

Pivot in Tableau

As Pivot is commonly used in Excel to summarise the data. Similarly in Tableau Pivot is used to visualize a measure on the basis of multiple dimensions in a same plot area.

Key Points regarding Pivot:

- Tableau Pivot is offered from the data grid.
- All fields within the pivot should be from an identical association.
- Only one pivot is allowed.



Pivot in Tableau

To initiate the pivot we need to click on “**Manage Metadata**”

The screenshot shows the Tableau interface with the 'Orders (orders)' data source selected. The 'Manage metadata' button is highlighted in the top right corner of the field list.

Field Name	Table	Remote Field Name
Abc Customer Name	Orders	Customer Name
Abc Segment	Orders	Segment
Country	Orders	Country
City	Orders	City
State	Orders	State
Postal Code	Orders	Postal Code
Abc Region	Orders	Region
Abc Product ID	Orders	Product ID
Abc Category	Orders	Category
Abc Sub-Category	Orders	Sub-Category
Abc Product Name	Orders	Product Name
# Sales	Orders	Sales
# Quantity	Orders	Quantity
# Discount	Orders	Discount

The screenshot shows the Tableau interface with the 'Orders (orders)' data source selected. The 'Pivot' option is highlighted in the context menu for the 'Segment' field.

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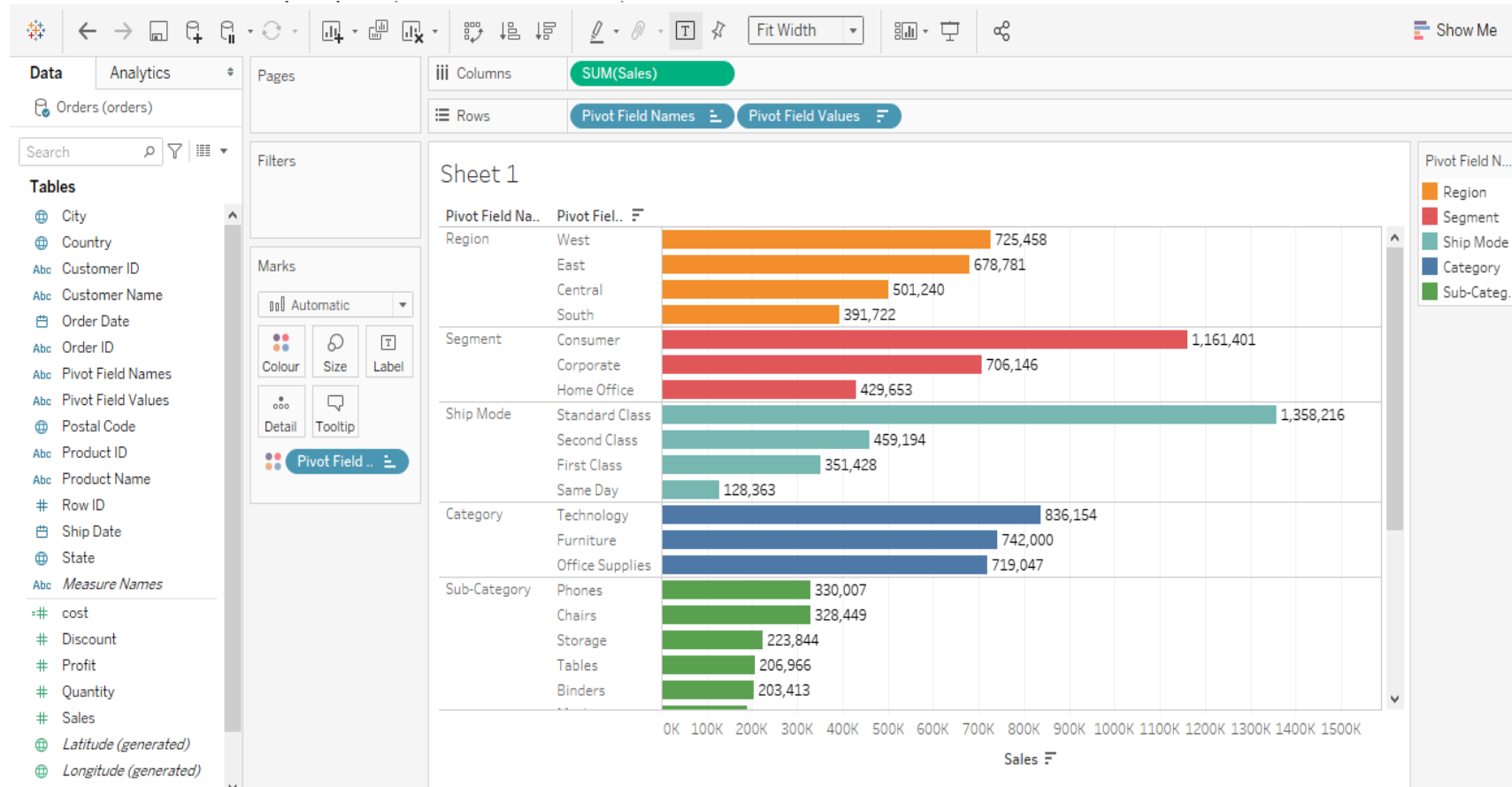


Pivot in Tableau

Finally visualize the Pivot using Pivot Field Names & Pivot Field Values

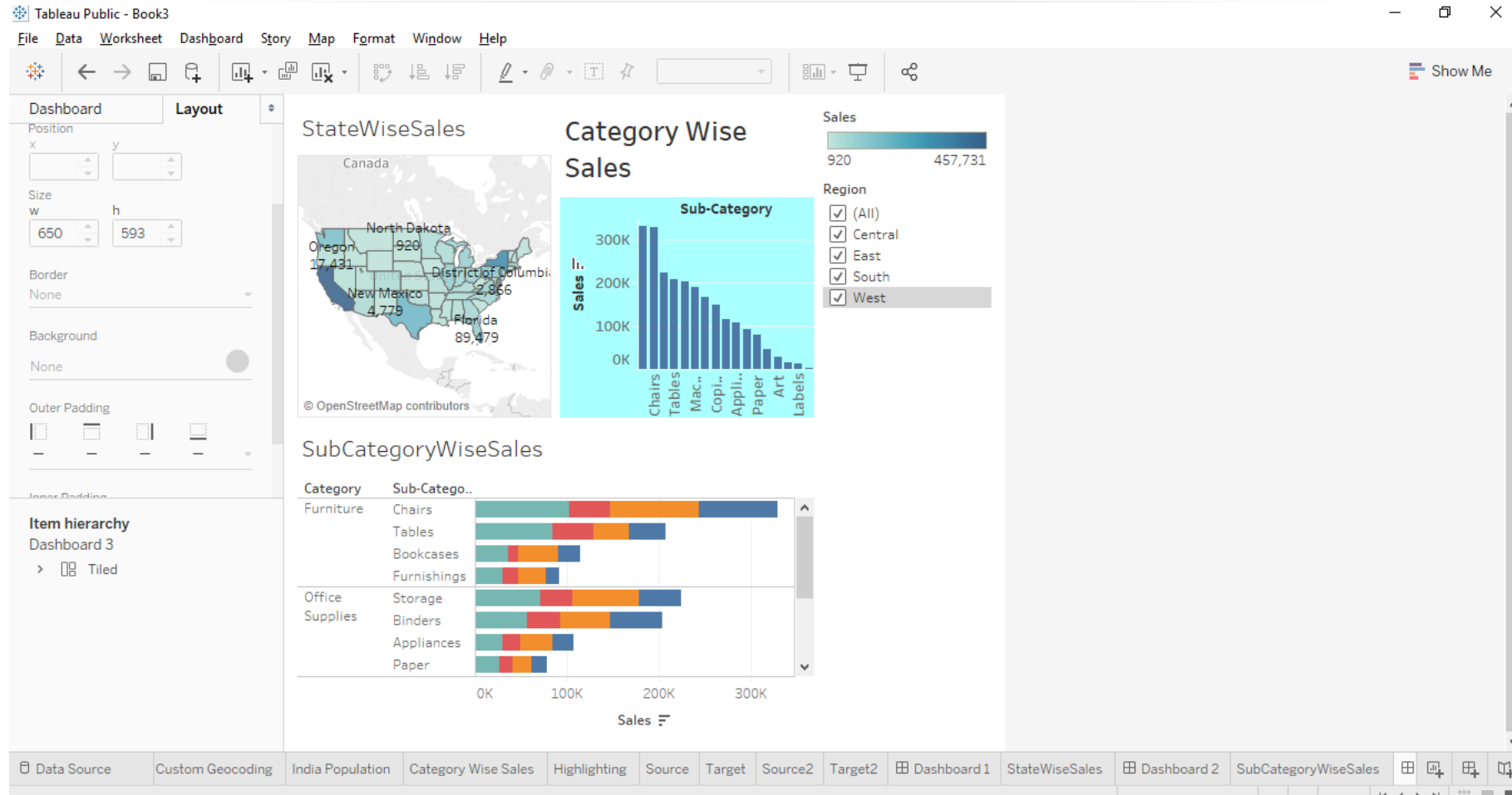
Pivot Field Names

Pivot Field Values



Dashboards

Dashboards are the collection of sheets at one place which are used for better analysis.



We can also add the webpage to our dashboard. Multiple charts can be made interactive at same time.

Dashboards Objects

- Text – Add a customized text in the dashboard
- Image – To add a image such as company logo
- Webpage – Add a webpage to the dashboard
- Blank - Gives a gap between the visuals
- Navigation – To navigate between the dashboards
- Download – enable the download option for the user
- Extension - get additional visuals
- Vertical & Horizontal Alignment - provides dynamic plot area



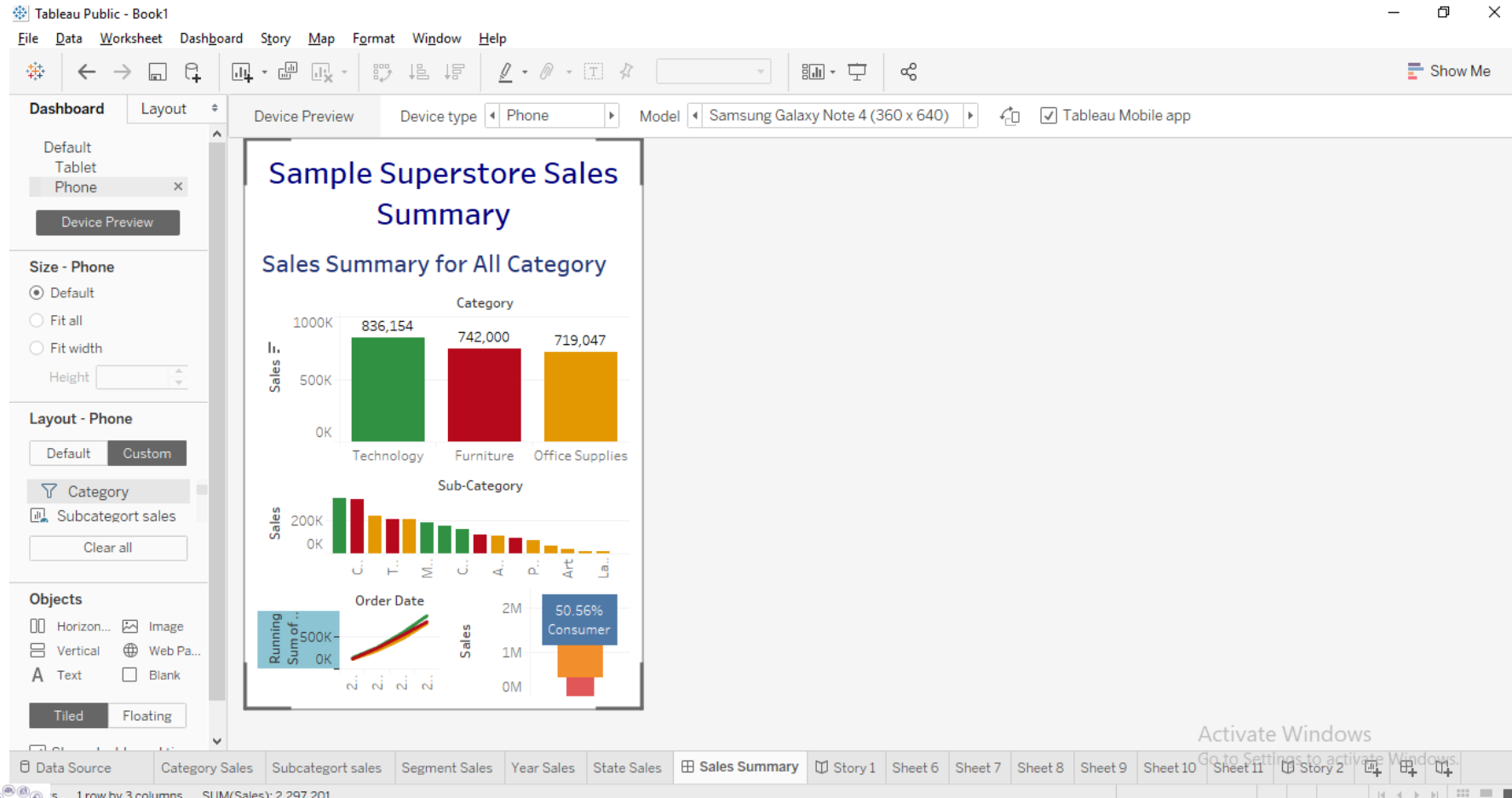
Formatting Dashboards

- Tiled / Floating Sheets
- Vertical & Horizontal Alignment impact on Filters
- Dashboard Titles
- Dashboard Actions



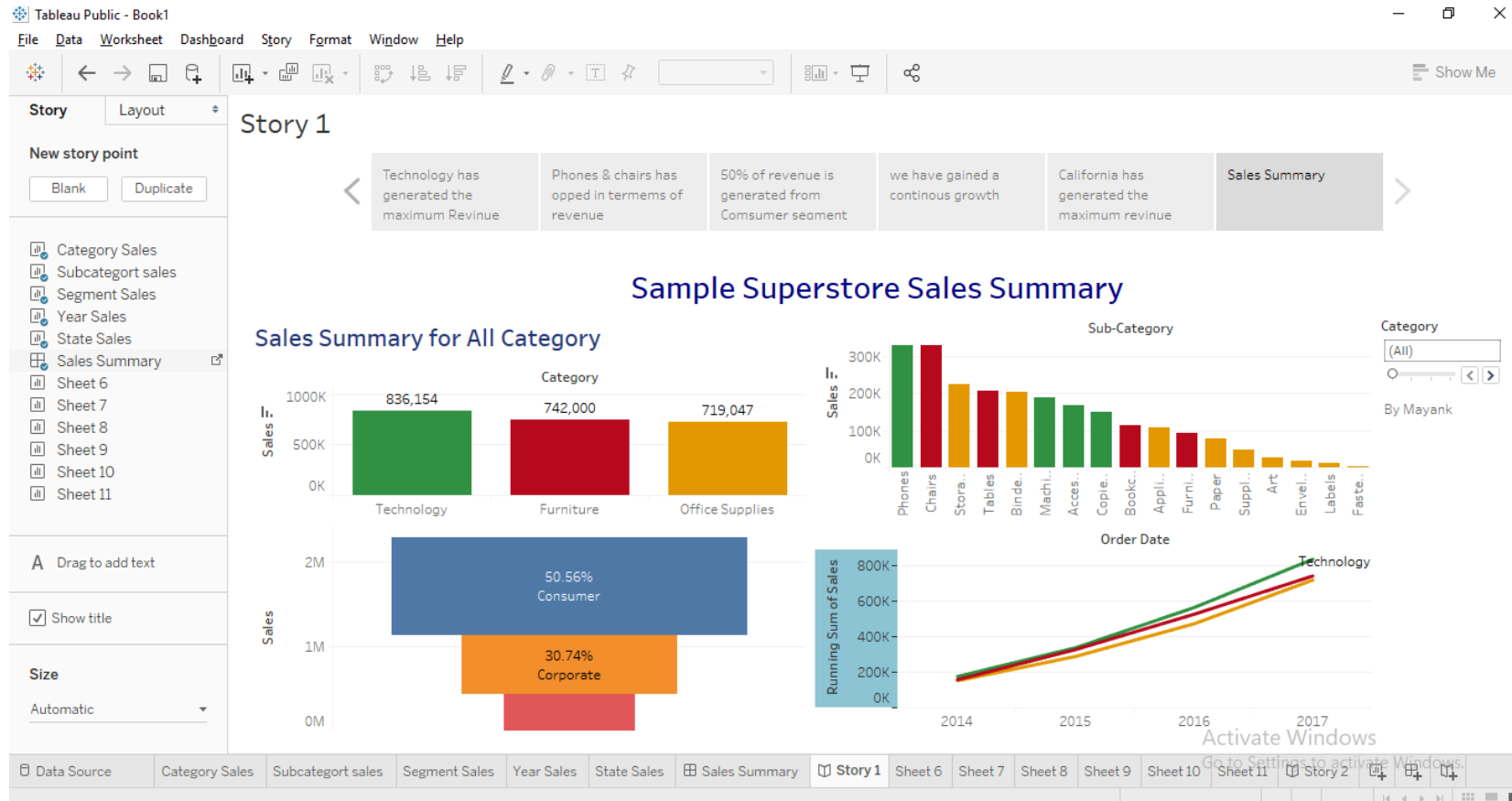
Device Designer

Tableau helps us to design the layout so that it is properly visible on different devices - desktops, Cell Phones & Tablets.



Story Point

Story point is sequential way of analyzing the visualized data. This will give us different analysis at one place.



ASSIGNMENT



Create a dashboard for sample superstore sales summary which should present:

- Year Wise sales for each region,
- Percentage contribution of each region in over all sales.
- State wise revenue earned.
- Category wise Sales with region details.
- Subcategory sales region wise.

The dashboard should be interactive on the basis of Region.



ASSIGNMENT



Create a Interactive dashboard for sample superstore Profit summary which should present:

- Month Wise profit earned in each category, Min & Max profit should be displayed.
- Category wise Profit with region details.
- Subcategory wise profit (use waterfall chart).
- Segment wise profit percentage.
- Percentage contribution of each region in over all profit.
- State wise profit earned (Word Map)



The dashboard should be interactive on the basis of Category.

Dashboard Actions

- Action Filter
- Action Highlight
- Action URL
- Navigation Actions
- Parameter Action
- Action Set



Dashboard Actions -Action Filter

The screenshot shows the Tableau Desktop interface with a dashboard titled 'Cat Sales'. The dashboard contains two visualizations: a bar chart titled 'Cat Sales' and a pie chart titled 'Region Birfaction for All Category'.

The 'Edit Filter Action' dialog box is open, showing the following settings:

- Name:** Filter2
- Source Sheets:** Dashboard 2 (selected), Cat Sales (checked), REG (unchecked), SC (unchecked). Run action on: Select (selected), Hover, Menu. ☐ Run on single select only.
- Target Sheets:** Dashboard 2 (selected), Cat Sales (unchecked), REG (checked), SC (checked). Clearing the selection will: Show all values (selected), Leave the filter, Exclude all values.
- Target Filters:** All Fields (selected). A table with columns: Source Field, Target Field, Target Data Source.

The 'Cat Sales' bar chart shows sales for Technology (836,154) and Furniture (742,000). The 'Region Birfaction for All Category' pie chart shows the distribution of sales by region: West (31.58%), Central (21.82%), South (17.05%), and East (29.55%).

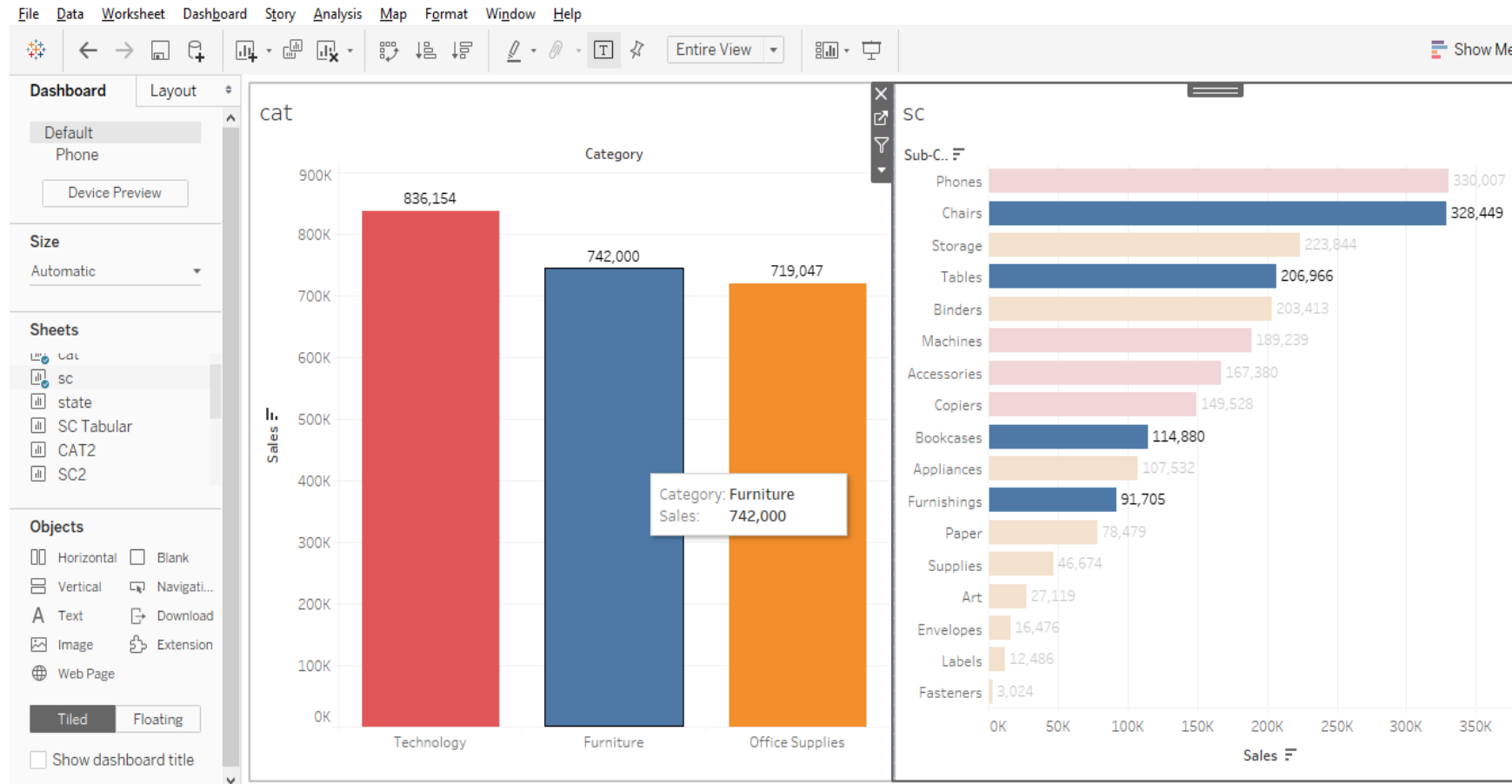
The 'Edit Filter Action' dialog box is also showing the 'Target Filters' section with a table:

Source Field	Target Field	Target Data Source

Buttons: Add Filter..., Edit..., Remove, OK, Cancel.



Dashboard Actions -Action Highlight



Dashboard Actions -Action URL

File Data Worksheet Dashboard Story Analysis Map Format Window Help

Dashboard Layout

Default Phone Device Preview

Size Automatic

Sheets

- cat
- SC
- state
- SC Tabular
- CAT2
- SC2

Objects

- Horizontal Blank
- Vertical Navigati...
- A Text Download
- Image Extension
- Web Page

Tiled Floating

Show dashboard title

Map of the United States showing population by state:

State	Population
Washington	7,386,411
Oregon	1,743,117
Idaho	1,732,837
Montana	1,080,577
North Dakota	769,912
South Dakota	886,961
Nebraska	1,961,590
Utah	3,205,658
New Mexico	2,096,829
Oklahoma	801,923
Texas	29,145,505
Mississippi	2,967,297
South Carolina	5,293,393
Florida	21,538,187
California	39,150,692

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California

From Wikipedia, the free encyclopedia Coordinates: 37°N 120°W

This article is about the State of California. For other uses, see California (disambiguation).

California is a state in the Pacific Coast region of the United States. With over 39.3 million residents across a total area of

California

State

State of California

Flag Seal

Nickname(s): Golden State^[1]
Motto(s): "Eureka"^[2]
Anthem: "I Love You, California"

0:00 CC MENU

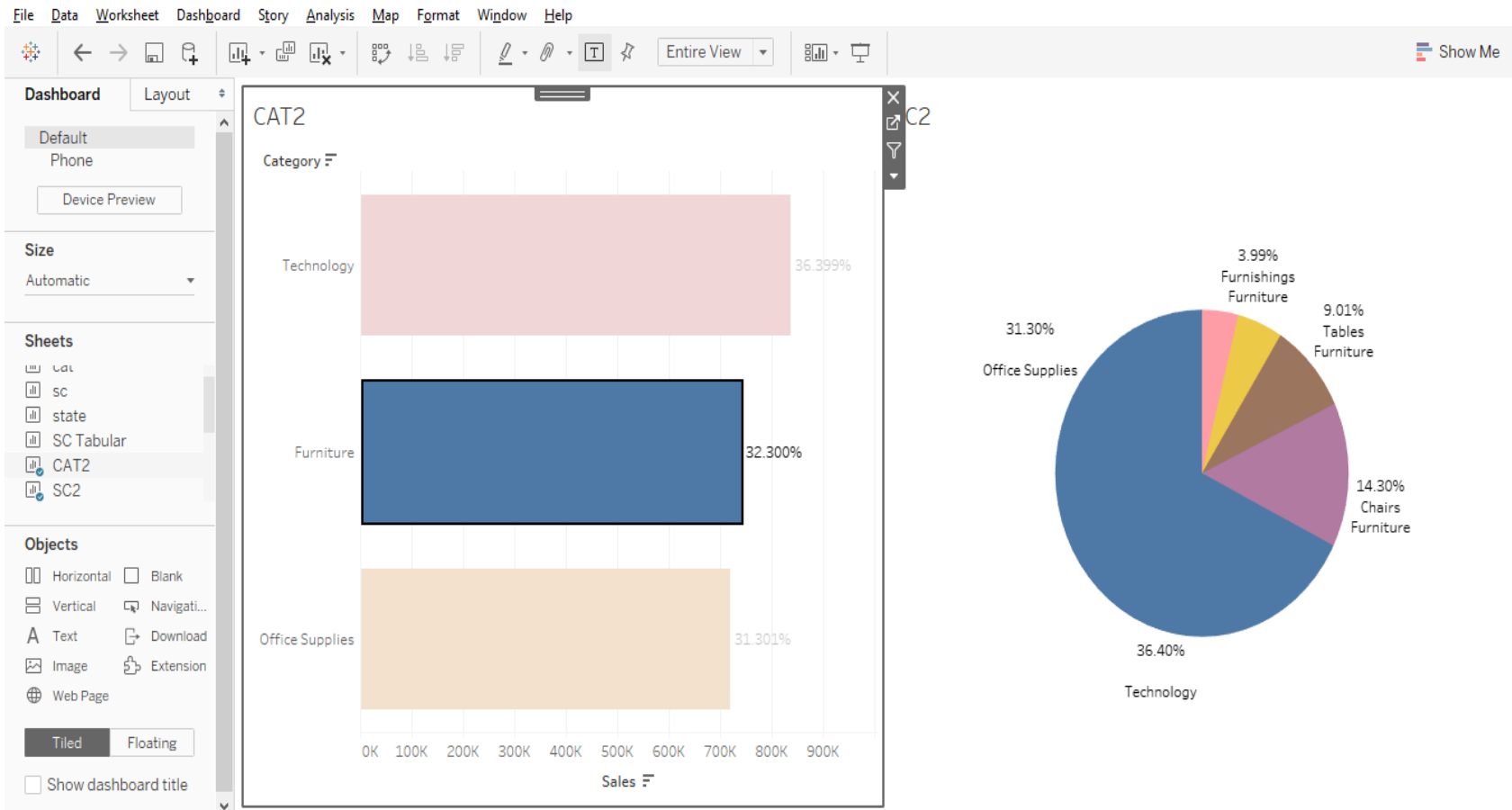
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Print/export



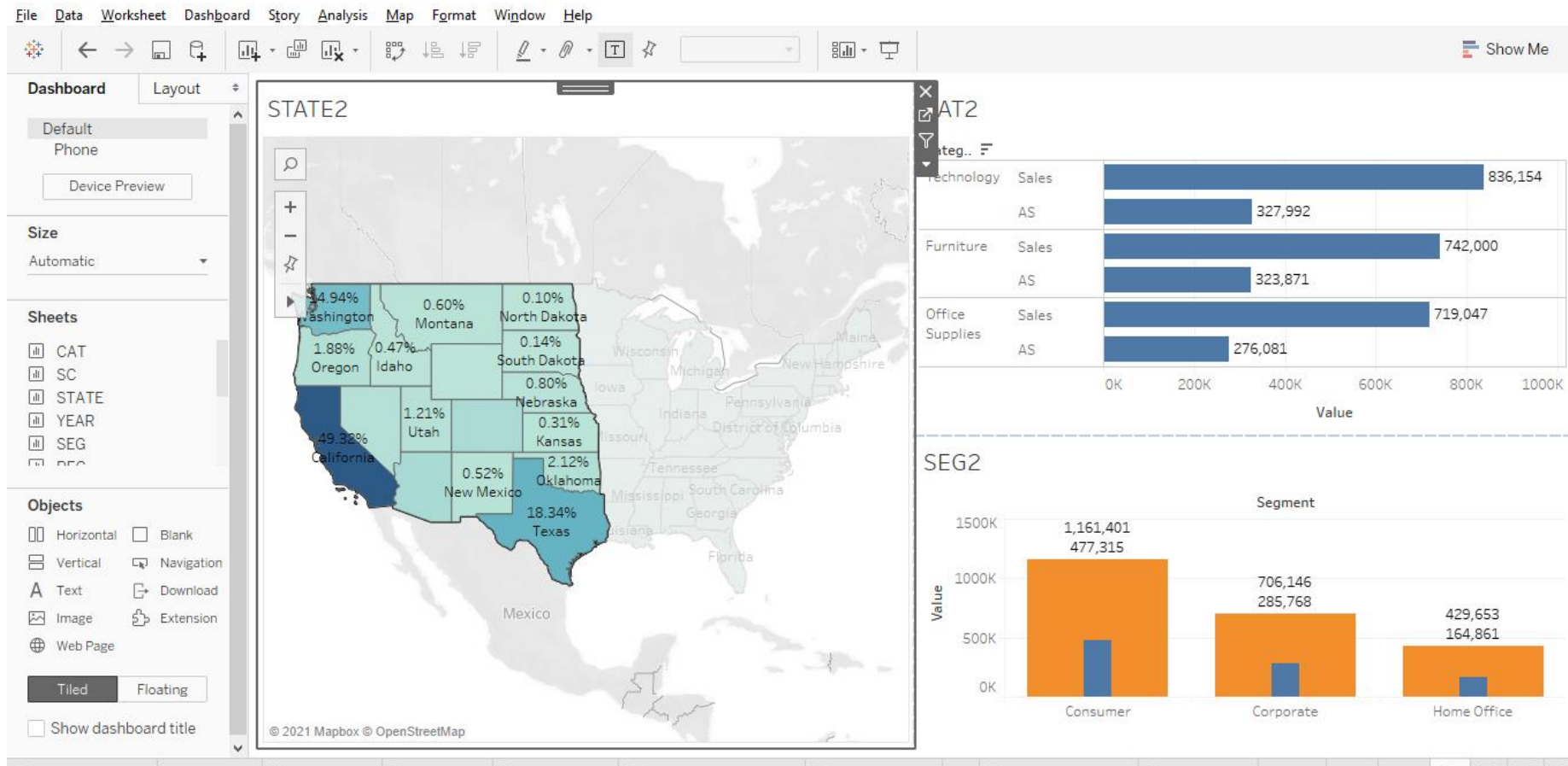
Dashboard Actions -Action Parameter

- Create a Parameter
- Create a calculated field using parameter
- Use Parameter Action to assign the value to parameter



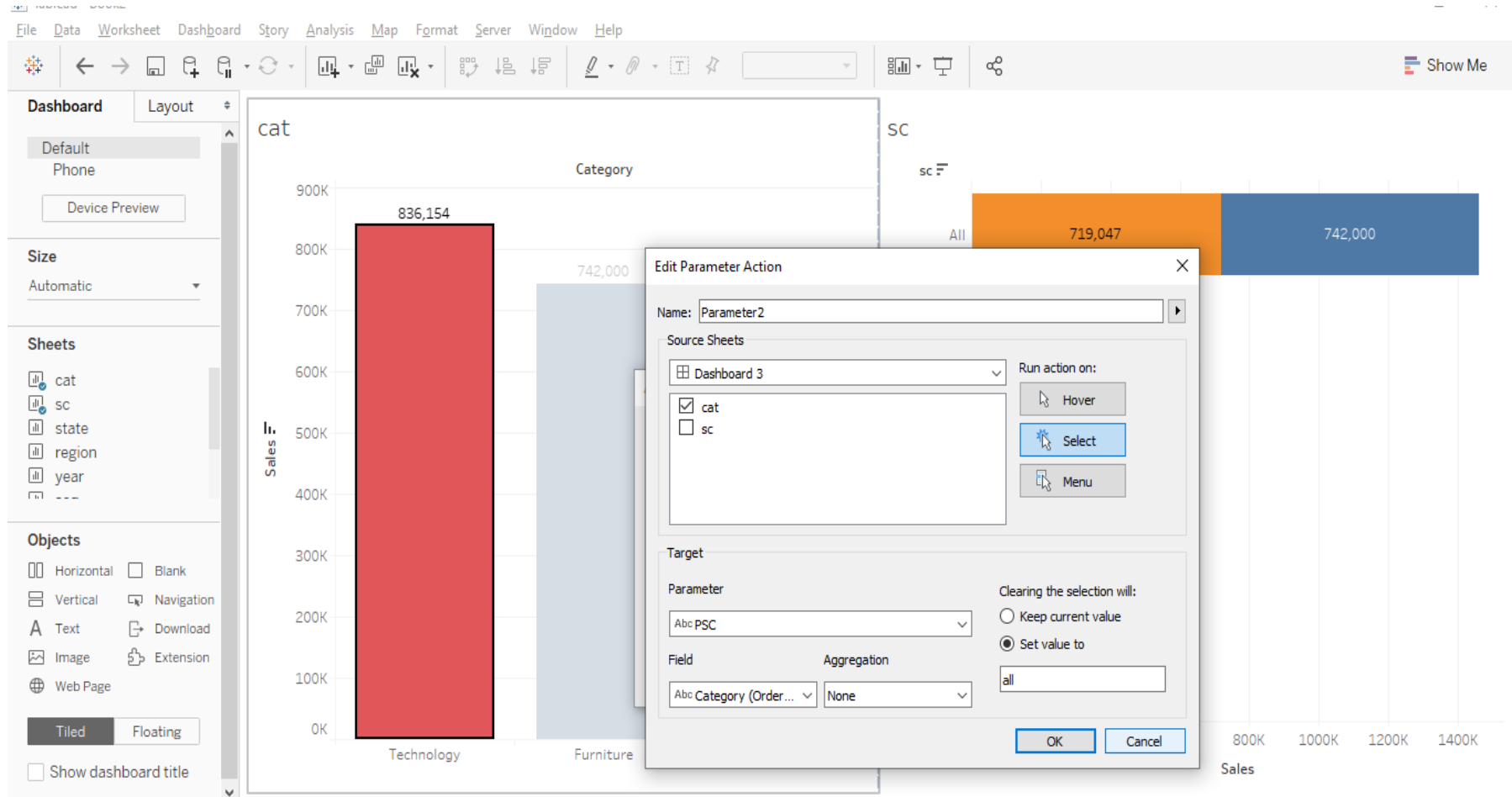
Dashboard Actions -Action Set

- Create a empty Set
- Created a calculated field using Set
- Assign the set to color
- Use set Action to change the value of set



Dashboard Actions

Parameter Action

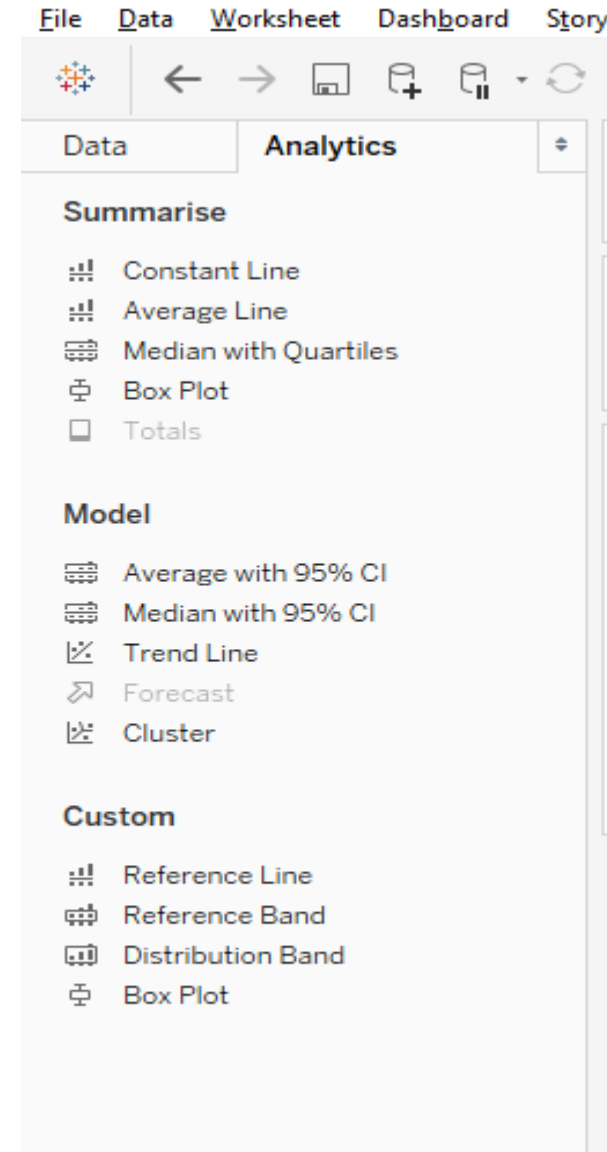


Analytics Pane

The Analytics Pane in Tableau gives you the various tools to analyze your data on the basis of different statistical model.

Analytics Pane has three sections:

- Summarise
- Model
- Custom



Forecasting

Forecasting is a process of predicting the future trend by identifying regular patterns in measure values.

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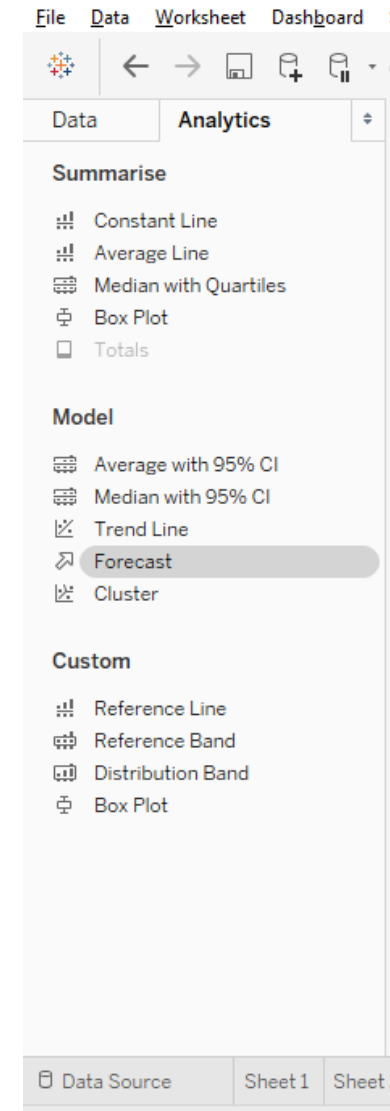
This technique of identifying regular patterns from existing data values and giving a forecast is known as **Exponential Smoothing**.

There are two important concepts on which the process of forecasting is based:

Trends - increase or decrease in data over time

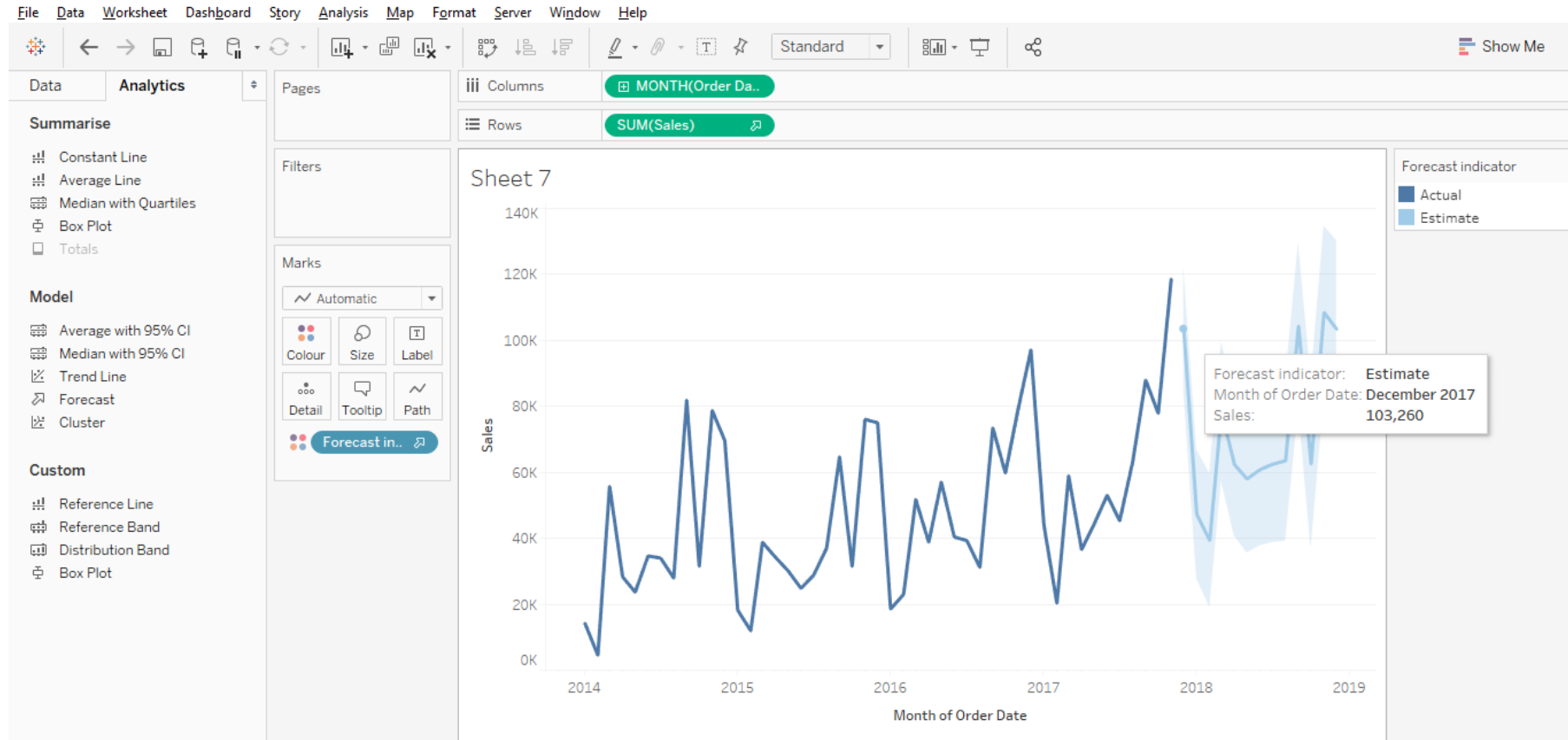
Seasonality - repeating variation in values over a determined period of time (such as weekly, quarterly, yearly, etc) known as seasons

In Tableau forecasting is automatic. We just need to drag the forecasting option from Analytics pane



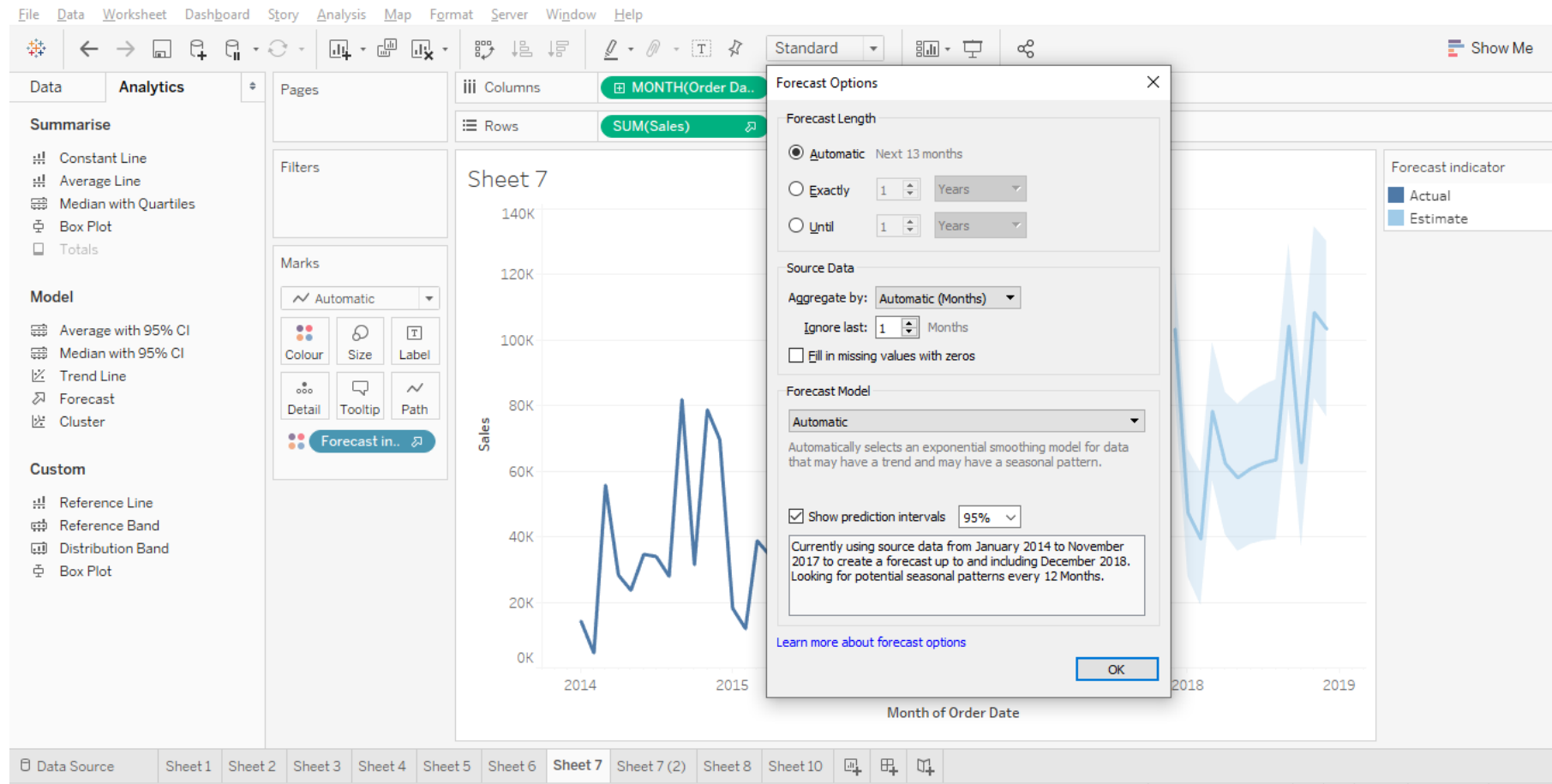
Forecasting

To create a forecast you need to have a line chart, Tableau will extend the line chart to add forecast to it



Forecasting

To get more information about forecast you can go to the Forecast options



Forecasting

Describe Forecast can also be used to get more information about forecast

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Standard

Show Me

Data Analytics

Summarise

- Constant Line
- Average Line
- Median with Quartiles
- Box Plot
- Totals

Model

- Average with 95% CI
- Median with 95% CI
- Trend Line
- Forecast
- Cluster

Custom

- Reference Line
- Reference Band
- Distribution Band
- Box Plot

Columns: MONTH(Order Da..)

Rows: SUM(Sales)

Describe Forecast

Summary Models

Options Used to Create Forecasts

Time series: Month of Order Date
Measures: Sum of Sales
Forecast forward: 13 months (December 2017 – December 2018)
Forecast based on: January 2014 – November 2017
Ignore last: 1 month (December 2017)
Seasonal pattern: 12 month cycle

Sum of Sales

Initial	Change From Initial	Seasonal Effect		Contribution		Quality
December 2017	December 2017 – December 2018	High	Low	Trend	Season	
103,260 ± 18,670	0	November 2018 37,518	February 2018 -31,547	0.0%	100.0%	Ok

☐ Show values as percentages

Copy to Clipboard [Learn more about the forecast summary](#) Close

Forecast indicator

- Actual
- Estimate

2019

Month of Order Date

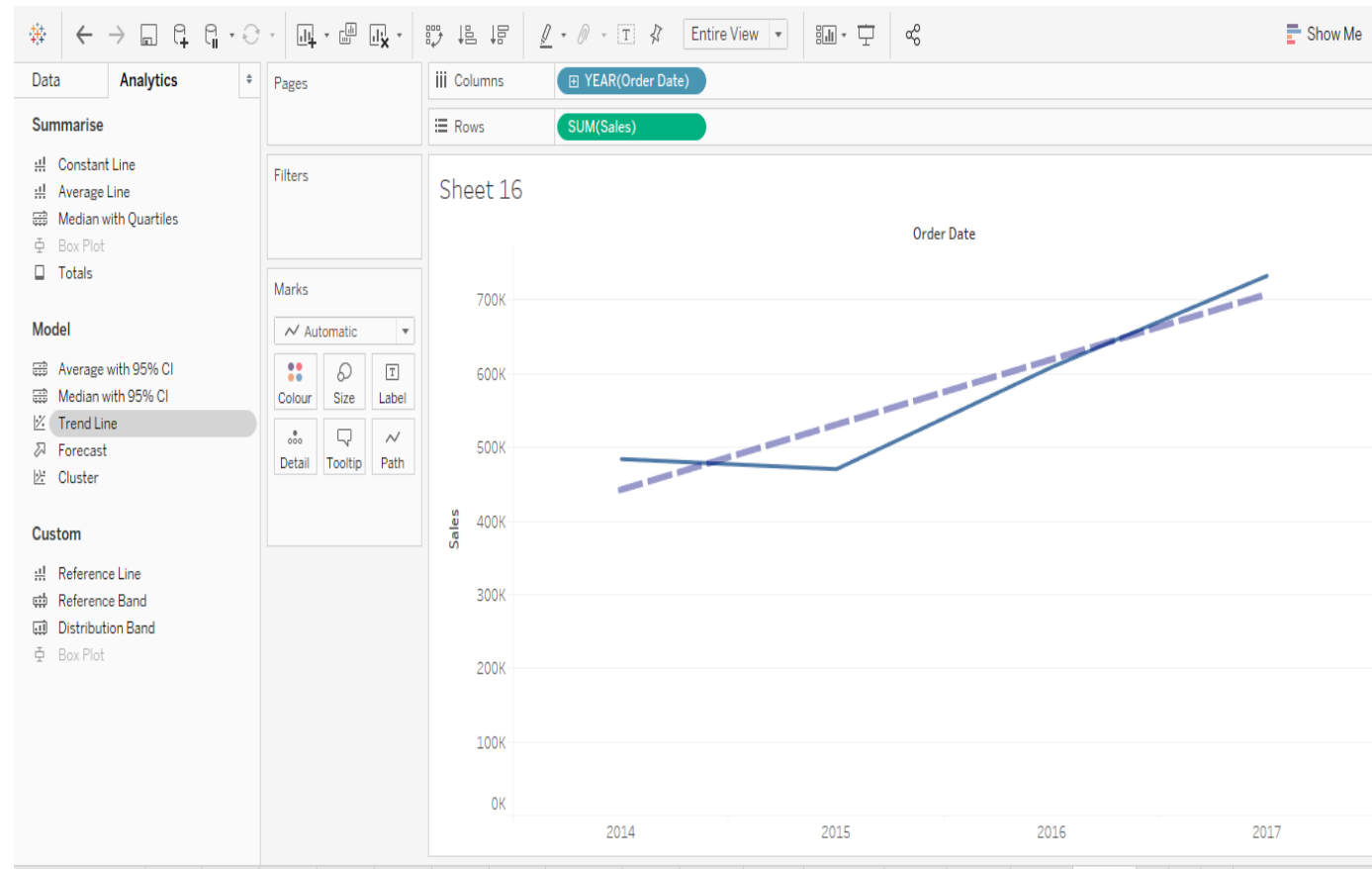


Trend Lines

A trend line is a line showing the patterns or trends emerging from data points. In Tableau, we can have straight or curved trend lines depending on the model you select.

Tableau has a total of five types of trend lines:

- Linear
- Exponential
- Logarithmic
- Polynomial
- Power



Clustering

Clustering means dividing a data set into segments or clusters having relevant data values. Clustering helps us conduct a comparative analysis of data in Tableau. A cluster contains similar data values of a dimension that is the values in a cluster are more related to each other than the data in other clusters.

Clustering allows you to statistically group similar dimension members

In Tableau clustering is done on the basis of K-means clustering algorithm.

To Create a cluster you just need to drag the cluster from Analytics pane to visualization.



Clustering

To Create a cluster you just need to drag the cluster from Analytics pane to visualization.

