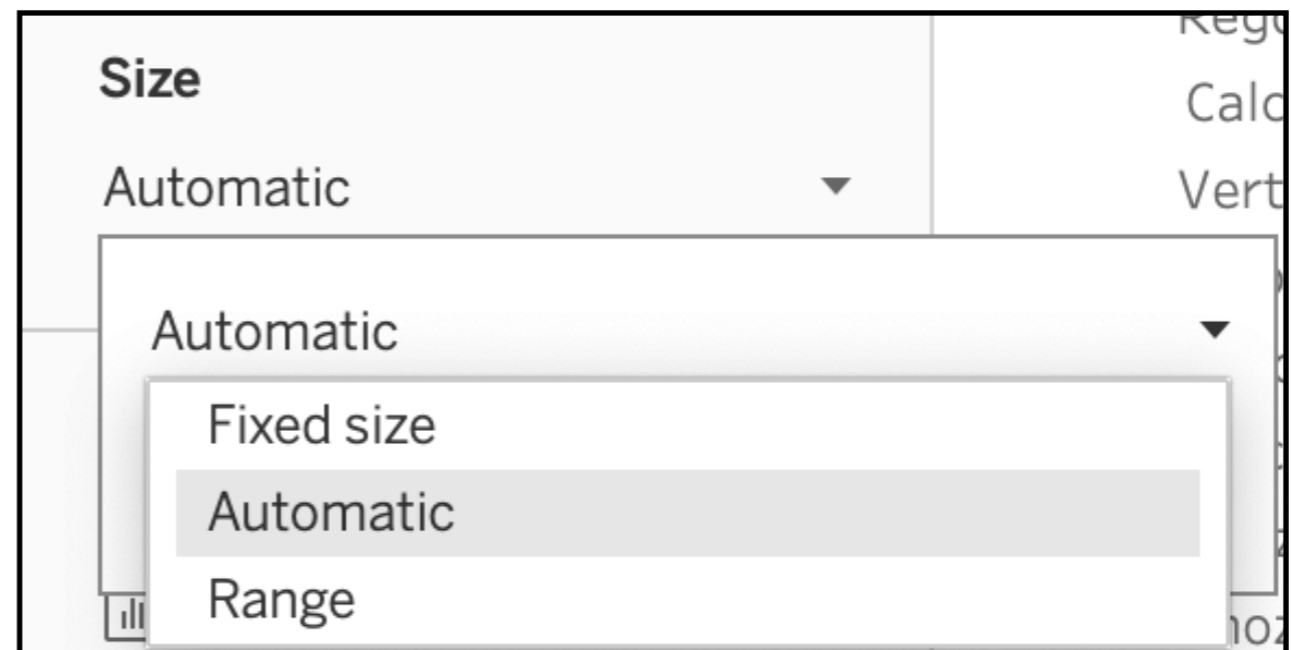
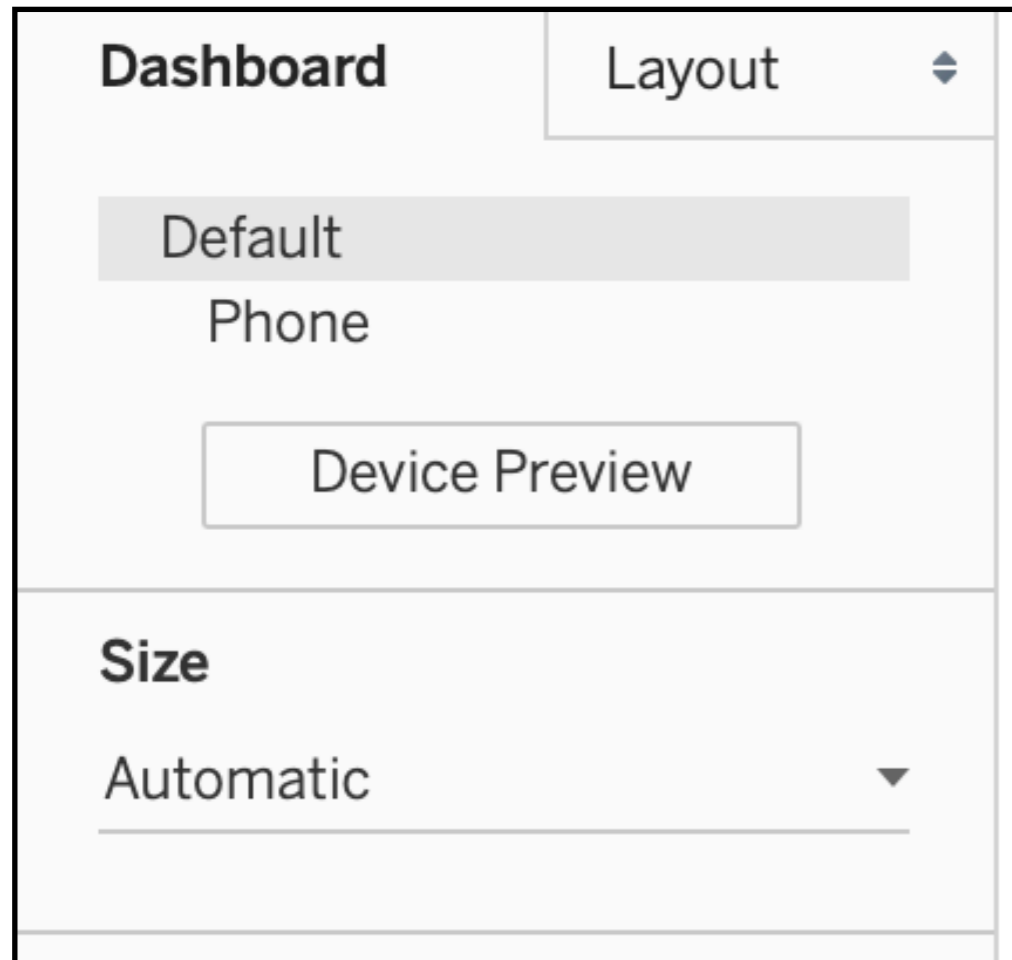
# Dashboards - Design



# Dashboards - Design - Set the size



# Dashboards - Design - Set the size

















# Dashboards - Design - Set the size

The screenshot shows the 'Dashboard' design interface. At the top, there are two tabs: 'Dashboard' and 'Layout'. Below the 'Layout' tab, there are two options: 'Default' (which is highlighted) and 'Phone'. A 'Device Preview' button is located below these options. In the bottom section, there is a 'Size' dropdown menu currently set to 'Automatic'.

This screenshot shows the 'Size' configuration panel. The 'Size' dropdown is open, showing options: 'Automatic' (selected), 'Fixed size', 'Automatic', and 'Range'. To the right, the 'Range' configuration is expanded, showing a 'Range' dropdown, a checked 'Minimum size' checkbox, and input fields for 'Width' (1709 px) and 'Height' (988 px). Below that, there is a checked 'Maximum size' checkbox and input fields for 'Width' (1809 px) and 'Height' (1088 px).
















# Dashboards - Design

## Sheets

-  Horizonts Structure by...
-  Histograma das Profu...
-  Thickness Horizon
-  Histogramas de Espes...
-  Perfil de profundidade ...
-  Perfil de profundidade ...
-  Perfis de Profundidade
-  BoxPlot Measurement...
-  Sheet 14
-  Map by Class
-  Class Distribution
-  Average Depth Profiles
-  Horizonts Structure by...
-  Scatter Mattrix - At Pr...

# Dashboards - Design


## Sheets

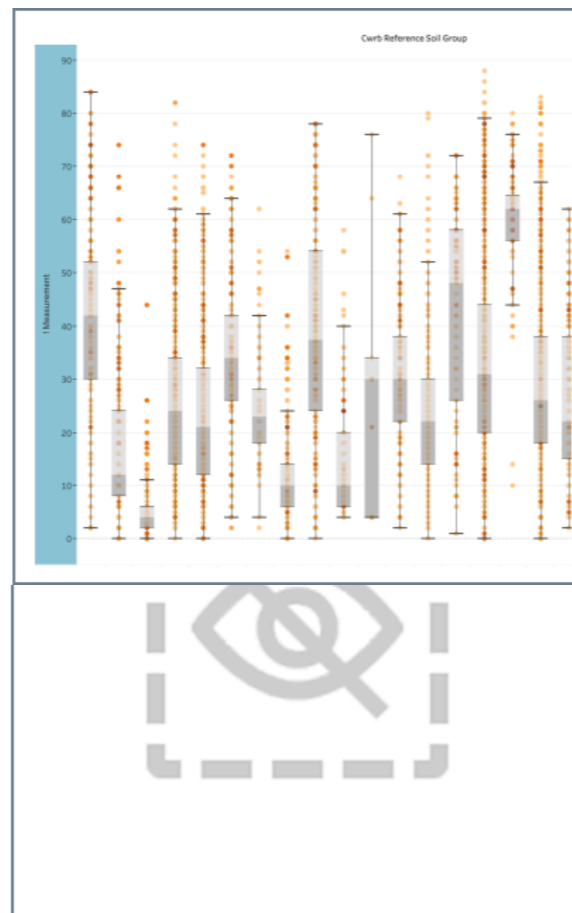
-  Horizonts Structure by...
-  Histograma das Profu...
-  Thickness Horizon
-  Histogramas de Espes...
-  Perfil de profundidade ...
-  Perfil de profundidade ...
-  Perfis de Profundidade
-  BoxPlot Measurement...
-  Sheet 14
-  Map by Class
-  Class Distribution
-  Average Depth Profiles
-  Horizonts Structure by...
-  Scatter Matrix - At Pr... 



# Dashboards - Design

## Sheets

- Horizonts Structure by...
- Histograma das Profu...
- Thickness Horizon
- Histogramas de Espes...
- Perfil de profundidade ...
- Perfil de profundidade ...
- Perfis de Profundidade
- BoxPlot Measurement... 
- Map by Class
- Class Distribution
- Average Depth Profiles
- Horizonts Structure by...
- Scatter Matrix - At Pr...





# Dashboards - Design

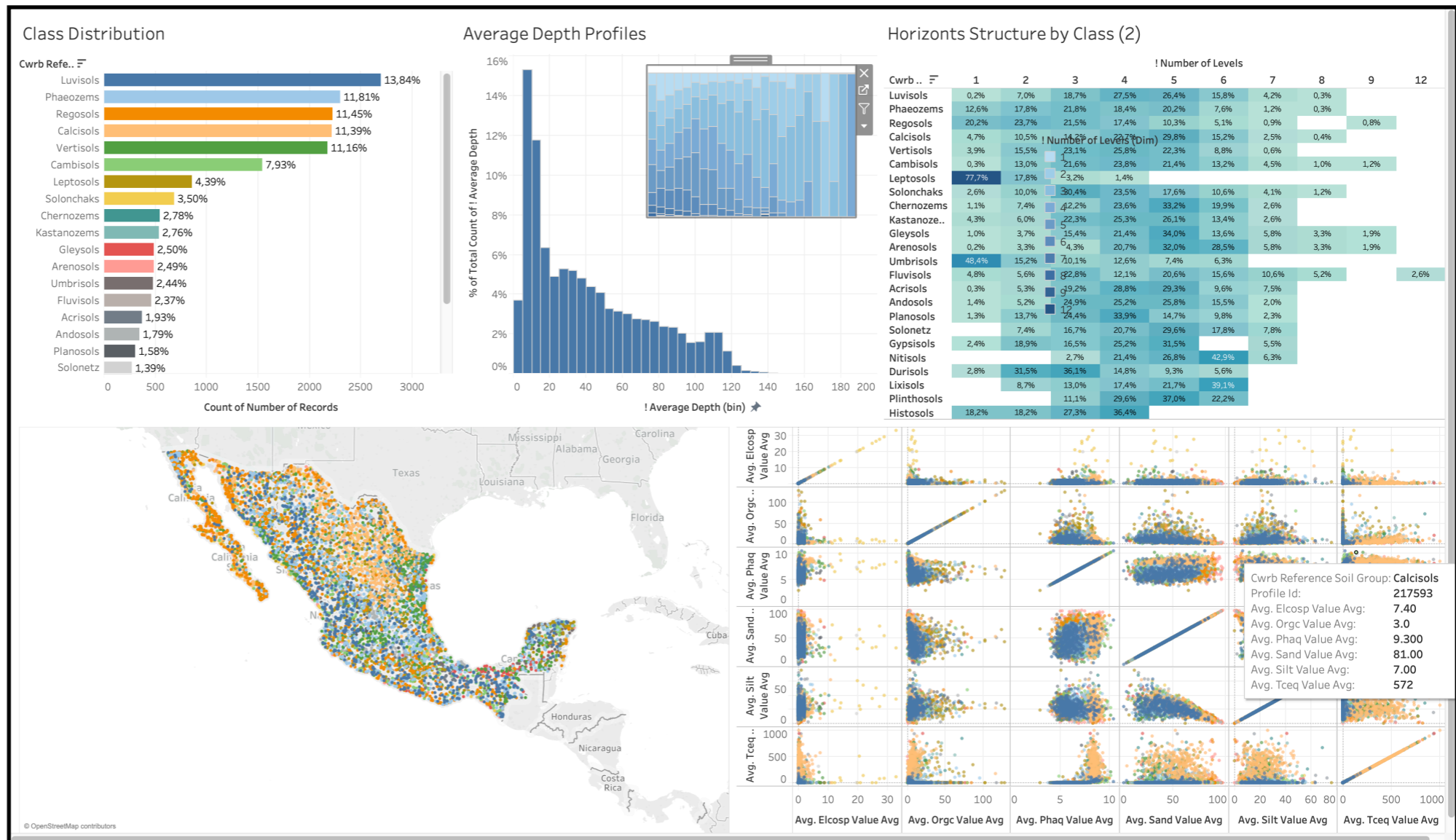
**Objects**

- Horizontal
- Vertical
- Text
- Image
- Web Page
- Blank
- Button
- Extension

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Show dashboard title

Data Source Horizons Stru





# Dashboards - Design

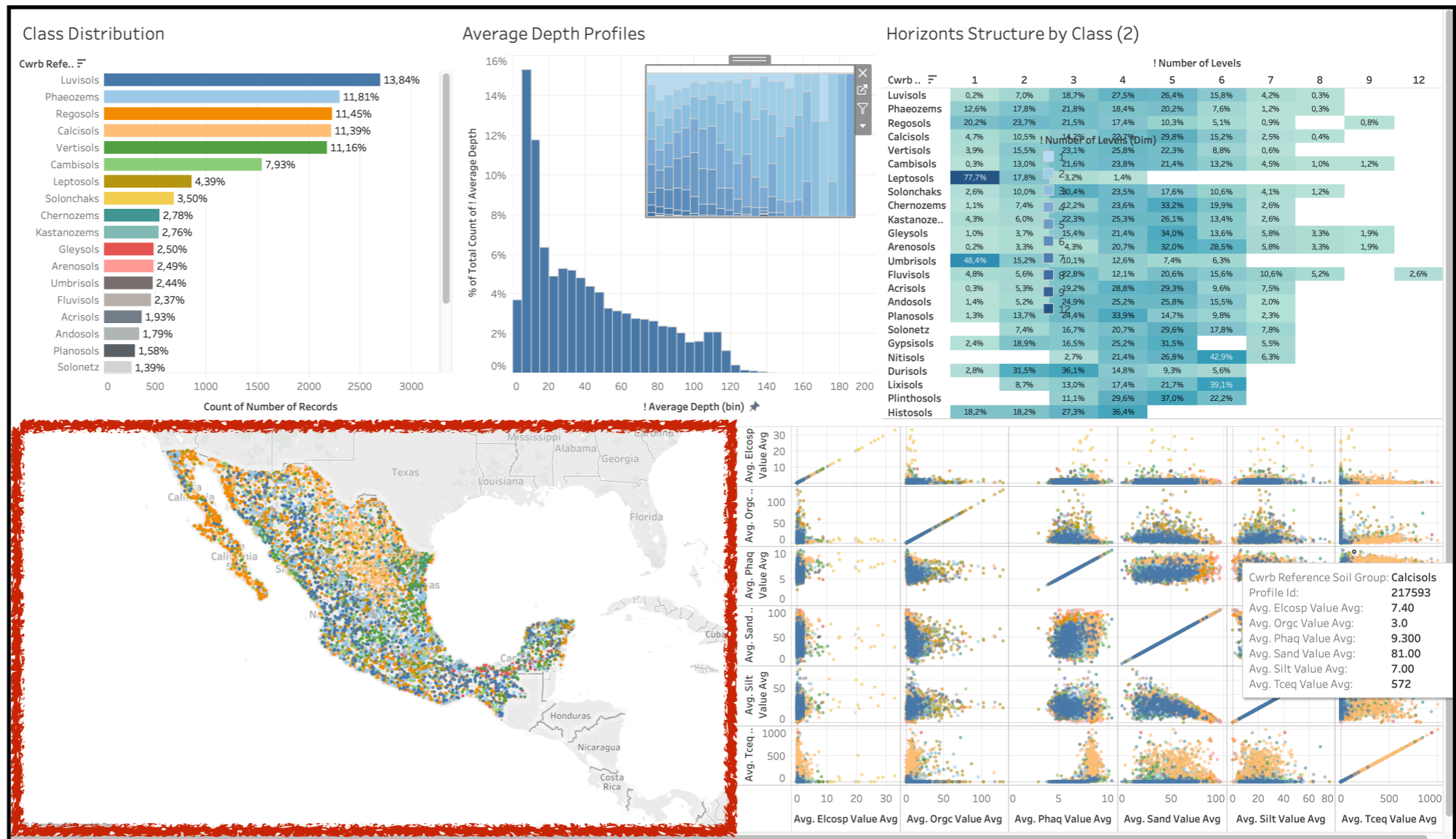
**Objects**

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Show dashboard title

Data Source Horizons Stru



# Dashboards - Design

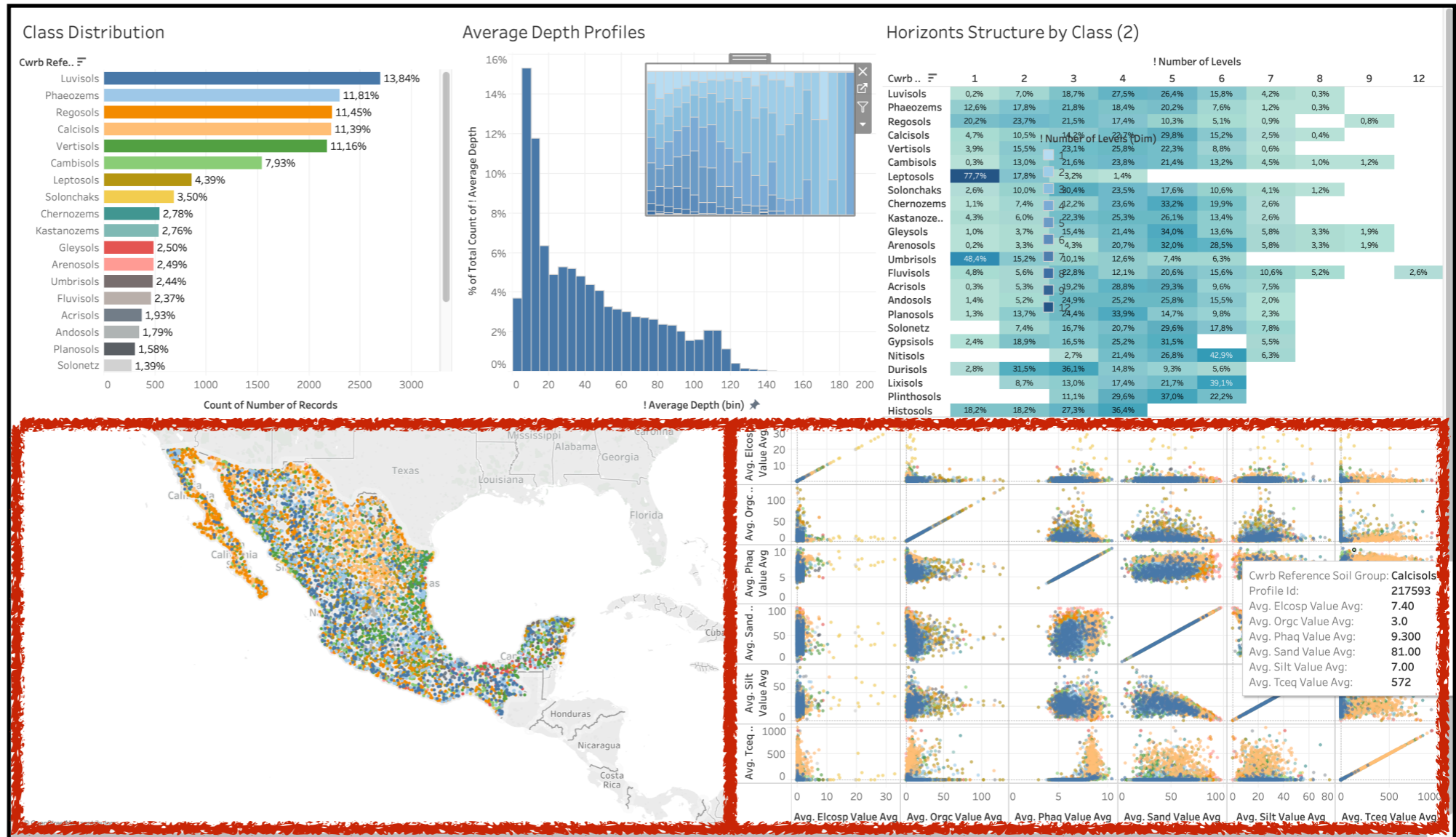
**Objects**

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Show dashboard title

Data Source Horizons Stru



# Dashboards - Design

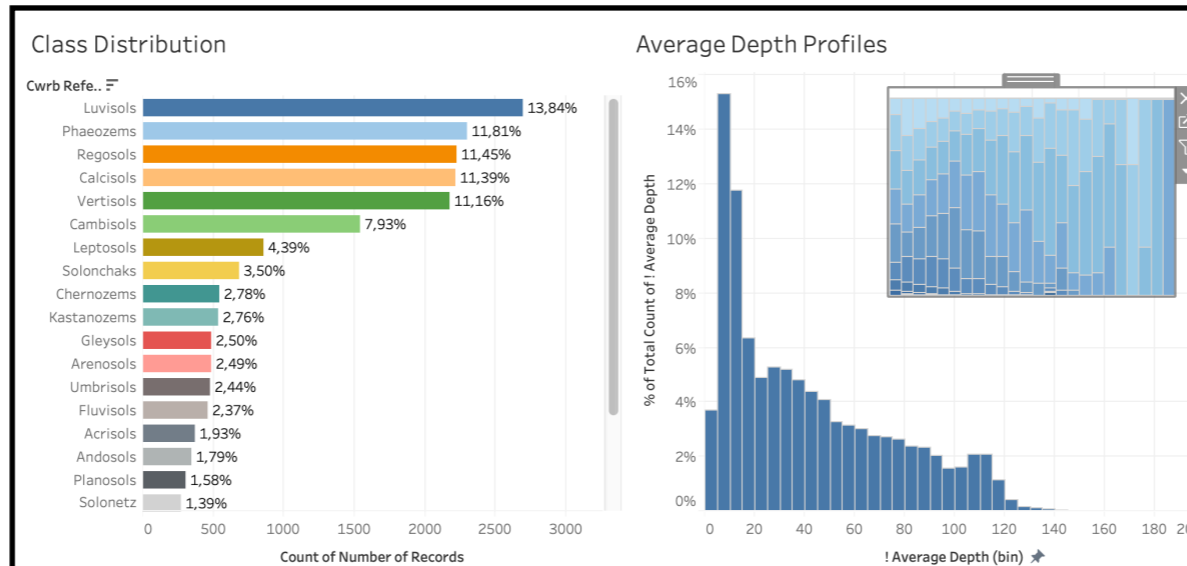
**Objects**

- Horizontal
- Vertical
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- Extension

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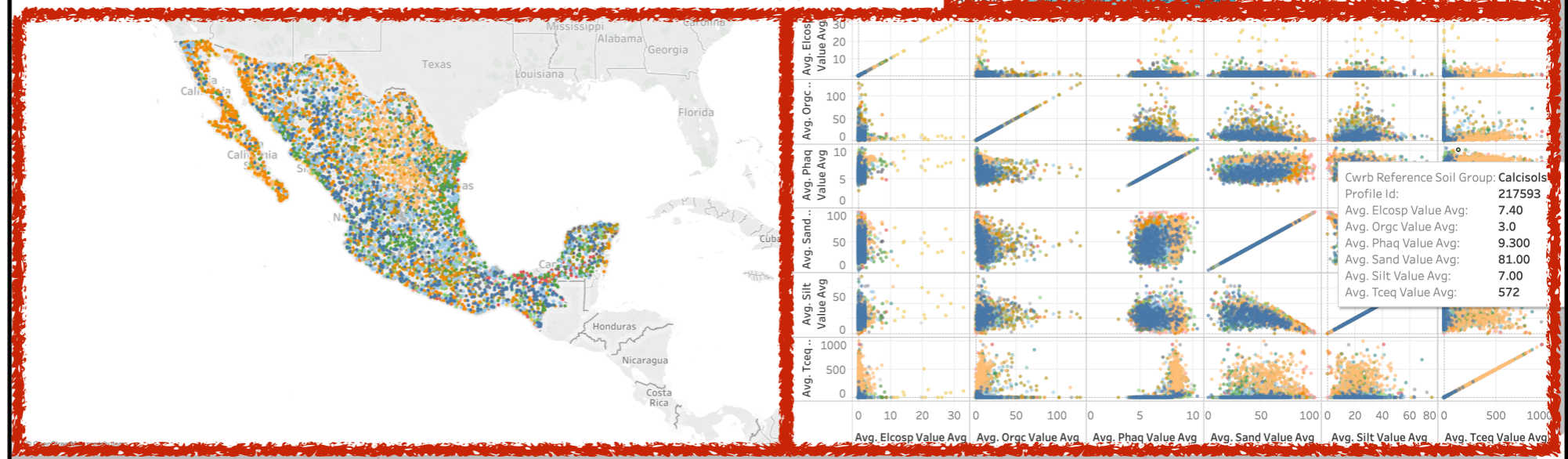
Show dashboard title

Data Source Horizons Stru



### Horizons Structure by Class (2)

Cwrb..	1	2	3	4	5	6	7	8	9	12
Luvisols	0,2%	7,0%	18,7%	27,5%	26,4%	15,8%	4,2%	0,3%		
Phaeozems	12,6%	17,8%	21,8%	18,4%	20,2%	7,6%	1,2%	0,3%		
Regosols	20,2%	23,7%	21,5%	17,4%	10,3%	5,1%	0,9%		0,8%	
Calcisols	4,7%	10,5%	23,1%	25,8%	29,8%	15,2%	2,5%	0,4%		
Vertisols	3,9%	15,5%	21,6%	23,8%	22,3%	8,8%	0,6%			
Cambisols	0,3%	13,0%	23,2%	23,8%	21,4%	13,2%	4,5%	1,0%	1,2%	
Leptosols	77,7%	17,8%	3,2%	1,4%						
Solonchaks	2,6%	10,0%	30,4%	23,5%	17,6%	10,6%	4,1%	1,2%		
Chernozems	1,1%	7,4%	42,2%	23,6%	33,2%	19,9%	2,6%			
Kastanoze..	4,3%	6,0%	22,3%	25,3%	26,1%	13,4%	2,6%			
Gleysols	1,0%	3,7%	15,4%	21,4%	34,0%	13,6%	5,8%	3,3%	1,9%	
Arenosols	0,2%	3,3%	4,3%	20,7%	32,0%	28,5%	5,8%	3,3%	1,9%	
Umbrisols	48,4%	15,2%	70,1%	12,6%	7,4%	6,3%				
Fluvisols	4,8%	5,6%	22,8%	12,1%	20,6%	15,6%	10,6%	5,2%		2,6%
Acrisols	0,3%	5,3%	19,2%	28,8%	29,3%	9,6%	7,5%			
Andosols	1,4%	5,2%	24,9%	25,2%	25,8%	15,5%	2,0%			
Planosols	1,3%	13,7%	24,4%	33,9%	14,7%	9,8%	2,3%			
Solonetz		7,4%	16,7%	20,7%	29,6%	17,8%	7,8%			
Gypsisols	2,4%	18,9%	16,5%	25,2%	31,5%		5,5%			
Nitisols			2,7%	21,4%	26,8%	42,9%	6,3%			
Durisols	2,8%	31,5%	36,1%	14,8%	9,3%	5,6%				
Lixisols		8,7%	13,0%	17,4%	21,7%	39,1%				
Plinthosols			11,1%	29,6%	37,0%	22,2%				





# Dashboards - Design

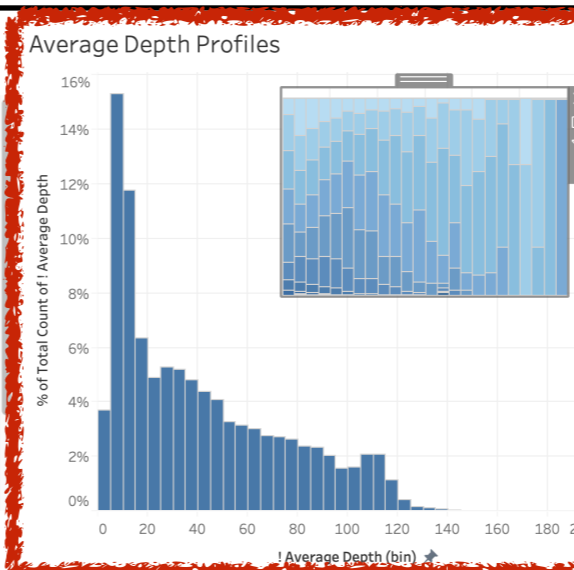
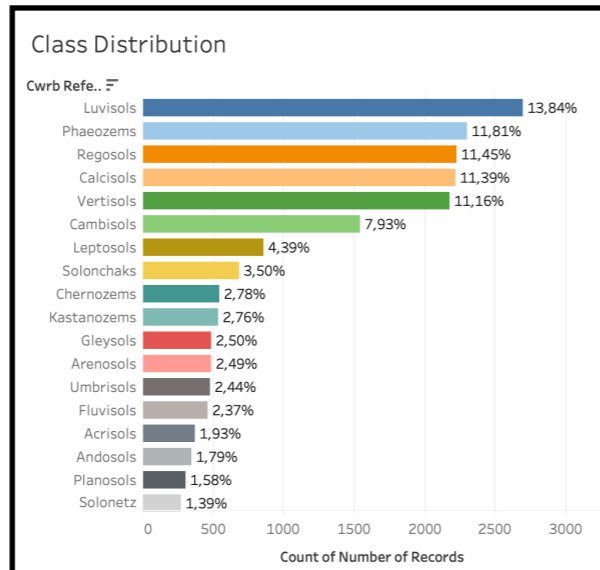
**Objects**

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- Image
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- Button
- Extension

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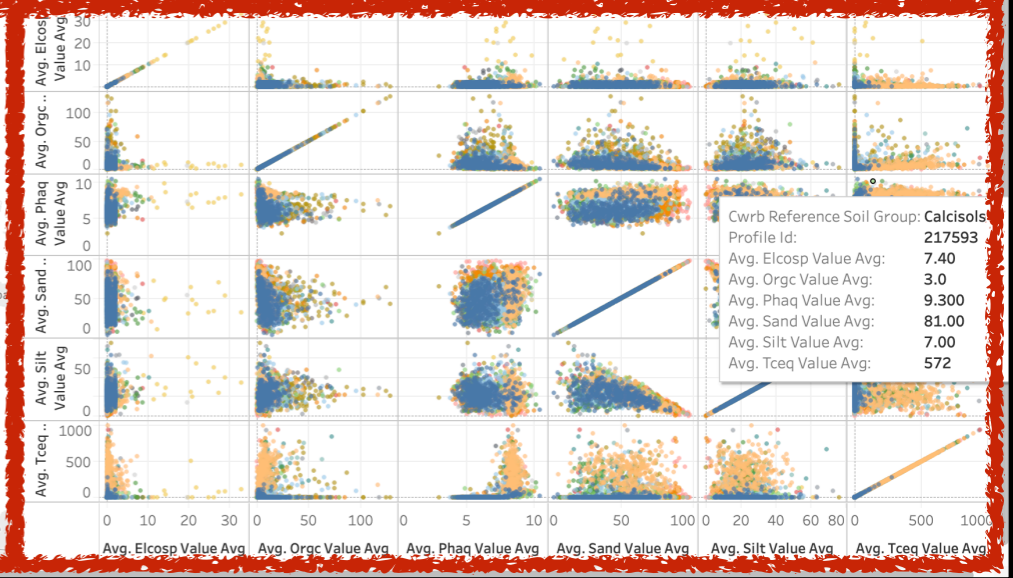
Show dashboard title

Data Source Horizons Stru



**Horizons Structure by Class (2)**

Cwrb..	1	2	3	4	5	6	7	8	9	12
Luvisols	0,2%	7,0%	18,7%	27,5%	26,4%	15,8%	4,2%	0,3%		
Phaeozems	12,6%	17,8%	21,8%	18,4%	20,2%	7,6%	1,2%	0,3%		
Regosols	20,2%	23,7%	21,5%	17,4%	10,3%	5,1%	0,9%		0,8%	
Calcisols	4,7%	10,5%	23,1%	29,8%	15,2%	2,5%	0,4%			
Vertisols	3,9%	15,5%	21,6%	25,8%	22,3%	8,8%	0,6%			
Cambisols	0,3%	13,0%	23,8%	21,4%	13,2%	4,5%	1,0%	1,2%		
Leptosols	77,7%	17,8%	3,2%	1,4%						
Solonchaks	2,6%	10,0%	30,4%	23,5%	17,6%	10,6%	4,1%	1,2%		
Chernozems	1,1%	7,4%	42,2%	23,6%	33,2%	19,9%	2,6%			
Kastanoze..	4,3%	6,0%	22,3%	25,3%	26,1%	13,4%	2,6%			
Gleysols	1,0%	3,7%	15,4%	21,4%	34,0%	13,6%	5,8%	3,3%	1,9%	
Arenosols	0,2%	3,3%	4,3%	20,7%	32,0%	28,5%	5,8%	3,3%	1,9%	
Umbrisols	48,4%	15,2%	70,1%	12,6%	7,4%	6,3%				
Fluvisols	4,8%	5,6%	22,8%	12,1%	20,6%	15,6%	10,6%	5,2%		2,6%
Acrisols	0,3%	5,3%	19,2%	28,8%	29,3%	9,6%	7,5%			
Andosols	1,4%	5,2%	24,9%	25,2%	25,8%	15,5%	2,0%			
Planosols	1,3%	13,7%	24,4%	33,9%	14,7%	9,8%	2,3%			
Solonetz		7,4%	16,7%	20,7%	29,6%	17,8%	7,8%			
Gypsisols	2,4%	18,9%	16,5%	25,2%	31,5%		5,5%			
Nitisols			2,7%	21,4%	26,8%	42,9%	6,3%			
Durisols	2,8%	31,5%	36,1%	14,8%	9,3%	5,6%				
Lixisols		8,7%	13,0%	17,4%	21,7%	39,1%				
Plinthosols			11,1%	29,6%	37,0%	22,2%				



# Dashboards - Design

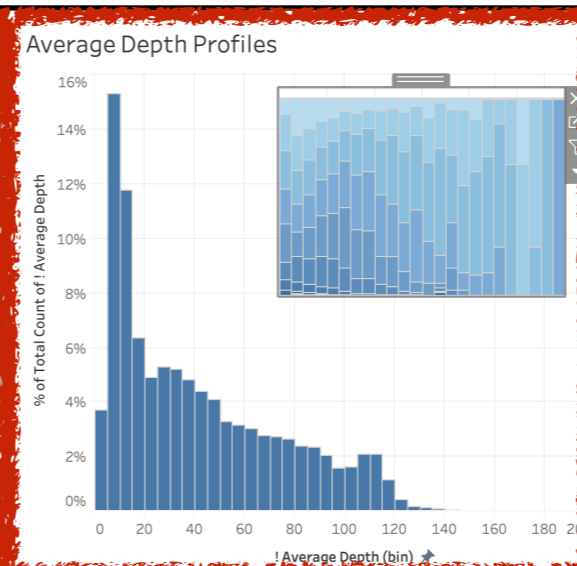
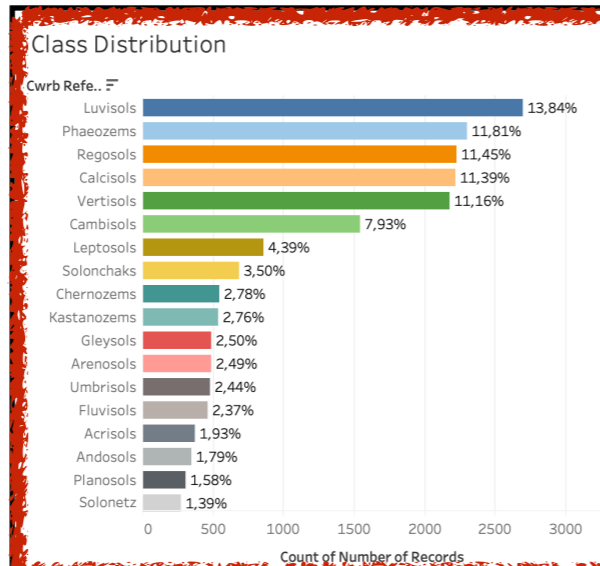
**Objects**

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- Extension

Tiled  Floating

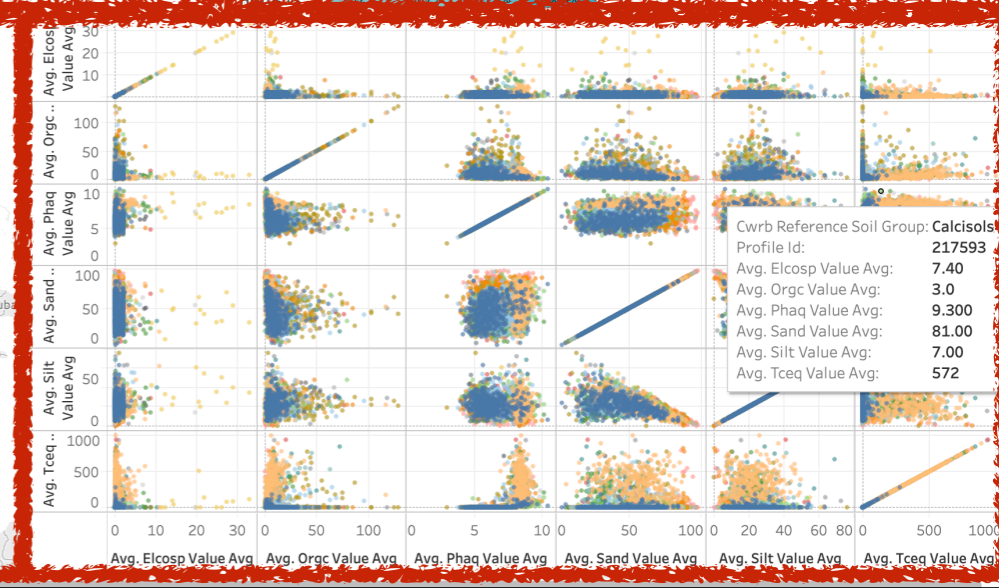
Show dashboard title

Data Source Horizons Stru



**Horizons Structure by Class (2)**

Cwrb..	1	2	3	4	5	6	7	8	9	12
Luvisols	0,2%	7,0%	18,7%	27,5%	26,4%	15,8%	4,2%	0,3%		
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Regosols	20,2%	23,7%	21,5%	17,4%	10,3%	5,1%	0,9%		0,8%	
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Vertisols	3,9%	15,5%	21,6%	25,8%	22,3%	8,8%	0,6%			
Cambisols	0,3%	13,0%	21,6%	23,8%	21,4%	13,2%	4,5%	1,0%	1,2%	
Leptosols	77,7%	17,8%	3,2%	1,4%						
Solonchaks	2,6%	10,0%	30,4%	23,5%	17,6%	10,6%	4,1%	1,2%		
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Gleysols	1,0%	3,7%	15,4%	21,4%	34,0%	13,6%	5,8%	3,3%	1,9%	
Arenosols	0,2%	3,3%	4,3%	20,7%	32,0%	28,5%	5,8%	3,3%	1,9%	
Umbrisols	48,4%	15,2%	70,1%	12,6%	7,4%	6,3%				
Fluvisols	4,8%	5,6%	22,8%	12,1%	20,6%	15,6%	10,6%	5,2%		2,6%
Acrisols	0,3%	5,3%	19,2%	28,8%	29,3%	9,6%	7,5%			
Andosols	1,4%	5,2%	24,9%	25,2%	25,8%	15,5%	2,0%			
Planosols	1,3%	13,7%	24,4%	33,9%	14,7%	9,8%	2,3%			
Solonetz		7,4%	16,7%	20,7%	29,6%	17,8%	7,8%			
Gypsisols	2,4%	18,9%	16,5%	25,2%	31,5%		5,5%			
Nitisols			2,7%	21,4%	26,8%	42,9%	6,3%			
Durisols	2,8%	31,5%	36,1%	14,8%	9,3%	5,6%				
Lixisols		8,7%	13,0%	17,4%	21,7%	39,1%				
Plinthosols			11,1%	29,6%	37,0%	22,2%				



# Dashboards - Design

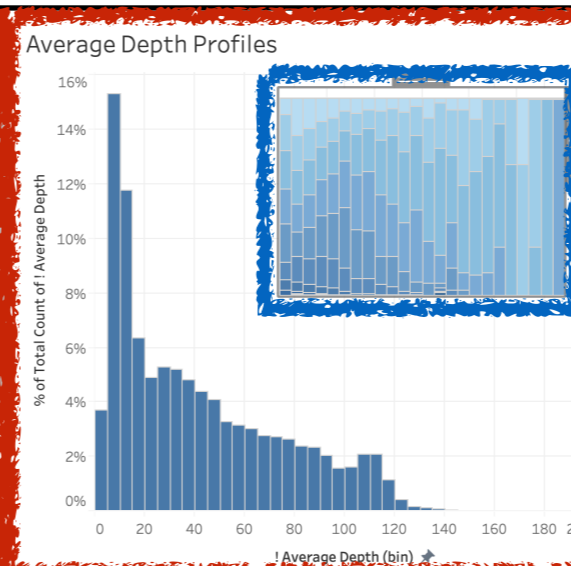
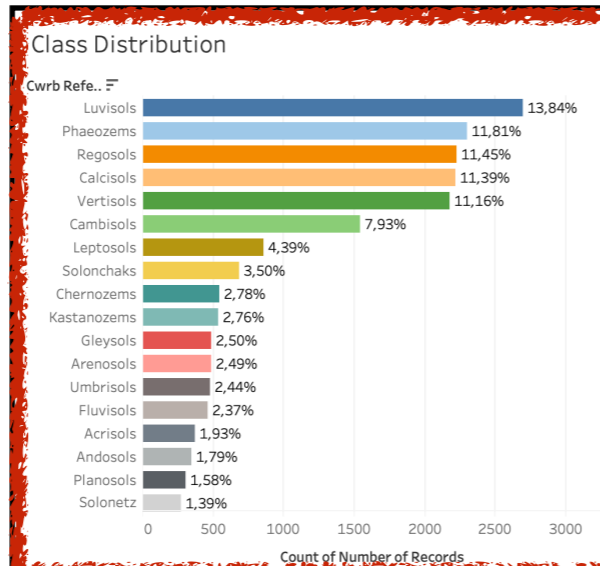
**Objects**

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- Vertical
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- Image
- Web Page
- Blank
- Button
- Extension

Tiled  Floating

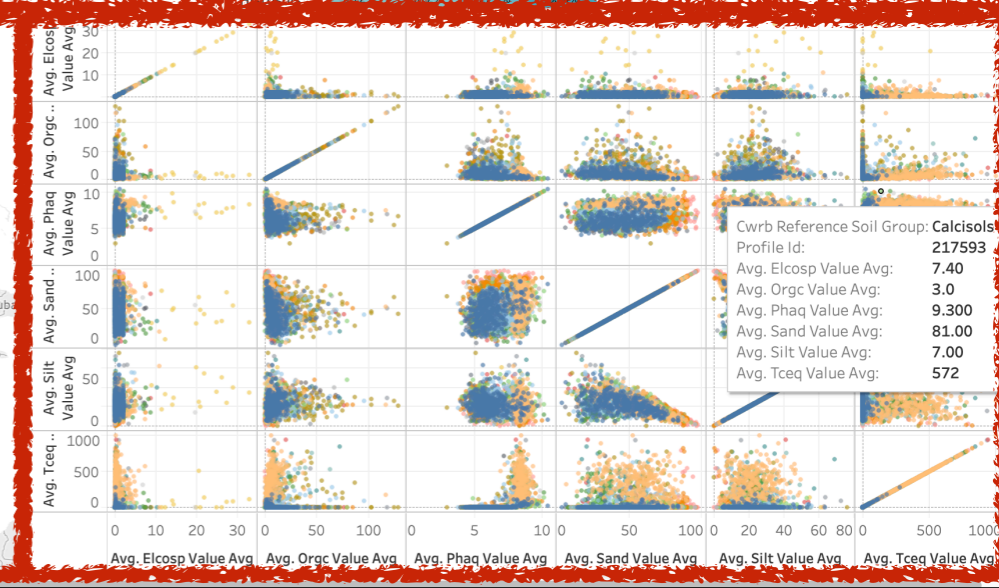
Show dashboard title

Data Source Horizons Stru



### Horizons Structure by Class (2)

Cwrb..	1	2	3	4	5	6	7	8	9	12
Luvisols	0,2%	7,0%	18,7%	27,5%	26,4%	15,8%	4,2%	0,3%		
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Regosols	20,2%	23,7%	21,5%	17,4%	10,3%	5,1%	0,9%		0,8%	
Calcisols	4,7%	10,5%	23,1%	29,8%	15,2%	2,5%	0,4%			
Vertisols	3,9%	15,5%	21,6%	25,8%	22,3%	8,8%	0,6%			
Cambisols	0,3%	13,0%	21,6%	23,8%	21,4%	13,2%	4,5%	1,0%	1,2%	
Leptosols	77,7%	17,8%	3,2%	1,4%						
Solonchaks	2,6%	10,0%	30,4%	23,5%	17,6%	10,6%	4,1%	1,2%		
Chernozems	1,1%	7,4%	42,2%	23,6%	33,2%	19,9%	2,6%			
Kastanoze..	4,3%	6,0%	22,3%	25,3%	26,1%	13,4%	2,6%			
Gleysols	1,0%	3,7%	15,4%	21,4%	34,0%	13,6%	5,8%	3,3%	1,9%	
Arenosols	0,2%	3,3%	4,3%	20,7%	32,0%	28,5%	5,8%	3,3%	1,9%	
Umbrisols	48,4%	15,2%	70,1%	12,6%	7,4%	6,3%				
Fluvisols	4,8%	5,6%	22,8%	12,1%	20,6%	15,6%	10,6%	5,2%		2,6%
Acrisols	0,3%	5,3%	19,2%	28,8%	29,3%	9,6%	7,5%			
Andosols	1,4%	5,2%	24,9%	25,2%	25,8%	15,5%	2,0%			
Planosols	1,3%	13,7%	24,4%	33,9%	14,7%	9,8%	2,3%			
Solonetz		7,4%	16,7%	20,7%	29,6%	17,8%	7,8%			
Gypsisols	2,4%	18,9%	16,5%	25,2%	31,5%		5,5%			
Nitisols			2,7%	21,4%	26,8%	42,9%	6,3%			
Durisols	2,8%	31,5%	36,1%	14,8%	9,3%	5,6%				
Lixisols		8,7%	13,0%	17,4%	21,7%	39,1%				
Plinthosols			11,1%	29,6%	37,0%	22,2%				





# Dashboards

- **Other objects**

- ◆ **Image**

- ◆ **WebPage**

- ◆ **Blank**

- **See the video tutorial on Dashboard Objects**

- ◆ **[https://www.tableau.com/learn/tutorials/on-demand/dashboard-objects?product=all&version=tableau\\_desktop\\_2019\\_1&topic=dashboardsstories](https://www.tableau.com/learn/tutorials/on-demand/dashboard-objects?product=all&version=tableau_desktop_2019_1&topic=dashboardsstories)**

# Dashboards - tutorial on Dashboard Objects

[Link to video](#)

The screenshot displays the Tableau Desktop interface. The main view is a world map titled "Avg. Shipping Cost" with a color scale legend ranging from 1.4 (lightest blue) to 155.7 (darkest blue). The map shows varying shipping costs across different regions, with the highest costs concentrated in Africa and parts of Asia. The interface includes a top menu bar (File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, Help), a toolbar with various actions, and a left-hand sidebar with the following sections:

- Dashboard:** Includes a "Device Preview" button.
- Size:** Set to "Custom size (800 x 550)".
- Sheets:** Lists three sheets: "Avg. Shipping Cost", "Shipping Cost", and "Running Total". A mouse cursor is hovering over the "Running Total" sheet.
- Objects:** Provides options for layout (Horizontal, Vertical), content type (Image, Web Page, Text, Blank), and display style (Tiled, Floating). The "Tiled" option is currently selected.
- Show dashboard title:** A checkbox that is currently unchecked.

At the bottom of the interface, a shelf contains several objects: "Data Source", "Avg. Shipping Cost", "Shipping Cost", "Running Total", "Tiled and Floating", "Shipping Dashboard", "Images & Web Pages", "Distribute Evenly", and "Layout Containers".



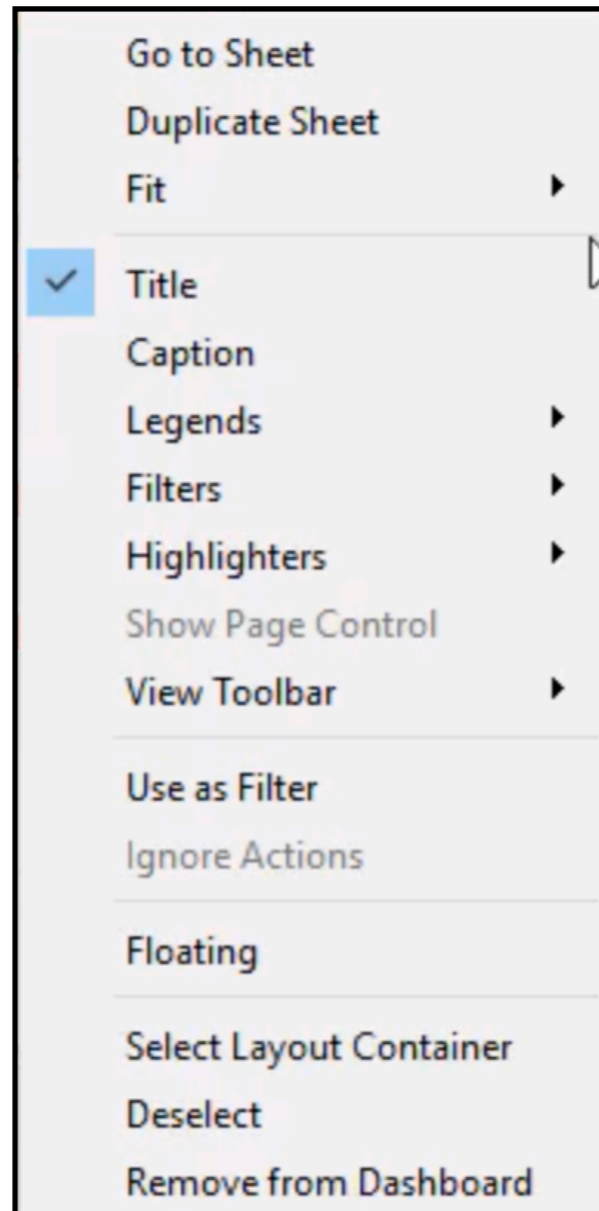
# Dashboards - tutorial on Dashboard Objects

[Link to video](#)

The screenshot displays the Tableau Desktop interface for a dashboard titled "Avg. Shipping Cost". The main visualization is a world map where countries are shaded in various shades of teal and blue, representing different average shipping costs. A legend in the top right corner of the map area shows a color gradient from light teal (representing a value of 1.4) to dark blue (representing a value of 155.7). The interface includes a top menu bar with options like File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, and Help. Below the menu is a toolbar with various icons for navigation and editing. On the left side, there is a "Dashboard" pane with a "Layout" dropdown and a "Device Preview" button. Below that is a "Size" section showing a custom size of 800 x 550. The "Sheets" section lists three sheets: "Avg. Shipping Cost", "Shipping Cost", and "Running Total", with a mouse cursor hovering over "Running Total". The "Objects" section at the bottom left offers options for "Horizontal", "Vertical", "Text", "Image", "Web Page", and "Blank", along with "Tiled" and "Floating" layout modes. At the very bottom, a shelf contains several objects: "Data Source", "Avg. Shipping Cost", "Shipping Cost", "Running Total", "Tiled and Floating", "Shipping Dashboard", "Images & Web Pages", "Distribute Evenly", and "Layout Containers".

# Dashboards - Content of a Container

- **Controlling the way the content of tile is displayed (specially the sheets)**
  - ◆ **Legends, Filters, Highlighters**



# Dashboards - Interaction - Actions

[Link to video](#)

The screenshot displays the Tableau Desktop interface with a dashboard titled "Sales and Profitability". The dashboard contains three main visualizations:

- World Map:** A geographical map showing sales and profit by region. A legend on the right indicates profit values ranging from -34,572 to 311,149. The "Market" filter is set to "(All)".
- Product Sales Table:** A table showing sales for Furniture, Office Supplies, and Technology across five markets. The x-axis for each column is labeled "Sales" with markers at 0K and 1000K.
- Sales and Profit Scatter Plot:** A scatter plot with "Sales" on the x-axis (0K to 100K) and "Profit" on the y-axis (-10K to 20K). Data points are colored by profit, with a legend ranging from -9,967 to 19,933. The "Category" filter is set to "Furniture".

The interface includes a menu bar (File, Data, Worksheet, Dashboard, Story, Map, Format, Server, Window, Help), a toolbar with navigation and editing tools, and a sidebar with "Dashboards" (Device Preview), "Size" (Custom size 800 x 550), "Sheets" (Product Sales, Profit Map, Sales & Profit), and "Objects" (Horizontal, Vertical, Text, Image, Web Page, Blank). The bottom status bar shows "Data Source", "Sales and Profitability", "URL Actions", and a user profile.

# Dashboards - Interaction - Actions

[Link to video](#)

The screenshot displays the Tableau Desktop interface for a dashboard titled "Sales and Profitability". The dashboard is composed of three main visualizations:

- World Map:** A geographical map showing sales and profit by region. A legend on the right indicates profit values ranging from -34,572 to 311,149. The "Market" filter is set to "(All)".
- Product Sales:** A horizontal bar chart showing sales for Furniture, Office Supplies, and Technology across five markets: Europe, Asia Pacific, USCA, LATAM, and Africa. The x-axis represents sales from 0K to 1000K.
- Sales and Profit:** A scatter plot showing the relationship between Sales (x-axis, 0K to 100K) and Profit (y-axis, -10K to 20K). Data points are categorized by product type: Furniture (circle), Office Supplies (square), and Technology (plus sign). A legend on the right shows profit values ranging from -9,967 to 19,933.

The interface includes a top menu bar (File, Data, Worksheet, Dashboard, Story, Map, Format, Server, Window, Help), a toolbar with various visualization and editing tools, and a sidebar on the left with sections for "Dashboards" (Device Preview), "Size" (Custom size 800 x 550), "Sheets" (Product Sales, Profit Map, Sales & Profit), and "Objects" (Horizontal, Vertical, Text, Image, Web Page, Blank). The bottom status bar shows the current data source, dashboard name, and user information.

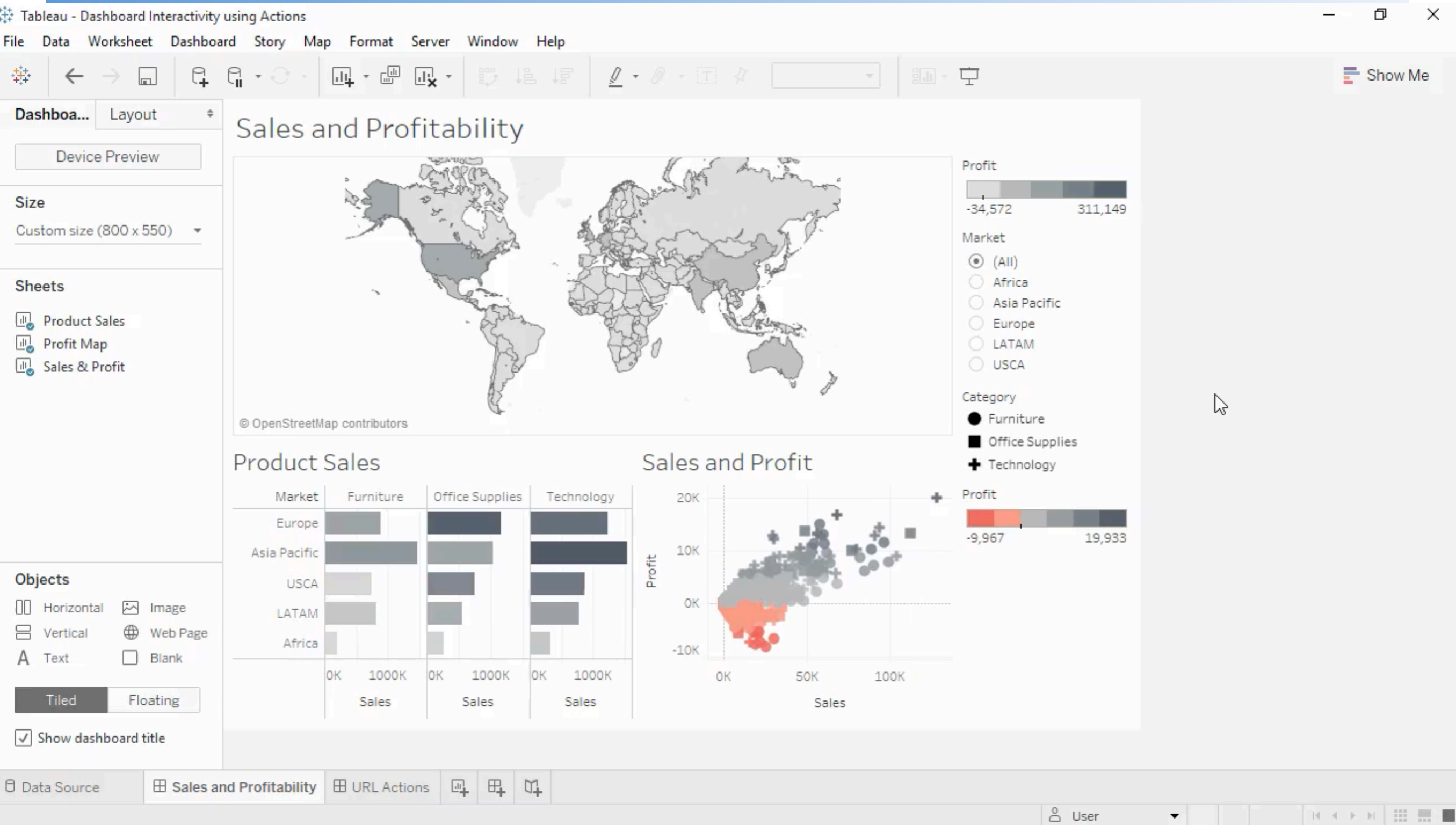
# Dashboards - Interaction - Actions

- **Actions**
  - ◆ **Highlight, Filter, or URL.Actions**
- **Highlight and Filter Actions have a source and target**
- **URL actions can include field values as dynamic inputs**
- **An action can be activated by various mouse behaviors:**
  - ◆ **hovering**
  - ◆ **clicking**
  - ◆ **menu option in the tooltip.**



# Dashboards - Actions: Highlight

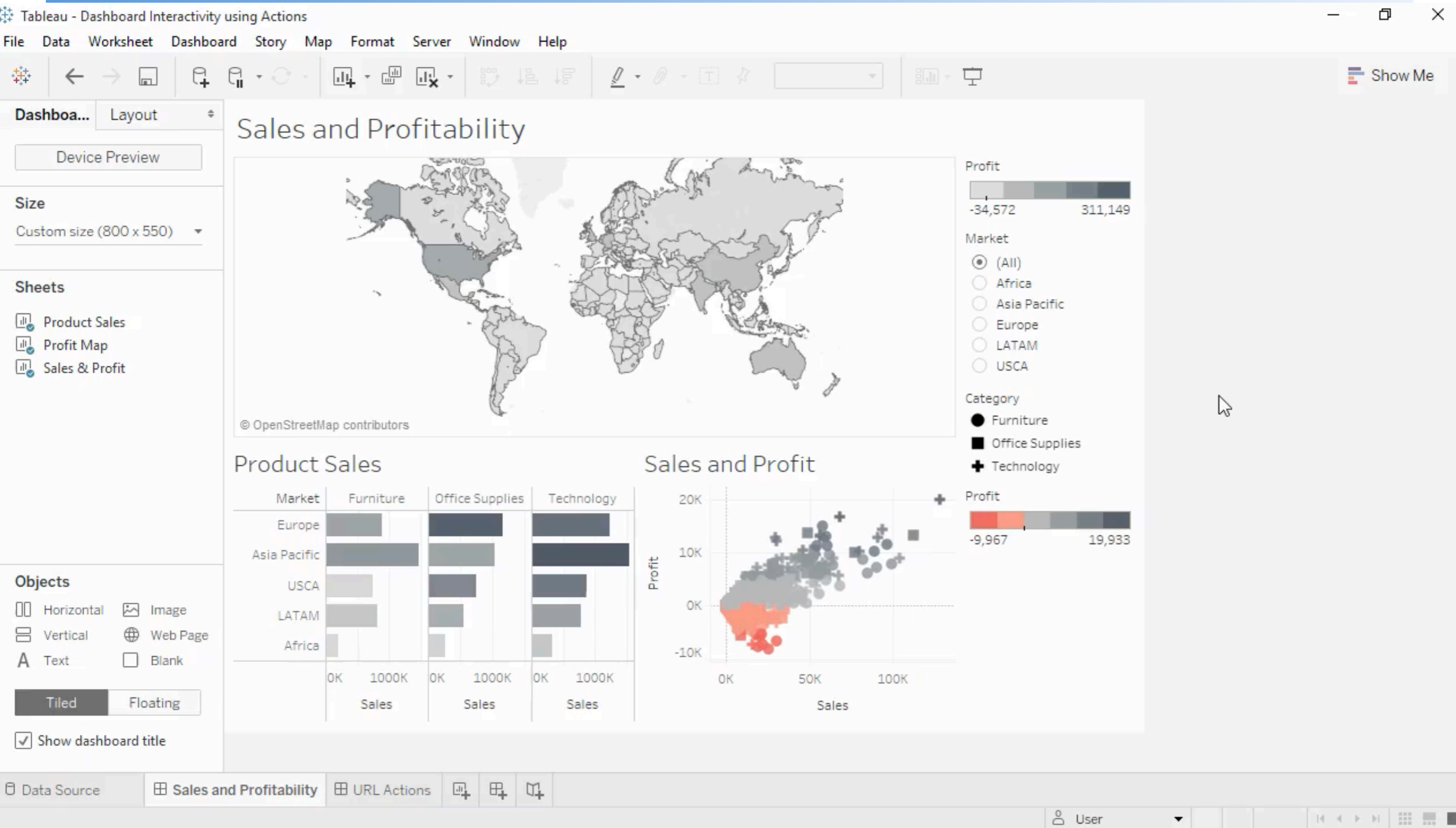
[Link to video](#)





# Dashboards - Actions: Highlight

[Link to video](#)



# Dashboards - Actions: Highlight

Add Highlight Action ✕

Name:

Source Sheets:

Sales and Profitability Run action on:

- Product Sales
- Profit Map
- Sales & Profit

Target Sheets

Sales and Profitability

- Product Sales
- Profit Map
- Sales & Profit

Target Highlighting

Selected Fields  Category

Dates and Times  Country

All Fields  Market

Region

Segment

Sub-Category

# Dashboards - Actions: Filtering

[Link to video](#)

The screenshot displays the Tableau Desktop interface with a dashboard titled "Sales and Profitability". The dashboard contains three main visualizations:

- World Map:** A geographical map showing sales and profit by region. A legend on the right indicates profit values ranging from -34,572 to 311,149. The "Market" filter is set to "(All)".
- Product Sales Table:** A horizontal bar chart showing sales for Furniture, Office Supplies, and Technology across five markets. The "Asia Pacific" market is highlighted in yellow.
- Sales and Profit Scatter Plot:** A scatter plot showing Profit (Y-axis, -10K to 20K) versus Sales (X-axis, 0K to 100K). Data points are colored by profit, with a legend showing values from -9,967 to 19,933. The "Category" filter is set to "Furniture".

The interface includes a menu bar (File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, Help), a toolbar with navigation and visualization tools, and a sidebar with "Dashboards", "Layout", "Device Preview", "Size", "Sheets", and "Objects" panels. The status bar at the bottom shows "1162 marks", "1 row by 1 column", "SUM(Sales): 12,642,502", and "Highlighting on Category".

# Dashboards - Actions: Filtering

[Link to video](#)

**Product Sales**

Market	Furniture	Office Supplies	Technology
Europe	~800K	~1000K	~1000K
Asia Pacific	~1000K	~1000K	~1000K
USCA	~800K	~800K	~800K
LATAM	~800K	~800K	~800K
Africa	~200K	~200K	~200K

**Sales and Profit**

Category	Profit Range
Furniture	~0K to ~10K
Office Supplies	~0K to ~10K
Technology	~0K to ~10K



# Dashboards - Actions: Filtering

Name:

Source Sheets:

Sales and Profitability

Product Sales

Profit Map

Sales & Profit

Run action on:

Run on single select only

Target Sheets

Sales and Profitability

Product Sales

Profit Map

Sales & Profit

Clearing the selection will:

Leave the filter

Show all values

Exclude all values

Target Filters

Selected Fields

All Fields

Source Field	Target Field	Target Data Source

# Dashboards - Actions: URL

[Link to video](#)

Tableau - Dashboard Interactivity using Actions

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Dashboa... Layout

Device Preview

Size

Custom size (800 x 550)

Sheets

NZ Cities

NZ Sales

Objects

Horizontal Image

Vertical Web Page

Text Blank

Tiled Floating

Show dashboard title

Data Source Sales and Profitability URL Actions

3820 marks 1 row by 1 column SUM(Profit): 1,467,457

User

### Sales by State - Select a State to Filter the Map

State	Sales
New Zealand	
Gisborne	1,434
Otago	
Marlborough	2,850
Nelson	
Southland	
Manawatu-Wanganui	4,184
Taranaki	
Hawke's Bay	
Northland	10,457
Bay of Plenty	
Canterbury	
Waikato	20,618
Wellington	36,691
Auckland	

### Sales by City - Select a City to bring up Wikipedia

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### From today's featured article

**The history of Liverpool Football Club from 1959 to 1985 opens with the appointment of Bill Shankly as manager of Liverpool, then a Second**

### In the news

- The Turkish government purges tens of thousands of alleged Gülenists following an



# Dashboards - Actions: URL

[Link to video](#)

Tableau - Dashboard Interactivity using Actions

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Dashboa... Layout

Device Preview

Size  
Custom size (800 x 550)

Sheets

- NZ Cities
- NZ Sales

Objects

- Horizontal
- Image
- Vertical
- Web Page
- Text
- Blank

Tiled Floating

Show dashboard title

Data Source Sales and Profitability URL Actions

3820 marks 1 row by 1 column SUM(Profit): 1,467,457 User

### Sales by State - Select a State to Filter the Map

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## Recommended Actions

# Plan your dashboards

- See the video “Concept: Planning for a Successful Dashboard” from the Module “Advanced Dashboards: Using Design Techniques and Filter Actions” from the “Desktop II: Intermediate” Course
  - ◆ Tableau eLearning: <https://www.tableau.com/learn/training/elearning>
  - ◆ Sign-in
  - ◆ Check the course “Desktop II: Intermediate”
  - ◆ Check the module “Advanced Dashboards: Using Design Techniques and Filter Actions”
  - ◆ See the video “**Concept: Planning for a Successful Dashboard**”

# THANK YOU!

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