

# Power BI

Advanced Visuals, Power Query & Dashboard Projects

# **More Visual Elements**

# Advanced Visuals

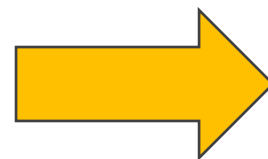
- Animated Charts
- Advanced Donut Chart
- Drill Down Column Chart
- Sankey Chart
- Infographic
- Play Axis
- Scroller
- SunBurst Chart
- Histogram

# Advanced Visuals

- Insert Objects
  - Images
  - Buttons
  - Page Navigations
  - Bookmarks

# **Power Query Project**

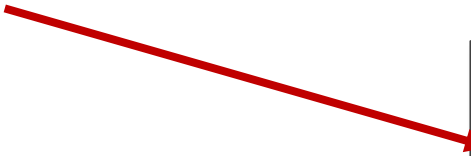
	A	B	C	D	E	F	G
1	ZenRetail Food Prep Overview						
2							
3							
4	Location	Products	January-22	February-22	March-22	April-22	Grand Total
5	Costco	Bottled Water	\$4.25	\$4.49	\$4.80	\$4.89	\$18.43
6	Costco	Canned Vegetables	\$0.85	\$0.85	\$0.85	\$0.85	\$3.40
7	Costco	Dried Beans	\$20.99	\$22.99	\$22.99	\$23.99	\$90.96
8	Costco	Duct Tape	\$5.00		\$5.25		\$10.25
9	Costco	Flashlight	\$13.00		\$13.00		\$26.00
10	Costco	Milk	\$2.30	\$2.40	\$2.50	\$2.70	\$9.90
11	Costco	Rice	\$23.00	\$23.99	\$24.99	\$25.25	\$97.23
12	Costco	Rope	\$13.50		\$14.00		\$27.50
13	Costco	Water Filter	\$29.00		\$31.00		\$60.00
14		Costco Total	\$111.89	\$54.72	\$119.38	\$57.68	\$343.67
15	Target	Bottled Water	\$4.99	\$5.15	\$5.25	\$5.35	\$20.74
16	Target	Canned Vegetables	\$0.65	\$0.69	\$0.74	\$0.79	\$2.87
17	Target	Dried Beans	\$23.99	\$24.99	\$25.45	\$25.79	\$100.22
18	Target	Duct Tape	\$6.00		\$6.25		\$12.25
19	Target	Flashlight	\$12.50		\$12.75		\$25.25
20	Target	Milk	\$2.20	\$2.45	\$2.70	\$3.00	\$10.35
21	Target	Rice	\$22.99	\$23.25	\$24.25	\$24.75	\$95.24
22	Target	Rope	\$15.00		\$15.25		\$30.25
23	Target	Water Filter	\$38.00		\$39.00		\$77.00
24		Target Total	\$126.32	\$56.53	\$131.64	\$59.68	\$374.17
25	Walmart	Bottled Water	\$5.00	\$5.25	\$5.45	\$5.75	\$21.45
26	Walmart	Canned Vegetables	\$0.65	\$0.75	\$0.85	\$1.00	\$3.25
27	Walmart	Dried Beans	\$22.99	\$23.99	\$24.25	\$24.49	\$95.72
28	Walmart	Duct Tape	\$5.00		\$5.50		\$10.50
29	Walmart	Flashlight	\$10.00		\$11.00		\$21.00
30	Walmart	Milk	\$2.00	\$2.10	\$2.40	\$2.90	\$9.40
31	Walmart	Rice	\$25.00	\$25.75	\$26.99	\$26.99	\$104.73
32	Walmart	Rope	\$14.00		\$14.50		\$28.50
33	Walmart	Water Filter	\$39.00		\$39.00		\$78.00
34		Walmart Total	\$123.64	\$57.84	\$129.94	\$61.13	\$372.55
35		Grand Total	\$361.85	\$169.09	\$380.96	\$178.49	\$1,090.39



**Power Query  
&  
Clean Data**

# Transformation Steps - 1

1. Use Excel Connector to connect to “ZenRetail\_\_\_Power Query Editor\_\_\_Project.XLSX” file.
2. Choose “Purchase Overview” worksheet. View the sample data. Click “Transform Data”.
3. Power Query Editor with Launch and you can see the new query and data.
4. Get Rid of Top 2 Rows, as they are of no use. From Home Tab -> Select Remove Rows -> Remove Top Rows. Select 2 Rows to remove
5. Now check, Column Headers are in First Row. From Transform Tab choose “Use First Row as Header”.
6. Check the amount types in columns, they are not standardized. Right Click on the Icon in header and choose “Fixed Decimal Number”.
7. Now to remove the null value / Total values from rows you can
  1. Click on the Down Arrow Icon in the Location Column Header and Uncheck Null Values. Or
  2. Click on the Down Arrow Icon in the Products Column, Select “Text Filters”, the choose “Does Not Contain”, Enter the value “Total” and select “OK”.



**Filter Rows**

Apply one or more filter conditions to the rows in this table.

☒ Basic ☐ Advanced

Keep rows where 'Products'

does not contain

☒ And ☐ Or

OK Cancel

# Transformation Steps -2

1. Now we need to Unpivot the Amount Columns. Select the four columns which have a date as column name.
2. From Transformation Tab Click on “Unpivot Columns”.
3. Now the Data looks perfect for loading into Power BI for creating Visualization.
4. Rename the Column and Change the Date column data type.
5. Click on “Close and Apply” to load Data in Power BI.

The screenshot displays the Power BI Desktop interface. On the left, the 'Queries' pane shows a query named 'Purchase Overview'. The main area shows a table with the following columns: 'Location' (labeled 'A<sub>C</sub> Location'), 'Products' (labeled 'A<sub>C</sub> Products'), 'Date', and 'Product\_Cost' (labeled '\$ Product\_Cost'). The table contains 22 rows of data. The formula bar at the top shows the transformation step: '= Table.TransformColumnTypes(#\"Renamed Columns\",{{\"Date\", type date}})'.

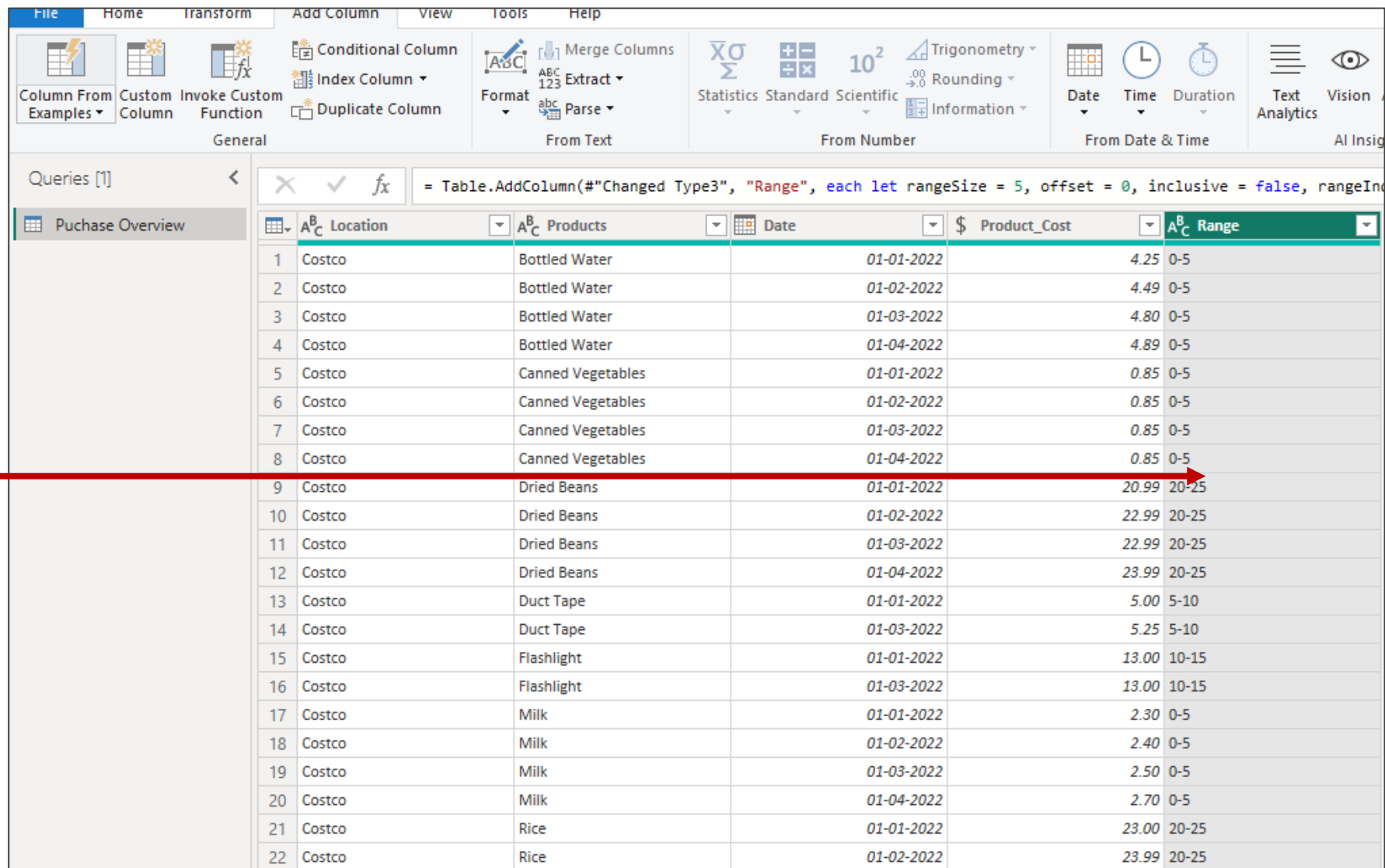
	A <sub>C</sub> Location	A <sub>C</sub> Products	Date	\$ Product_Cost
1	Costco	Bottled Water	01-01-2022	4.25
2	Costco	Bottled Water	01-02-2022	4.49
3	Costco	Bottled Water	01-03-2022	4.80
4	Costco	Bottled Water	01-04-2022	4.89
5	Costco	Canned Vegetables	01-01-2022	0.85
6	Costco	Canned Vegetables	01-02-2022	0.85
7	Costco	Canned Vegetables	01-03-2022	0.85
8	Costco	Canned Vegetables	01-04-2022	0.85
9	Costco	Dried Beans	01-01-2022	20.99
10	Costco	Dried Beans	01-02-2022	22.99
11	Costco	Dried Beans	01-03-2022	22.99
12	Costco	Dried Beans	01-04-2022	23.99
13	Costco	Duct Tape	01-01-2022	5.00
14	Costco	Duct Tape	01-03-2022	5.25
15	Costco	Flashlight	01-01-2022	13.00
16	Costco	Flashlight	01-03-2022	13.00
17	Costco	Milk	01-01-2022	2.30
18	Costco	Milk	01-02-2022	2.40
19	Costco	Milk	01-03-2022	2.50
20	Costco	Milk	01-04-2022	2.70
21	Costco	Rice	01-01-2022	23.00
22	Costco	Rice	01-03-2022	23.00





# Buckets or Bins

1. Select the Product\_Cost Column, then select Add Column Tab.
2. Select “Column From Examples” and then select “From Selection”.
3. A new column is added.
4. Add the typical range for top columns and Power BI will smartly add ranges for the rest of columns.



The screenshot shows the Power BI interface with the 'Add Column' tab selected. The 'Column From Examples' group is active, and the 'From Selection' option is chosen. A new column named 'Range' has been added to the data table. A red arrow points from the 'From Selection' option to the 'Range' column header.

	Location	Products	Date	Product_Cost	Range
1	Costco	Bottled Water	01-01-2022	4.25	0-5
2	Costco	Bottled Water	01-02-2022	4.49	0-5
3	Costco	Bottled Water	01-03-2022	4.80	0-5
4	Costco	Bottled Water	01-04-2022	4.89	0-5
5	Costco	Canned Vegetables	01-01-2022	0.85	0-5
6	Costco	Canned Vegetables	01-02-2022	0.85	0-5
7	Costco	Canned Vegetables	01-03-2022	0.85	0-5
8	Costco	Canned Vegetables	01-04-2022	0.85	0-5
9	Costco	Dried Beans	01-01-2022	20.99	20-25
10	Costco	Dried Beans	01-02-2022	22.99	20-25
11	Costco	Dried Beans	01-03-2022	22.99	20-25
12	Costco	Dried Beans	01-04-2022	23.99	20-25
13	Costco	Duct Tape	01-01-2022	5.00	5-10
14	Costco	Duct Tape	01-03-2022	5.25	5-10
15	Costco	Flashlight	01-01-2022	13.00	10-15
16	Costco	Flashlight	01-03-2022	13.00	10-15
17	Costco	Milk	01-01-2022	2.30	0-5
18	Costco	Milk	01-02-2022	2.40	0-5
19	Costco	Milk	01-03-2022	2.50	0-5
20	Costco	Milk	01-04-2022	2.70	0-5
21	Costco	Rice	01-01-2022	23.00	20-25
22	Costco	Rice	01-02-2022	23.99	20-25



# Superstore Analysis

- 1. Overview**
- 2. Financial Analysis**
- 3. Product Analysis**
- 4. Category & Sub-Category Data Analysis**
- 5. Regional Data Analysis**
- 6. Customer Analysis**
- 7. Segment Analysis**
- 8. Orders Analysis**
- 9. ShipMode Data Analysis**
- 10. Delivery Data Analysis**
- 11. Analyze Different Dimensions Performance on Date & Time**

2019

2020

2021

2022

Central

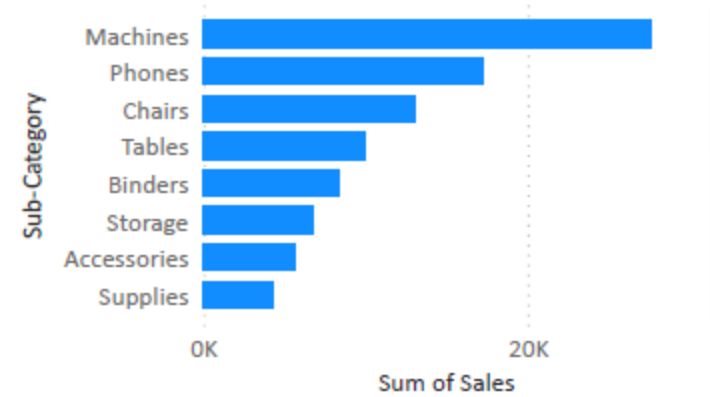
East

South

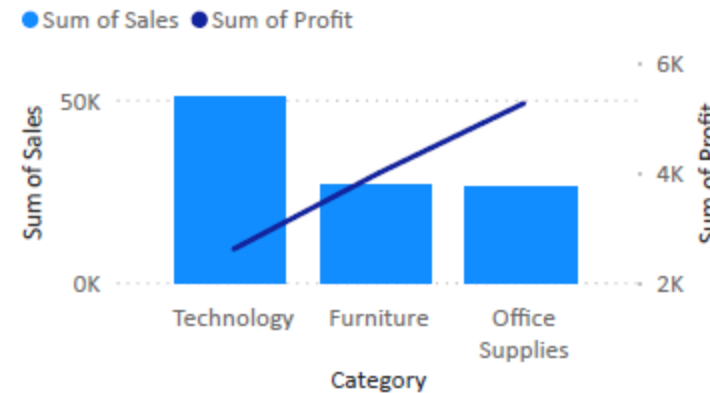
West

Category	Sales	Profit
[-] Furniture	26,942.75	3,996.48
Bookcases	794.28	164.71
Chairs	13,072.28	2,304.71
Furnishings	3,135.25	419.06
Tables	9,940.94	1,107.99
[-] Office Supplies	25,958.88	5,271.31
Appliances	2,119.72	489.79
Art	566.13	133.75
Binders	8,307.45	2,420.10
Envelopes	251.85	107.50
Fasteners	165.79	50.91
Labels	401.04	169.61
Paper	3,184.58	1,338.83
Storage	6,715.01	462.23
Supplies	4,247.31	98.60
[-] Technology	50,918.96	2,607.23
Accessories	5,595.29	1,685.73
Copiers	479.98	90.00
Machines	27,594.73	-3,254.21
Phones	17,348.96	4,025.71
<b>Total</b>	<b>1,03,820.60</b>	<b>11,875.02</b>

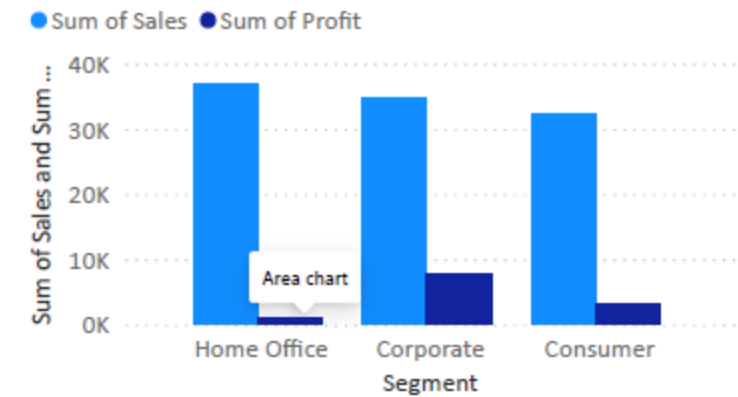
Sales by Sub-Category



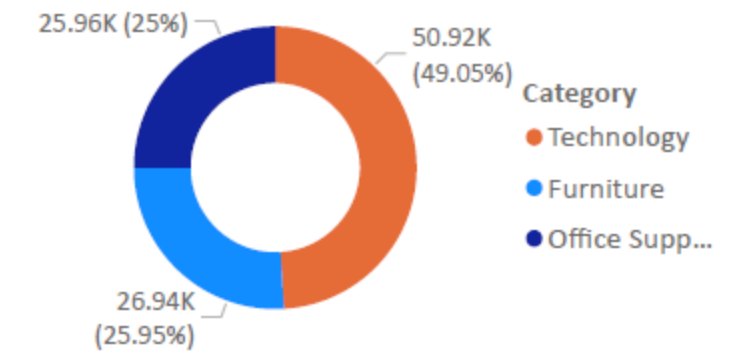
Sales &amp; Profit by Category



Sales &amp; Profit by Segment



Sales by Category



# Display Selected Filters (Using DAX Code)

The screenshot displays the Microsoft Power BI interface with the following components:

- Formula Bar:** Contains the DAX code `1 Selected filters =`.
- Filters Pane:** Shows three filter categories:
  - CompanyName:** Includes items like 'Alfreds Futterkiste', 'Ana Trujillo Emparedados y helados', 'Antonio Moreno Taquería', 'Around the Horn' (selected), 'Berglunds snabbköp', 'Blauer See Delikatessen', 'Blondesddsl père et fils', and 'Bóldo Comidas preparadas'.
  - CategoryName:** Includes 'Beverages' (selected), 'Condiments', 'Confections', 'Dairy Products', 'Grains/Cereals', 'Meat/Poultry' (selected), 'Produce', and 'Seafood'.
  - ProductName:** Includes 'Alice Mutton', 'Chai', 'Chang', 'Chartreuse verte', 'Côte de Blaye', 'Guaraná Fantástica' (selected), 'Ipoh Coffee', 'Lakkalikööri', and 'Launhinn Lumberjack Lager'.
- Visuals Pane:** Shows a card visual with the text **25 Orders quantity**.
- Data Pane:** Lists the data model tables:
  - Categories
  - Customers
  - Order\_Details (expanded, showing 'Discount', 'Fake column', 'Is table filtered', 'Is table not filtered', 'OrderID', 'ProductID', 'Quantity', 'Selected filters' (checked), and 'UnitPrice')
  - Orders
  - Products
- Selected filters Visual:** A table visual at the bottom left showing the following data:

Selected filters
Company = Around the Horn
Category = Beverages , Meat/Poultry
Product = Carnarvon Tigers , Guaraná Fantástica

Red arrows indicate the flow from the formula bar to the visual and from the data pane to the visual.

Selected filters =

```
VAR CR_LF = "  
    " // This is a simple carriage return
```

```
VAR Company = IF(ISFILTERED(Customers[CompanyName]) ,  
    "Company = " & CONCATENATEX(ALLSELECTED(Customers[CompanyName]) ,  
Customers[CompanyName] , " , ") & CR_LF , "")
```

```
VAR Category = IF(ISFILTERED(Categories[CategoryName]) ,  
    "Category = " & CONCATENATEX(ALLSELECTED(Categories[CategoryName]) ,  
Categories[CategoryName] , " , ") & CR_LF , "")
```

```
VAR Product = IF(ISFILTERED(Products[ProductName]) ,  
    "Product = " & CONCATENATEX(ALLSELECTED(Products[ProductName]) ,  
Products[ProductName] , " , ") & CR_LF , "")
```

```
RETURN Company & Category & Product
```

# **Interesting Perspective on Superstore Data Analysis**





## SUPERSTORE Orders Analysis

Years

(All)

Sales and Profit



Total Orders

5,009



Products

1,862



Quantity

37,873



Avg to Ship

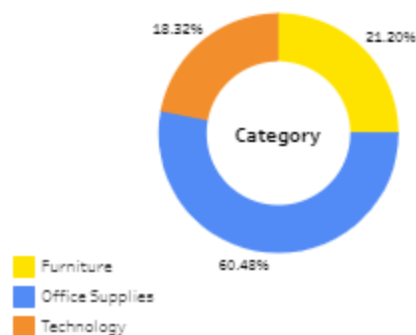
4 days



Avg Discount

15.62%

### Order by Category



### Monthly Order by Category

Furniture



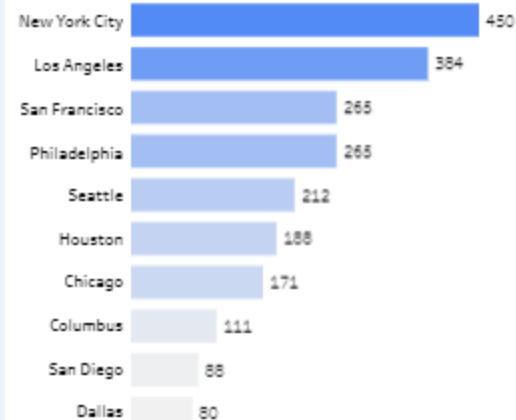
Office Supplies



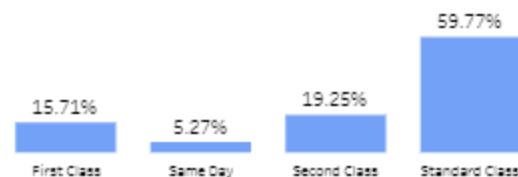
Technology



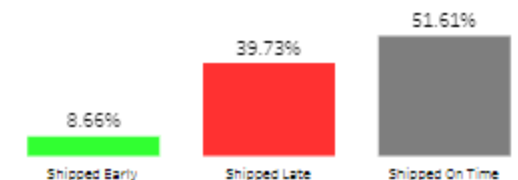
### Top 10 Order by City



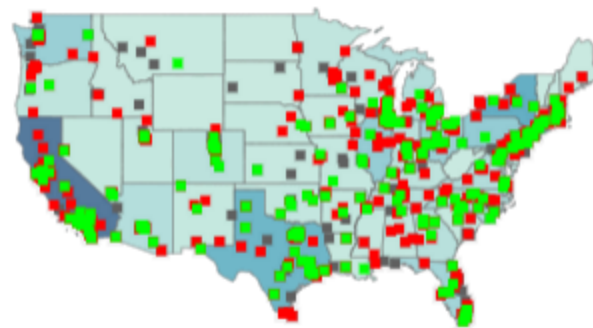
### Order by Ship Mode



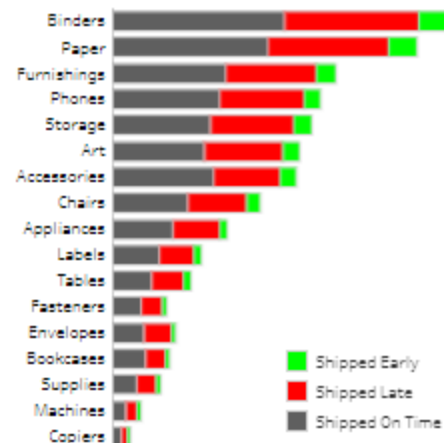
### Order by Ship Mode



### Shipped by State and Postal Code



### Shipped Order by Sub-Category



# Superstore Dashboard

## Hey, Datafam!

Let's have a look at the superstore indicators and the opportunities it has to be optimized.

## Description

The Superstore Dashboard provides us an overview about information of the most recent orders and the principal metrics of them.

In addition, much of this information can be detailed by the filters placed in the navbar. Have a better understanding by interacting with these filters and use your insights to plan some management strategy to optimize these data.



**\$733.2k**

Total Sales

**\$93.4k**

Total Profit

**12.5k**

Total Quantity

**\$518**

Total Discount



Total Sales

**\$733.2k**

▼ \$34.6k

vs. Previous Month



Total Profit

**\$93.4k**

▼ \$1.2k

vs. Previous Month

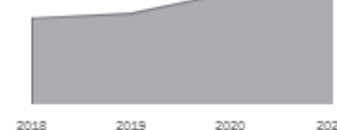


Total Quantity

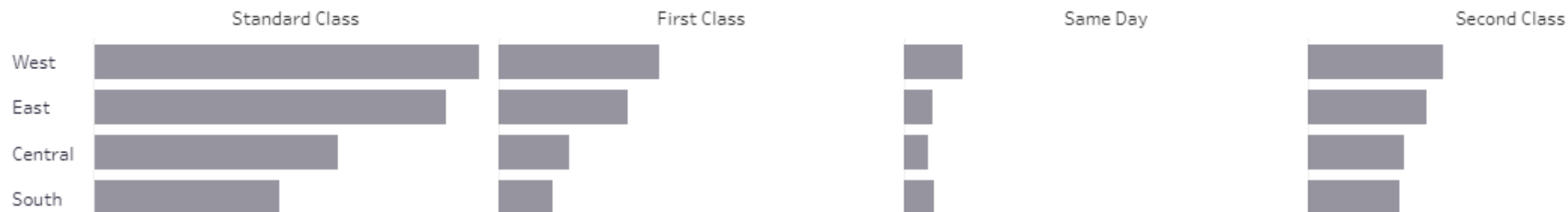
**12.5k**

▼ 117

vs. Previous Month



Sales by Region and Ship Mode



Sales Over Time

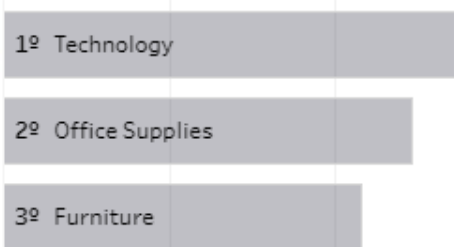


Sales by Segment





## Sales by Category

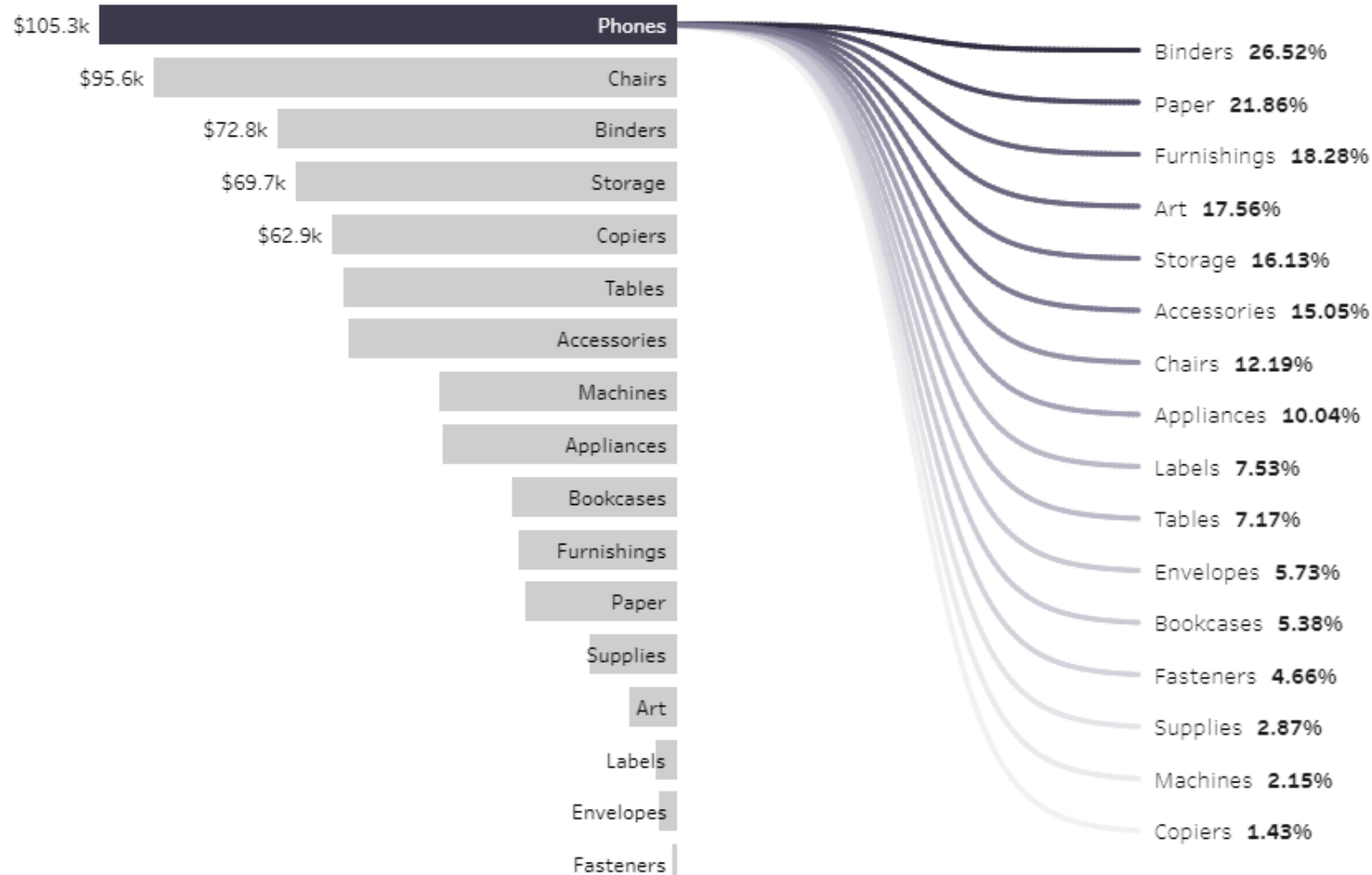


## Top 5 Products

Canon imageCLASS 2200 Advanced Copier	\$35,700
GBC DocuBind TL300 Electric Binding System	\$10,943
Hewlett Packard LaserJet 3310 Copier	\$9,240
Martin Yale Chadless Opener Electric Letter Opener	\$11,826
Samsung Galaxy Mega 6.3	\$9,240

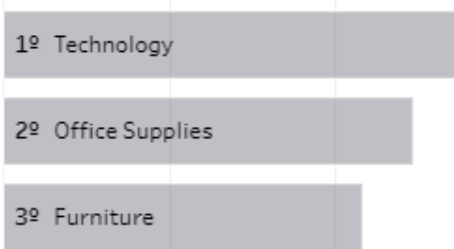


## Sales by Sub-Category and Its Market Basket





## Sales by Category

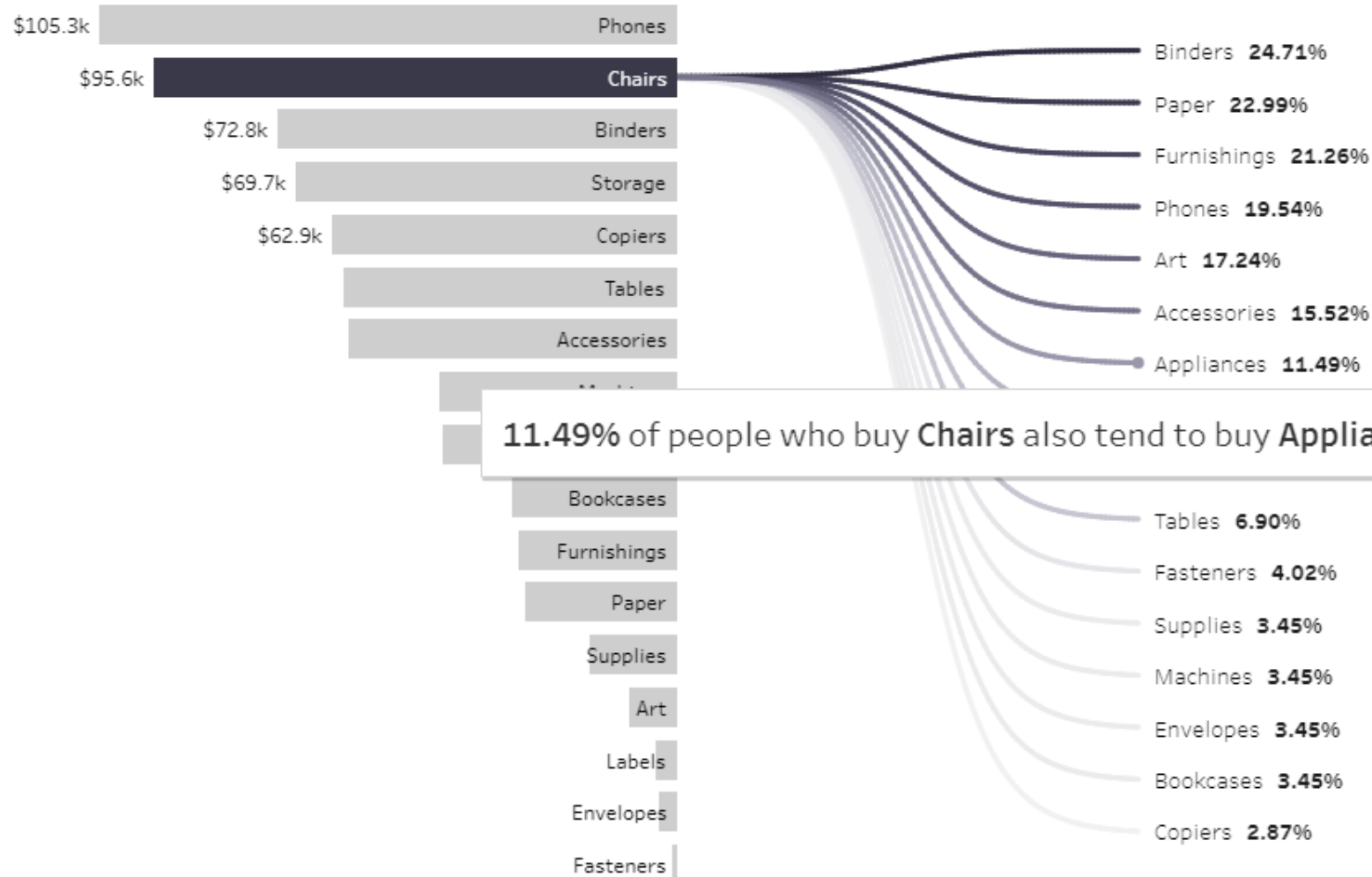


## Top 5 Products

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Martin Yale Chadless Opener Electric Letter Opener	\$11,826
Samsung Galaxy Mega 6.3	\$9,240



## Sales by Sub-Category and Its Market Basket





## Top 1 City

### New York City

Sales of **\$86,940** and It represents **11.86%** of total.



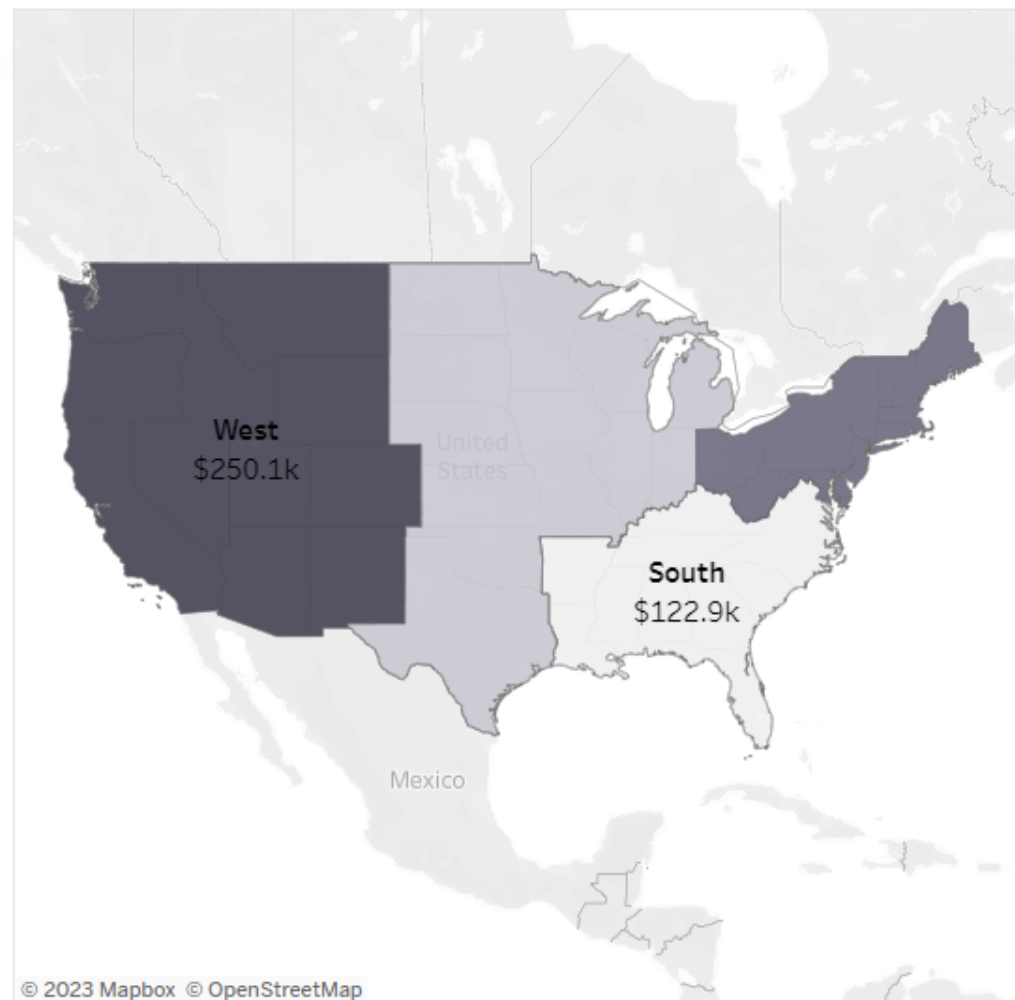
## Top 1 Postal Code

### 10035

Sales of **\$33,365** and It represents **4.55%** of total.



## Sales by All Regions



## Top Cities

2º	Seattle	
3º	Los Angeles	
4º	Philadelphia	
5º	San Francisco	
6º	Columbus	
7º	Chicago	
8º	Houston	
9º	Newark	
10º	Jackson	



## Top Postal Codes

2º	10024	
3º	98105	
4º	98115	
5º	19134	
6º	94110	
7º	10009	
8º	98103	
9º	10011	
10º	90049	



## Details

Order ID	Customer Name	Order Date	Ship Date	Ship Mode	Sales	Profit	Profit Ratio	Discount	Quantity
CA-2021-100013	Zuschuss Carroll	11/6/2021	11/11/2021	Standard Class	\$30	\$12.22	41.1%	\$0.00	5
CA-2021-100055	Michael Dominguez	5/28/2021	6/1/2021	Standard Class	\$153	\$46.17	30.3%	\$0.00	5
CA-2021-100097	Michael Nguyen	11/26/2021	11/29/2021	Second Class	\$1,115	\$302.47	27.1%	\$0.00	10
CA-2021-100111	Seth Vernon	9/20/2021	9/26/2021	Standard Class	\$7,360	\$1,571.80	21.4%	\$0.60	52
CA-2021-100160	Cassandra Brandow	9/7/2021	9/11/2021	Standard Class	\$50	\$16.96	34.1%	\$0.60	11
CA-2021-100223	Linda Southworth	7/5/2021	7/10/2021	Standard Class	\$396	-\$359.80	-90.8%	\$2.60	28
CA-2021-100230	Allen Arnold	12/11/2021	12/15/2021	Standard Class	\$150	\$42.36	28.3%	\$0.20	6
CA-2021-100237	Stuart Van	10/15/2021	10/19/2021	Standard Class	\$12	\$4.20	36.0%	\$0.00	2
CA-2021-100314	Ann Steele	9/29/2021	10/5/2021	Standard Class	\$372	\$56.90	15.3%	\$0.80	9
CA-2021-100335	Nicole Fjeld	9/7/2021	9/13/2021	Standard Class	\$73	\$26.47	36.3%	\$0.20	9
CA-2021-100356	Susan Pistek	10/21/2021	10/25/2021	Standard Class	\$24	-\$62.38	-260.0%	\$0.80	2
CA-2021-100384	Nicole Hansen	6/24/2021	7/1/2021	Standard Class	\$421	\$123.64	29.3%	\$0.00	17
CA-2021-100412	Sharelle Roach	12/22/2021	12/26/2021	Standard Class	\$142	\$35.49	25.0%	\$0.00	2
CA-2021-100426	Dan Campbell	6/4/2021	6/8/2021	Standard Class	\$12	\$5.62	45.0%	\$0.00	2
CA-2021-100433	Sanjit Jacobs	8/11/2021	8/16/2021	Standard Class	\$26	\$12.44	48.0%	\$0.00	4
CA-2021-100524	Chad McGuire	3/31/2021	4/2/2021	Second Class	\$782	\$220.23	28.1%	\$0.00	13
CA-2021-100580	Michael Kennedy	8/13/2021	8/20/2021	Standard Class	\$36	\$11.71	32.5%	\$0.20	3
CA-2021-100601	Jay Kimmel	11/16/2021	11/20/2021	Standard Class	\$49	\$0.98	2.0%	\$0.00	7
CA-2021-100615	Sarah Jordon	4/20/2021	4/24/2021	Standard Class	\$347	-\$20.76	-6.0%	\$1.10	10
CA-2021-100622	Dave Kipp	11/3/2021	11/7/2021	Standard Class	\$1,031	\$316.94	30.7%	\$1.30	8





## Filter Menu

Year

2021

Month

(All)

Region

(All)

State

(All)

City

(All)

Segment

(All)

Category

(All)

Sub-Category

(All)

Ship Mode

(All)

LS

Last Update: 12/30/2021

Order Date	Ship Date	Ship Mode	Sales	Profit	Profit Ratio	Discount	Quantity
10/28/2021	10/4/2021	Standard Class	\$9	\$4.44	48.0%	\$0.00	3
10/22/2021	10/27/2021	Standard Class	\$177	-\$120.51	-68.0%	\$0.50	5
3/24/2021	3/25/2021	Same Day	\$13	\$0.96	7.5%	\$0.20	2
12/25/2021	12/1/2021	Standard Class	\$5	\$1.34	26.0%	\$0.00	2
4/23/2021	4/26/2021	First Class	\$30	\$10.36	34.1%	\$0.40	5
8/19/2021	8/23/2021	Standard Class	\$2	-\$3.90	-170.0%	\$0.80	2
10/3/2021	10/8/2021	Standard Class	\$171	-\$6.42	-3.8%	\$0.20	3
12/2/2021	12/15/2021	Standard Class	\$63	\$21.48	33.9%	\$0.20	6
12/21/2021	12/6/2021	Standard Class	\$628	\$41.88	6.7%	\$0.20	21
11/24/2021	11/28/2021	Standard Class	\$11	\$2.57	23.8%	\$0.20	3
3/28/2021	3/6/2021	Standard Class	\$18	\$8.22	46.7%	\$0.00	3
12/2/2021	12/19/2021	First Class	\$52	\$23.56	45.3%	\$0.00	10
7/13/2021	7/17/2021	Standard Class	\$374	\$99.94	26.7%	\$0.00	4
12/2/2021	12/26/2021	Standard Class	\$364	\$171.44	47.1%	\$0.20	11
5/1/2021	5/6/2021	Standard Class	\$3,741	-\$457.73	-12.2%	\$0.85	11
9/2/2021	9/4/2021	Second Class	\$12	\$3.95	33.8%	\$0.20	2
12/1/2021	12/4/2021	Standard Class	\$2	\$0.83	35.0%	\$0.20	2
9/23/2021	9/25/2021	Second Class	\$213	\$70.20	33.0%	\$0.00	7
6/13/2021	6/16/2021	First Class	\$683	-\$120.47	-17.6%	\$0.70	13
12/2/2021	12/6/2021	Standard Class	\$1,379	\$80.44	5.8%	\$0.40	15

<< < 1 2 **3** 4 5 > >>





# Overview Dashboard



January 01, 2022 - December 30, 2022

● Last updated: 21/05/2023

Welcome, **Amit Prabhash!**

Sales

Profit

Orders

SALES

▲ 20.4% vs. PY

\$733.2K



PROFIT

▲ 14.2% vs. PY

\$93.4K



# ORDERS

▲ 28.3% vs. PY

1,687



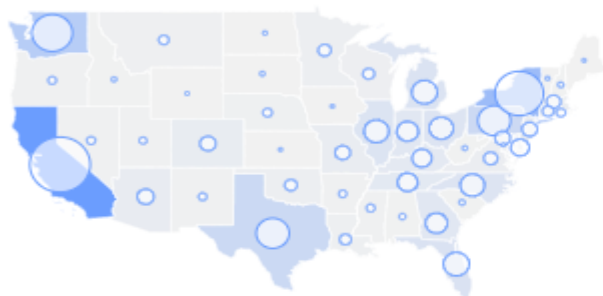
# CUSTOMERS

▲ 8.6% vs. PY

693



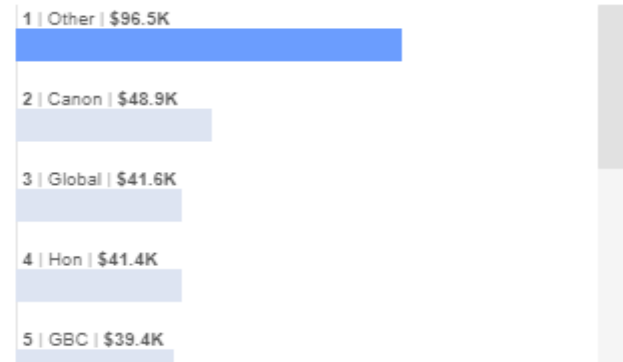
Sales | By State



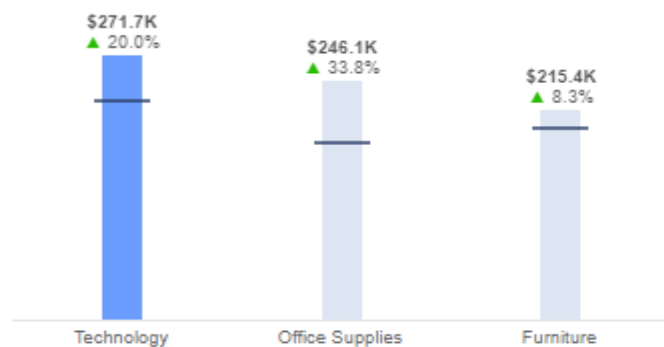
Sales | By Segment



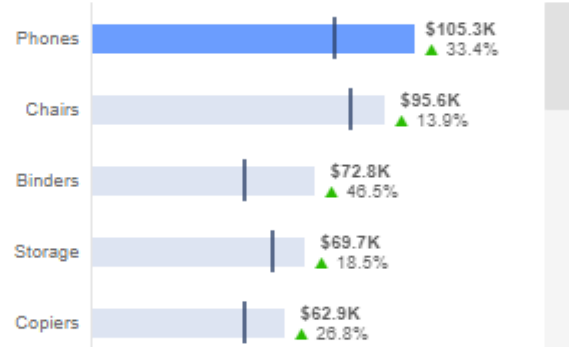
Sales | By Top 10 Manufacturers



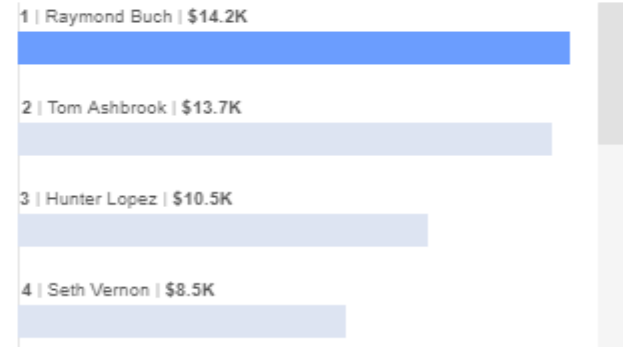
Sales | By Category



Sales | By Sub-Category



Sales | By Top 10 Customers



EXPORT



SALES

▲ 20.4% vs. PY

\$733.2K



PROFIT

▲ 14.2% vs. PY

\$93.4K



# ORDERS

▲ 28.3% vs. PY

1,687



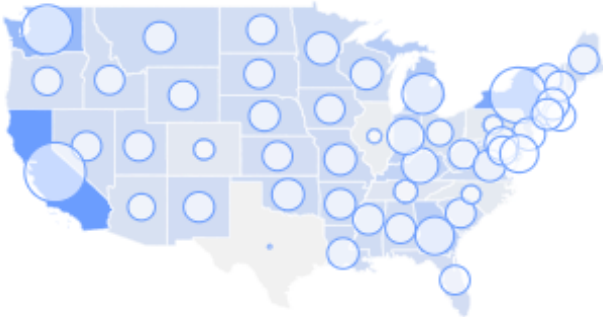
# CUSTOMERS

▲ 8.6% vs. PY

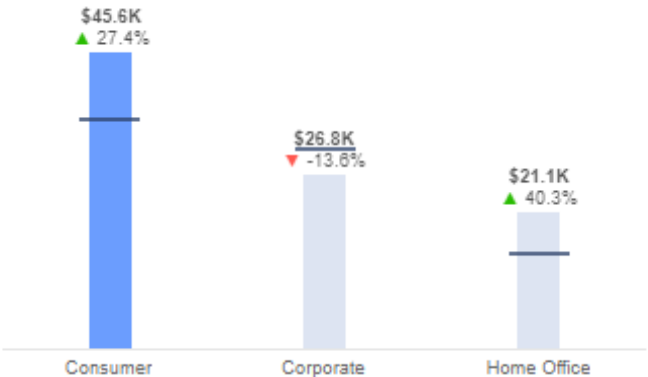
693



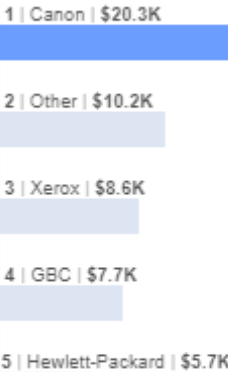
Profit | By State



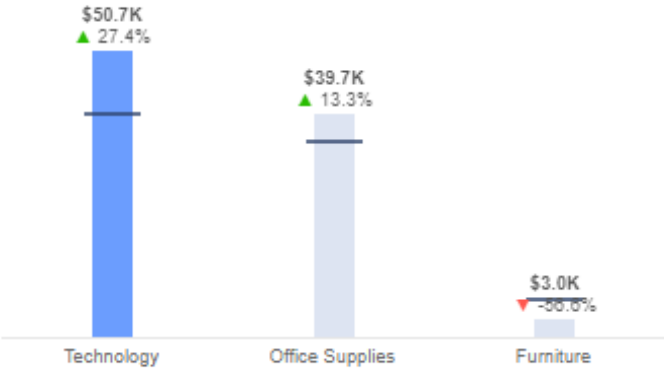
Profit | By Segment



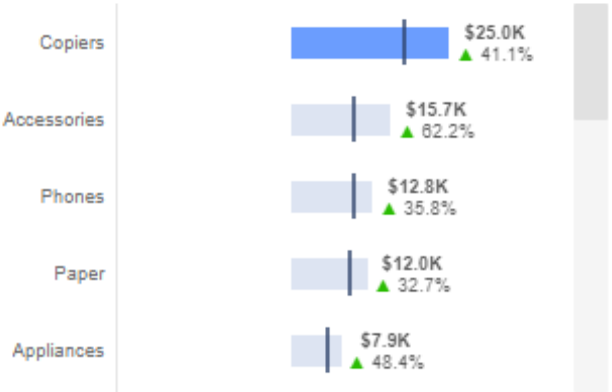
Profit | By Top 10 Manufacturers



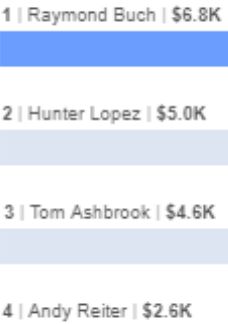
Profit | By Category



Profit | By Sub-Category



Profit | By Top 10 Customers



SALES

▲ 20.4% vs. PY

\$733.2K



PROFIT

▲ 14.2% vs. PY

\$93.4K



# ORDERS

▲ 28.3% vs. PY

1,687



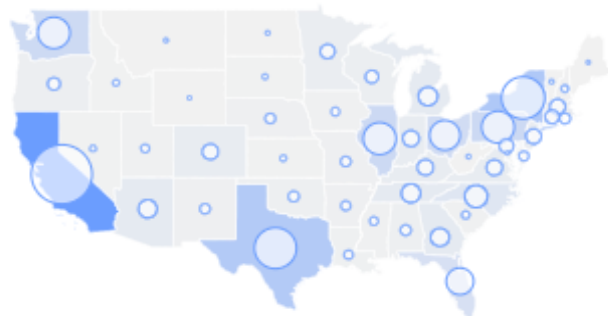
# CUSTOMERS

▲ 8.6% vs. PY

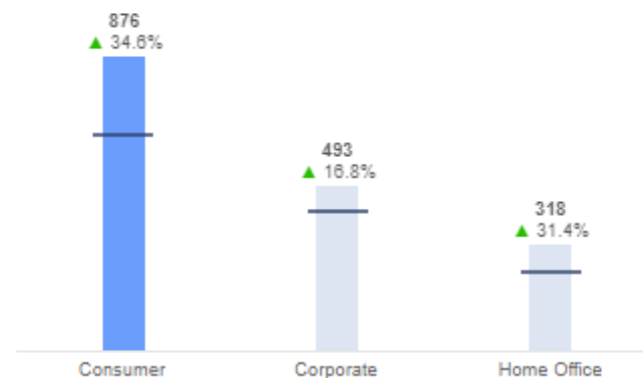
693



Orders | By State



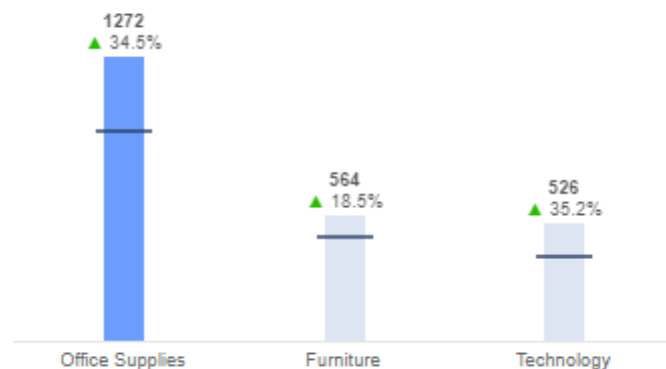
Orders | By Segment



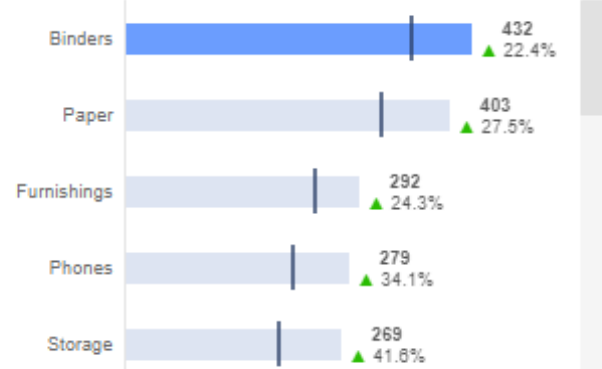
Orders | By Top 10 Manufacturers



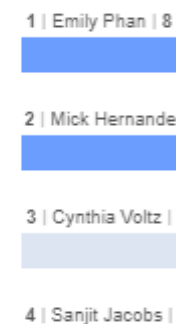
Orders | By Category



Orders | By Sub-Category



Orders | By Top 10 Customers





# Order Details

● Last updated: 21/05/2023



EXPORT



● Consumer ● Corporate ● Home Office

ORDER ID	CUSTOMER NAME	LOCATION	SALES	PROFIT RATIO	QUANTITY	STATUS
US-2022-140151 23-Mar-2022	CON Raymond Buch	Seattle Washington	\$14,052.48	47.9%	9	Complete
US-2022-127180 22-Oct-2022	HO Tom Ashbrook	New York City New York	\$13,716.46	33.5%	18	Pending
US-2022-166709 17-Nov-2022	CON Hunter Lopez	Newark Delaware	\$10,499.97	48.0%	3	Pending
US-2022-168116 04-Nov-2022	COR Grant Thornton	Burlington North Carolina	\$8,167.42	-46.8%	6	Pending
US-2022-100111 20-Sep-2022	CON Seth Vernon	New York City New York	\$7,359.92	21.4%	52	Pending
US-2022-138289 16-Jan-2022	CON Andy Reiter	Jackson Michigan	\$5,802.70	44.8%	14	Complete
US-2022-143112 05-Oct-2022	COR Todd Sumrall	New York City New York	\$5,509.14	25.4%	10	Pending
US-2022-135909 13-Oct-2022	COR Jane Waco	Sacramento California	\$5,325.88	36.4%	13	Pending
US-2022-143224 05-Sep-2022	COR	Sacramento California	\$5,325.88	36.4%	13	Pending



## Order Details



EXPORT



ORDER ID	CUSTOMER NAME	LOCATION	SALES
		Seattle Washington	\$14,052.48
		New York City New York	\$13,716.46
		Newark Delaware	\$10,499.97
US-2022-168116 04-Nov-2022	COR Grant Thornton	Burlington North Carolina	\$8,167.42

Order ID

(All) ▼

Customer Name

(All) ▼

Order Date

(All) ▼

Profit Ratio < 0%

(All) ▼

State/Province

(All) ▼

City

(Multiple values) ▼

Segment

(All) ▼

Status

(All) ▼

# SUPERSTORE

## Dashboard

STATE ANALYSIS

CUSTOMER REPORT

### Monthly Regional Profit Summary

● = negative profit in selected month

Select Target Month

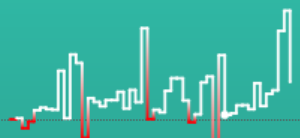
1/1/2019

#### EAST

Total profit

**\$91,523**

\$356 selected month  
▼ from prior: \$5,528

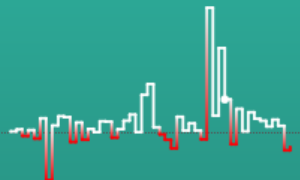


#### CENTRAL

Total profit

**\$39,706**

\$2,866 selected month  
▼ from prior: \$7,281



#### SOUTH

Total profit

**\$46,749**

\$710 selected month  
▼ from prior: \$1,749



#### WEST

Total profit

**\$108,418**

\$3,208 selected month  
▼ from prior: \$3,327



hover over regions to the left to change analysis below; select a state to view product subcategory details for that state

## East Region Analysis

### Sales & Profit Ratio, by State

● Month of 1/1/2019

State (select)	Quantity	Sales	Profit	Profit Ratio
Pennsylvania	25	\$3.6K	-\$55	-1.5%
New York	17	\$0.8K	\$198	24.7%
Vermont	9	\$0.6K	\$196	30.8%
Ohio	13	\$0.2K	-\$26	-10.6%
District of Columbia	8	\$0.1K	\$35	45.1%
Massachusetts	2	\$0.0K	\$6	46.0%
Connecticut	2	\$0.0K	\$1	29.0%

### Sales vs. Profit, by Product Subcategory

● State: None

Sub-Category	Quantity	Sales	Profit
Accessories	12	\$500	\$100
Appliances	12	\$2,500	\$500
Art	7	\$100	\$100
Binders	3	\$200	-\$100
Chairs	6	\$1,100	-\$50
Envelopes	1	\$100	\$100
Furnishings	8	\$100	\$100
Labels	2	\$100	\$100
Paper	17	\$100	\$100
Phones	8	\$700	-\$50



## Superstore Overview Dashboard Executive Summary



Hello, Amit Prabhash!  
Signed in Sunday, May 21, 2023

### REPORT



### EXPORT



### INFO



### FOLLOW



Close



\$1.4M

Total Sales



\$178.6K

Total Profit



6,013

Total Orders



780

Total Customers

OrderID	Customer Info	Quantity	Shipping Status
US-2022-100111 20-Sep-2022	Seth Vernon New York City • East	52	Pending
US-2021-105732 13-Sep-2021	Alejandro Grove Omaha • Central	46	Complete
US-2022-117457 08-Dec-2022	Keith Herrera San Francisco • West	46	Pending
US-2021-165330 11-Dec-2021	William Brown Anaheim • West	43	Complete
US-2022-140949 17-Mar-2022	Denny Blanton New York City • East	43	Complete
US-2021-145177 10-Nov-2021	Paul Prost Springfield • East	42	Complete
US-2021-103674 06-Dec-2021	Anne Pryor Los Angeles • West	41	Complete
US-2021-108504 05-Feb-2021	Paul Prost Smyrna • South	41	Complete
US-2022-157987 02-Sep-2022	Ann Chong New York City • East	40	Pending

Profit Today

Current Week • Previous Week •

\$101



68%  
Sales Target



87%  
Customer Target

### Top 5 Sub-Category

### Sales Trend



#### Phones

Home Office • Technology



#### Binders

Consumer • Office Supplies



#### Chairs

Home Office • Furniture



#### Storage

Consumer • Office Supplies



#### Tables

Home Office • Furniture



# Company Profitability

Total profit (\$)

286,397



Profit / Loss

Period Change

▽ Descending

↓ Select to filter ↓

Machines	3,385		Δ 3055% ● 1,216 ●
Fasteners	950		Δ 99% ● 62 ●
Supplies	(1,189)		Δ 96% ● 105 ●
Paper	34,054		Δ 94% ● 1,602 ●
Labels	5,546		Δ 88% ● 115 ●
Appliances	18,138		Δ 86% ● 590 ●
Storage	21,279		Δ 82% ● 1,145 ●
Copiers	55,618		Δ 82% ● 2,076 ●

Product drivers: Which products are impacting our profit?

Product performance



Average profit per product (circle size is no. of orders)

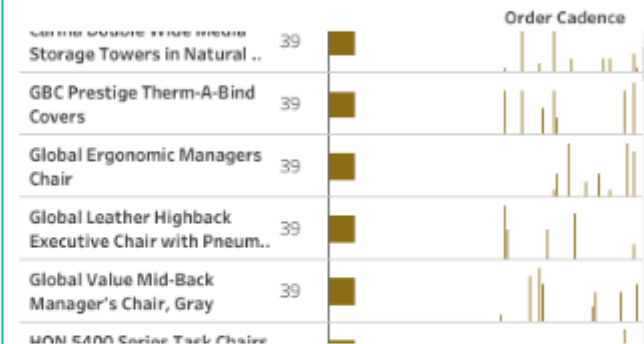
Copiers	\$140		\$5,040
Phones	-\$375		\$593
Accessories	-\$15		\$592
Paper	\$2		\$170
Binders	-\$313		\$1,115
Chairs	-\$165		\$385
Storage	-\$103		\$369
Appliances	-\$174		\$551
Furnishings	-\$132		\$158
Envelopes	\$2		\$150
Art	\$1		\$111
Labels	\$2		\$190
Machines	-\$3,840		\$1,996
Fasteners	-\$8		\$15
Supplies	-\$217		\$17
Bookcases	-\$191		\$115
Tables	-\$575		\$122

↑ Shaded area is losses

White area is profits ↑

Product detail: How are our products performing in market?

Product order cadence



Multiple Products

\$7.6

profit per unit  
(\$286,397 / 37,873)

Order cadence

789.0

orders per month  
(37,873 / 48 months)

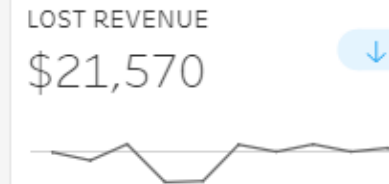
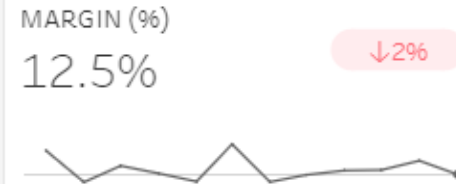
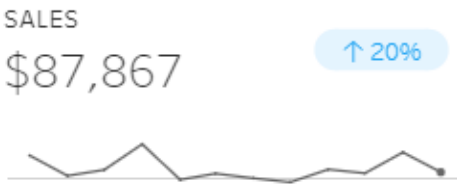
Customer delivery days:

Are we seeing any unusual delays with delivery of certain product lines?





# KPIs





# EXECUTIVE SALES OVERVIEW | 2023



Overview

Order Details

## Controls

Select Year

2021 2022 2023

Set Sales Target  
(PY + X%)

+ 20%

Sales Target has been reached.

## Connect



Created by: Serena Purslow

### Sales

£733,215

+20.4% vs PY



### Profit

£93,439

+14.2% vs PY



### Returns

4,655

+59.6% vs PY



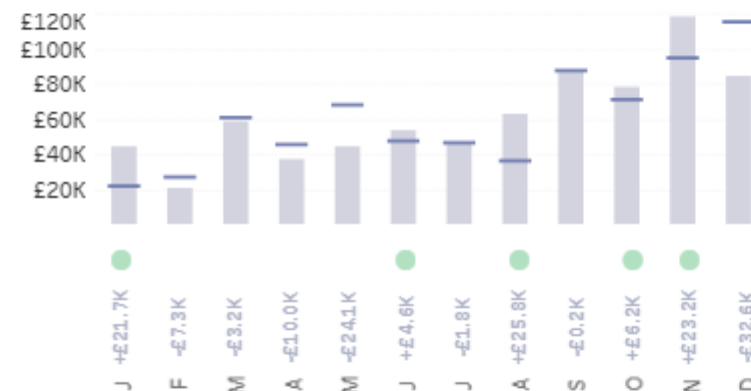
### Quantity

12,476

+26.8% vs PY



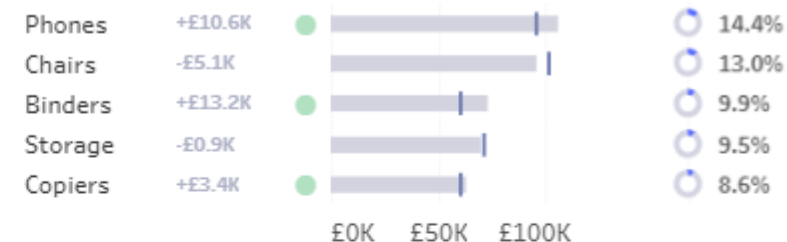
## 2023 | Sales vs Targets



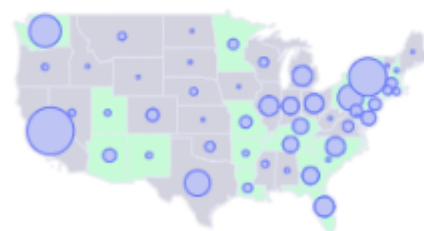
## Segment | Sales vs Targets



## Top 5 Sub-Categories | Sales vs Targets

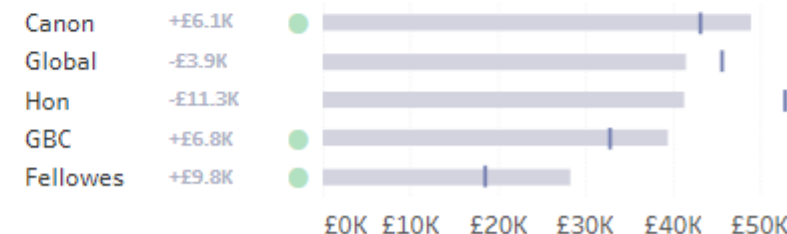


## Sales by Location | Top 5 States



- California  
£146,388
- New York  
£93,923
- Washington  
£65,540
- Texas  
£43,422
- Pennsylvania  
£42,688

## Top 5 Manufacturers | Sales vs Targets



## SUPERSTORE PERFORMANCE - EXECUTIVE SUMMARY

Comparison period December 2019 vs. December 2018

PERIOD 2019 December

Below the Previous Period Current Period Previous Period

### SALES

\$470.5K

\$484.2K Prior Year

-2.8% vs. PY

J F M A M J J A S O N D



### PROFIT

\$61.6K

\$49.5K Prior Year

24.4% vs. PY

J F M A M J J A S O N D



### # ORDERS

1,038

969 Prior Year

7.1% vs. PY

J F M A M J J A S O N D



### # CUSTOMERS

573

595 Prior Year

-3.7% vs. PY

J F M A M J J A S O N D



### SALES COMPARISON BY SEGMENT | Hover the cursor over the bars to view top 5 clients



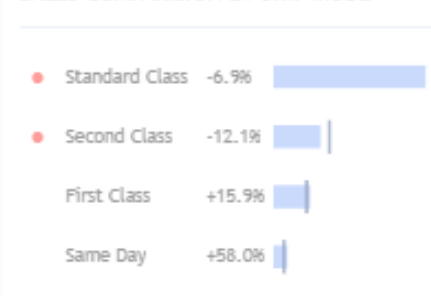
### SALES COMPARISON BY CATEGORY | Hover the cursor over the bars to view subcategories



### SALES COMPARISON BY REGION | Click on the region to filter the top 5 states



### SALES COMPARISON BY SHIP MODE



## SUPERSTORE PERFORMANCE - EXECUTIVE SUMMARY

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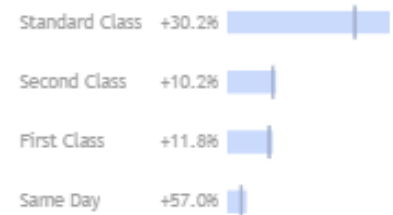
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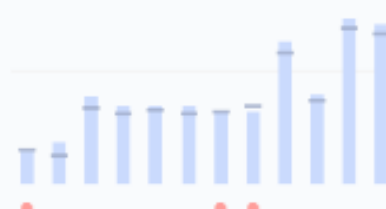
## # CUSTOMERS

573

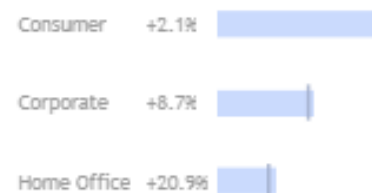
595 Prior Year

-3.7% vs. PY

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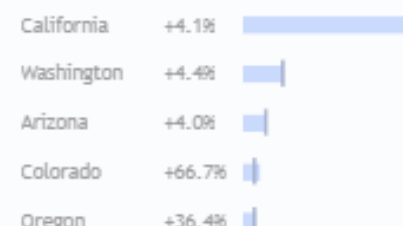
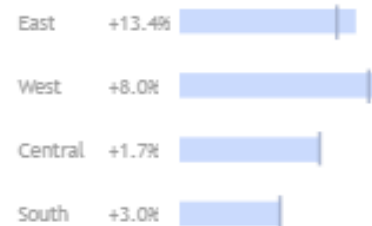
## ORDERS COMPARISON BY SEGMENT | Hover the cursor over the bars to view top 5 clients



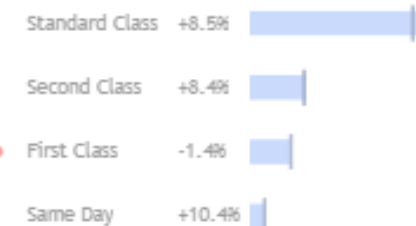
## ORDERS COMPARISON BY CATEGORY | Hover the cursor over the bars to view subcategories



## ORDERS COMPARISON BY REGION | Click on the region to filter the top 5 states



## ORDERS COMPARISON BY SHIP MODE



# SUPERSTORE PERFORMANCE - EXECUTIVE SUMMARY

Comparison period December 2019 vs. December 2018

PERIOD 2019 December

Below the Previous Period Current Period Previous Period

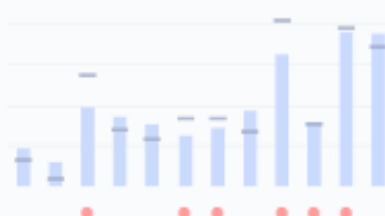
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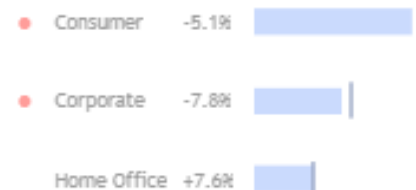
595 Prior Year

-3.7% vs. PY

J F M A M J J A S O N D



## CUSTOMERS COMPARISON BY SEGMENT | Hover the cursor over the bars to view top 5 clients



### Consumer



### Corporate



### Home Office



## CUSTOMERS COMPARISON BY CATEGORY | Hover the cursor over the bars to view subcategories



### Furniture



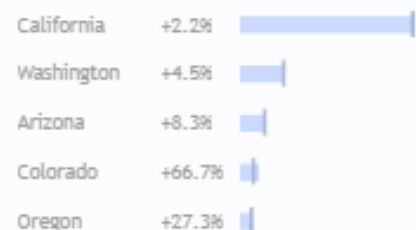
### Technology



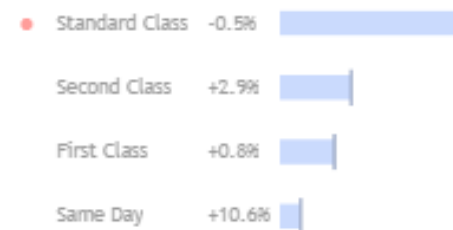
### Office Supplies






## CUSTOMERS COMPARISON BY REGION | Click on the region to filter the top 5 states



## CUSTOMERS COMPARISON BY SHIP MODE



# S SUPERSTORE SALES INSIGHTS -2018-

 Region  State  City   Segment  Ship Mode   Category  Sub-Category

TOTAL SALES

**\$1.1M**

▲ 20% YoY



TOTAL CUSTOMERS

**693**

▲ 9% YoY



SALES PER CUSTOMERS

**\$1.6K**

▲ 11% YoY



PROFIT

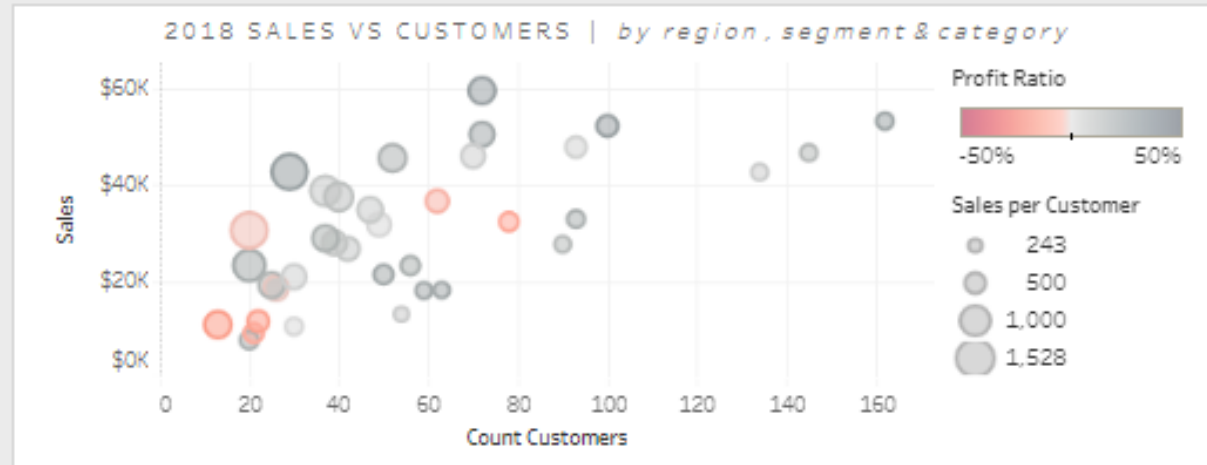
**\$93.4K**

▲ 14% YoY


PROFIT RATIO

**8%**

▼ 29% from target



[Dashboard filters >](#)

 click to filter / ctrl+click to select multiple bars / re-click or esc to deselect

REGION

West: \$375.2K (32%)

East: \$319.6K (30%)

Central: \$220.6K (22%)

South: \$184.4K (17%)

SEGMENT

Consumer: \$497.9K (51%)

Corporate: \$362.8K (31%)

Home Office: \$239.2K (19%)

CATEGORY

Technology: \$407.6K (36%)

Furniture: \$323.1K (32%)

Office Supplies: \$369.1K (31%)

# SUPERSTORE KEY PERFORMANCE INDICATORS

REGION

(All)

CATEGORY

(All)

SEGMENT

(All)

SHIP MODE

(All)

TOTAL SALES

**\$196,662**

▲ 28.3% YoY



TOTAL PROFIT

**\$29,731**

▲ 70.9% YoY



TOTAL VOLUME

**3,254**

▲ 38.9% YoY



TOTAL SALES PER CUSTOMER

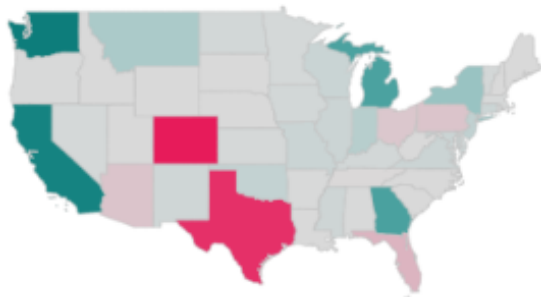
**\$573**

▲ 2.5% YoY

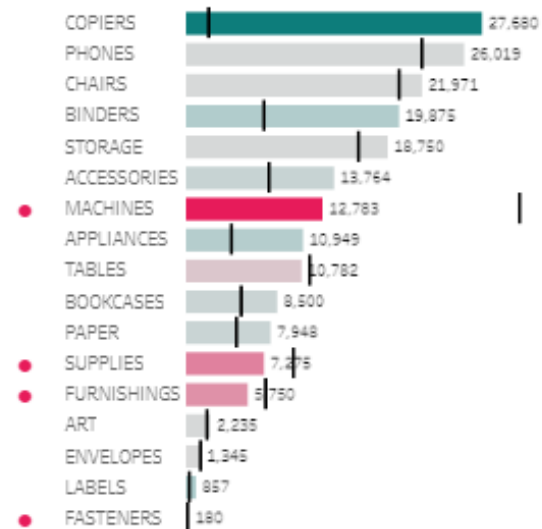


YEAR-TO-DATE VS. PRIOR YEAR | [CLICK TO FILTER](#)

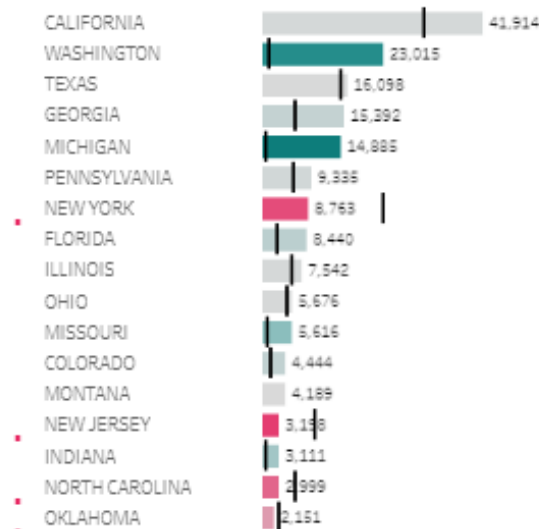
PROFIT BY STATE



SALES BY SUB-CATEGORY



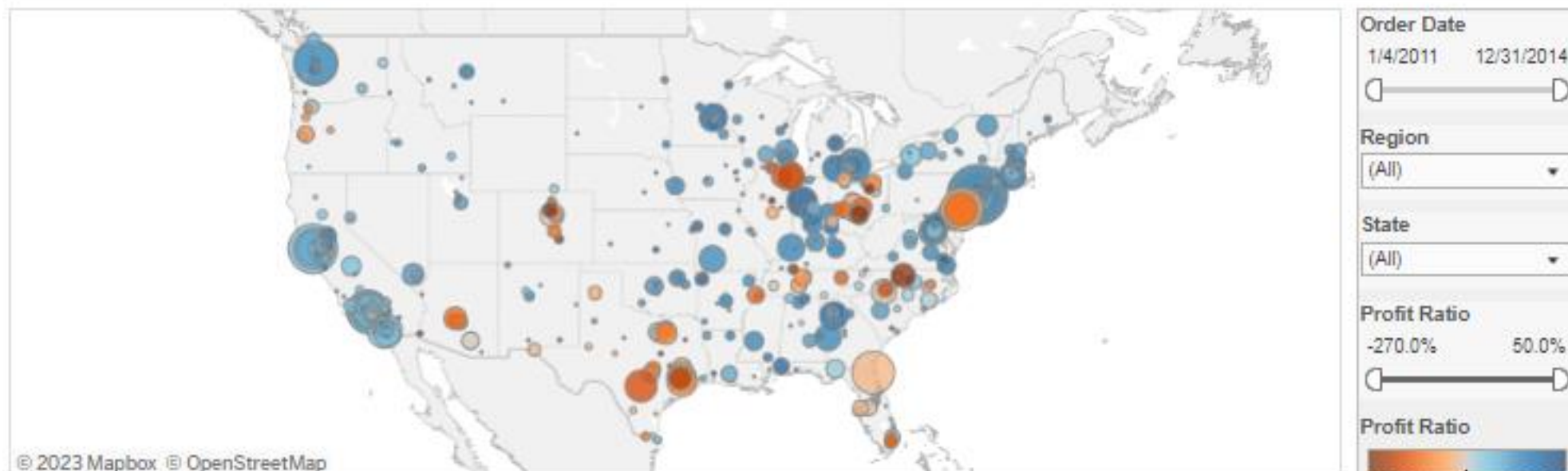
SALES BY STATE



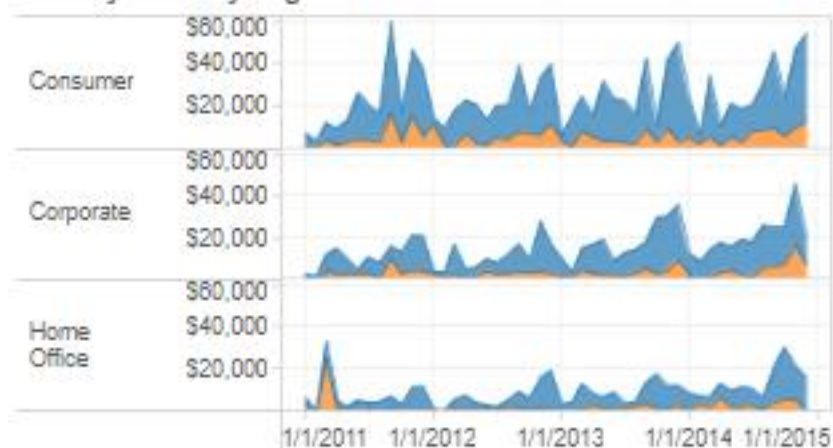


## Profitability Overview

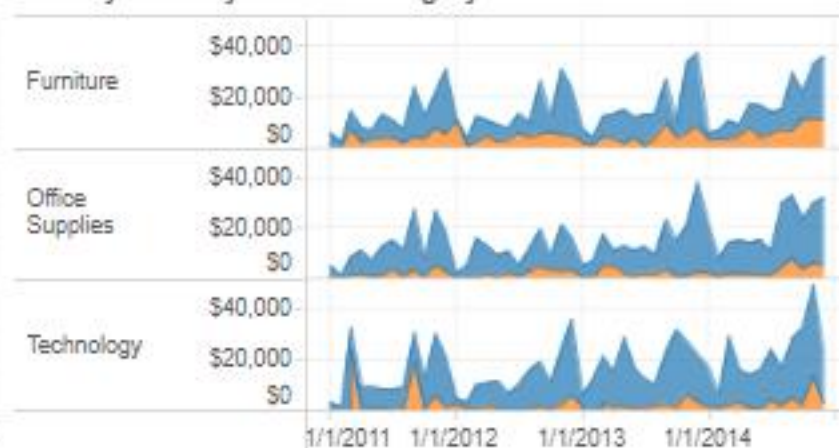
Total Sales	Total Profit	Profit Ratio	Profit per Order	Profit per Customer	Average Discount	Quantity
\$2,297,201	\$286,397	12.5%	\$57.18	\$361.16	16%	37,873



### Monthly Sales by Segment - States: All



### Monthly Sales by Product Category - States: All



## Product Drilldown

### Sales by Product Category

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Furniture	2011	6K	2K	15K	8K	7K	13K	11K	7K	24K	12K	22K	31K
	2012	12K	3K	12K	10K	9K	8K	14K	10K	26K	12K	31K	23K
	2013	8K	4K	12K	13K	15K	12K	13K	14K	27K	10K	34K	37K
	2014	6K	7K	11K	9K	17K	17K	14K	15K	30K	22K	33K	36K
Office Supplies	2011	5K	1K	9K	11K	7K	13K	15K	11K	27K	7K	27K	18K
	2012	2K	5K	16K	13K	9K	11K	5K	12K	19K	9K	21K	16K
	2013	5K	7K	17K	11K	13K	11K	13K	9K	23K	15K	21K	38K
	2014	22K	7K	14K	15K	14K	15K	11K	30K	33K	23K	30K	32K
Technology	2011	3K	2K	33K	9K	10K	8K	8K	9K	31K	12K	30K	21K
	2012	5K	3K	10K	11K	12K	6K	10K	16K	19K	11K	24K	36K
	2013	6K	12K	21K	15K	29K	17K	13K	10K	23K	32K	27K	22K
	2014	17K	6K	29K	16K	14K	16K	24K	17K	28K	33K	49K	23K

### Order Date

1/4/2011 12/31/201

### Region

☒ (All)☐ Central☐ East☐ South☐ West

### State

(All) ▼

### Profit

(3K) 12K

### Profit Ratio

-25.7% 37.1%

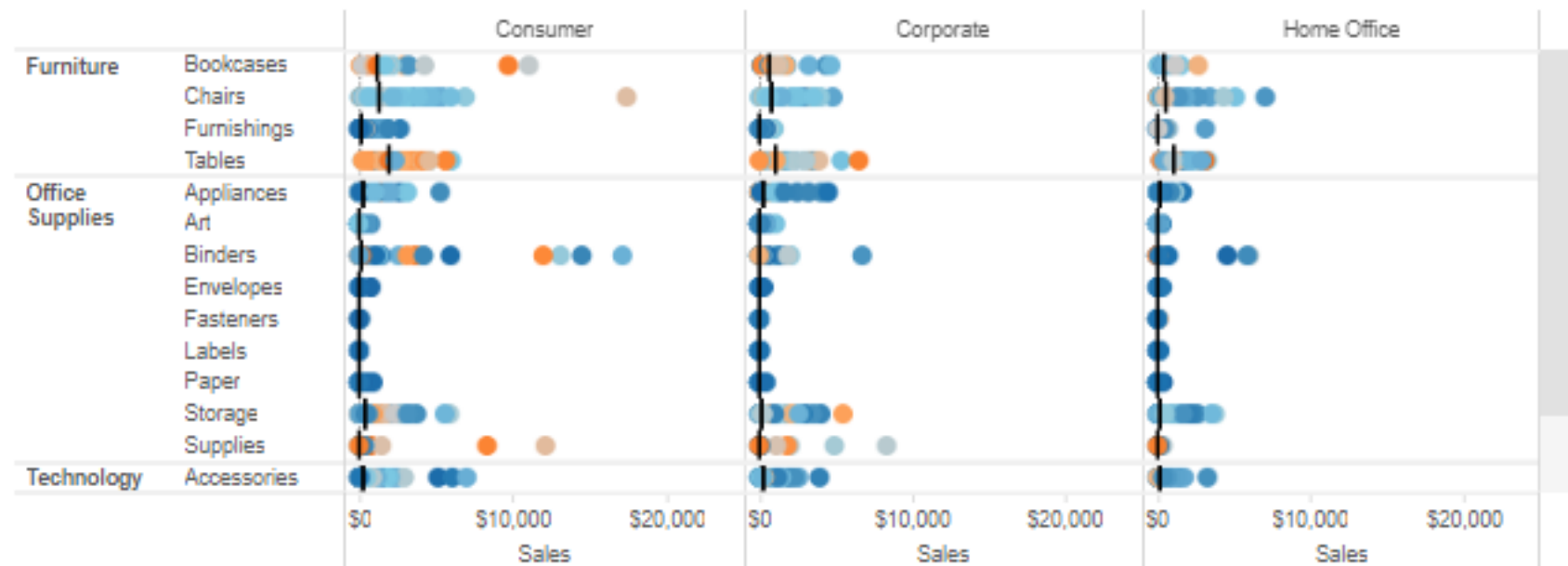
### Sales

1K 49K

### Profit Ratio

-50.0% 50.0%

### Sales and Profit by Product Names - Year: All, Month: All, Product Category: All

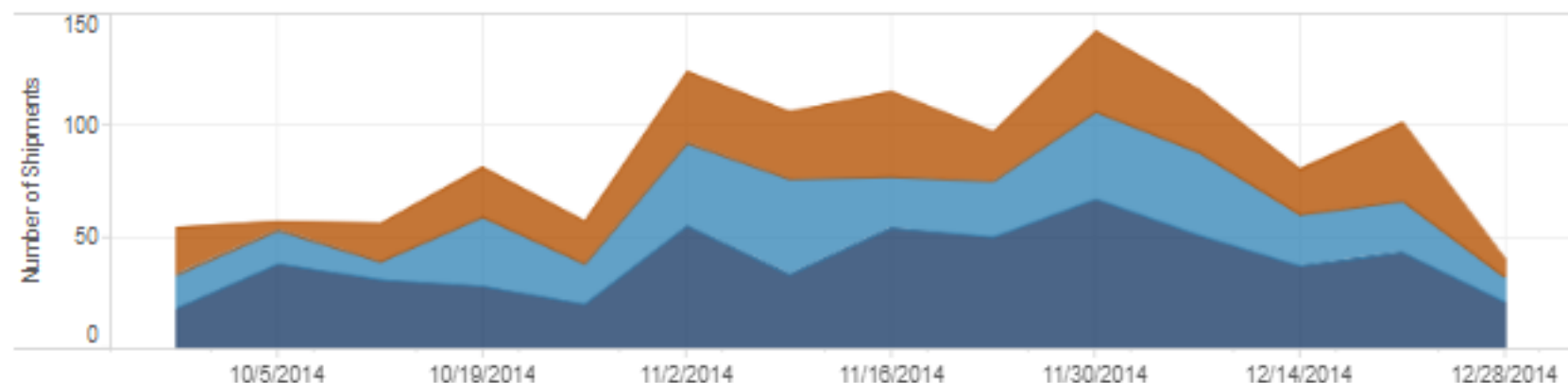


## On-Time Shipment Trends

27% Shipped Late

28% Shipped On Time

45% Shipped Early



Order Year

2014

Order Quarter

Q4

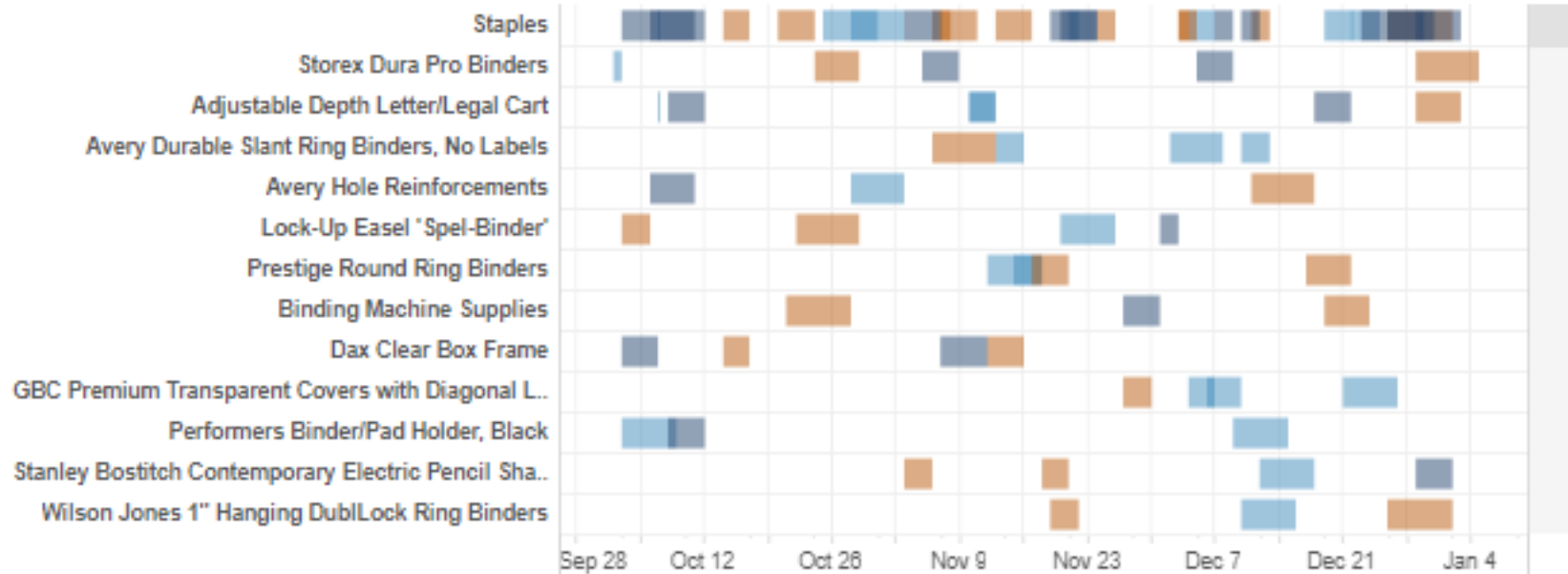
Region

(All)

Ship Mode

(All)

### Days to Ship by Product



## Sales Performance vs Target

Year

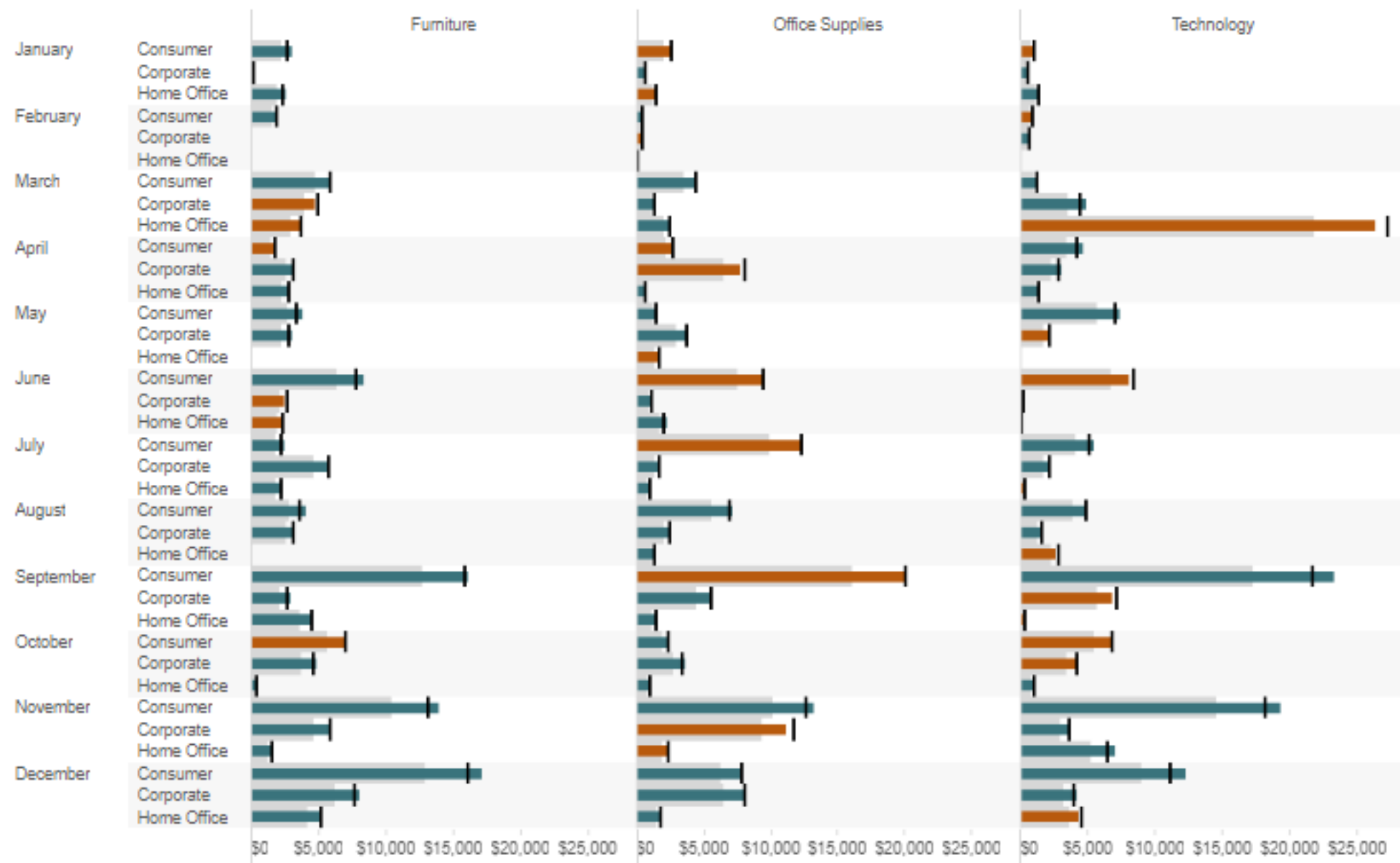
2011

Quarter

(All)

Above Target

Below Target



## Order Details

Order Date	Region	State	City	Category	Segment
1/4/2011 12/31/2014	(All)	(All)	(All)	(All)	(All)

Order ID	Customer Name	Order Date	Ship Date	Ship Mode	Total..	Quan..	Sum ..	Total ..	Profit..	Days ..	Days..
CA-2011-100006	Dennis Kane	9/7/2011	9/13/2011	Standard Class	\$378	3	0%	\$110	29.0%	6	6
CA-2011-100090	Ed Braxton	7/8/2011	7/12/2011	Standard Class	\$699	9	40%	(\$19)	-2.7%	12	8
CA-2011-100293	Neil Französisch	3/14/2011	3/18/2011	Standard Class	\$91	6	20%	\$32	35.0%	6	4
CA-2011-100328	Jasper Cacioppo	1/29/2011	2/4/2011	Standard Class	\$4	1	20%	\$1	33.8%	6	6
CA-2011-100363	Jim Mitchum	4/8/2011	4/15/2011	Standard Class	\$21	5	40%	\$8	36.1%	12	14
CA-2011-100391	Barry Weirich	5/25/2011	5/29/2011	Standard Class	\$15	2	0%	\$7	46.0%	6	4
CA-2011-100678	Kunst Miller	4/18/2011	4/22/2011	Standard Class	\$697	11	90%	\$62	8.9%	24	16
CA-2011-100706	Laurel Elliston	12/16/2011	12/18/2011	Second Class	\$129	8	0%	\$18	13.7%	6	4
CA-2011-100762	Nat Gilpin	11/24/2011	11/29/2011	Standard Class	\$509	11	0%	\$219	43.1%	24	20
CA-2011-100860	Cindy Stewart	3/26/2011	3/30/2011	Second Class	\$19	5	0%	\$9	48.0%	3	4
CA-2011-100867	Eugene Hildebrand	10/19/2011	10/24/2011	Standard Class	\$322	6	20%	\$20	6.3%	6	5
CA-2011-100881	Daniel Raglin	3/28/2011	4/1/2011	Standard Class	\$302	3	20%	\$23	7.5%	6	4
CA-2011-100895	Stewart Visinsky	6/2/2011	6/6/2011	Standard Class	\$605	7	0%	\$177	29.2%	18	12
CA-2011-100916	Frank Hawley	10/21/2011	10/26/2011	Standard Class	\$789	10	0%	\$123	15.6%	18	15
CA-2011-100972	Dennis Bolton	11/19/2011	11/24/2011	Second Class	\$166	3	0%	\$80	48.0%	3	5
CA-2011-101147	Matt Collins	12/2/2011	12/4/2011	First Class	\$2	1	80%	(\$6)	#####	1	2
CA-2011-101175	Dario Medina	12/9/2011	12/14/2011	Standard Class	\$101	6	20%	(\$1)	-1.3%	6	5
CA-2011-101266	Michael Moore	8/27/2011	8/30/2011	Second Class	\$13	2	0%	\$6	48.0%	3	3
CA-2011-101364	Tamara Willingham	12/22/2011	12/26/2011	Standard Class	\$297	13	20%	\$100	33.8%	6	4
CA-2011-101392	Ann Steele	12/7/2011	12/13/2011	Standard Class	\$269	7	0%	\$70	26.0%	6	6
CA-2011-101427	Andy Yotov	12/26/2011	12/30/2011	Standard Class	\$8	3	20%	\$1	13.8%	6	4
CA-2011-101462	Benjamin Patterson	4/20/2011	4/25/2011	Standard Class	\$60	4	0%	\$28	46.0%	6	5
CA-2011-101476	Shirley Daniels	9/12/2011	9/13/2011	First Class	\$70	1	0%	\$30	43.0%	1	1
CA-2011-101560	Chris Selesnick	11/28/2011	12/1/2011	Second Class	\$542	19	0%	\$111	20.4%	12	12
CA-2011-101602	Mick Osherson	12/15/2011	12/18/2011	First Class	\$804	8	50%	(\$31)	-3.9%	2	6

# Superstore Sales Overview

2020

2021

2022

Sales  
**\$733.2K**



Profit  
**\$93.4K**



Orders  
**1,687**



Quantity  
**12,476**



## Sales Target

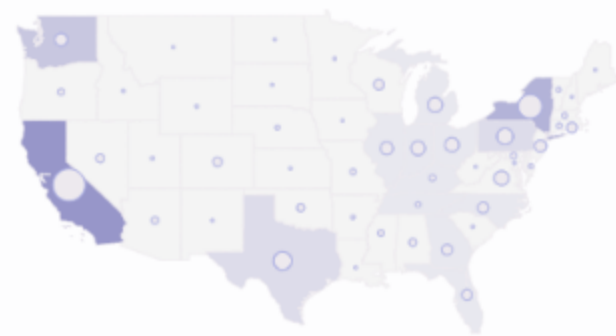


Total Sales **\$733.2K**  
Target Sales **\$1.0M**  
Percent of Target **73.3%**

## Monthly Target



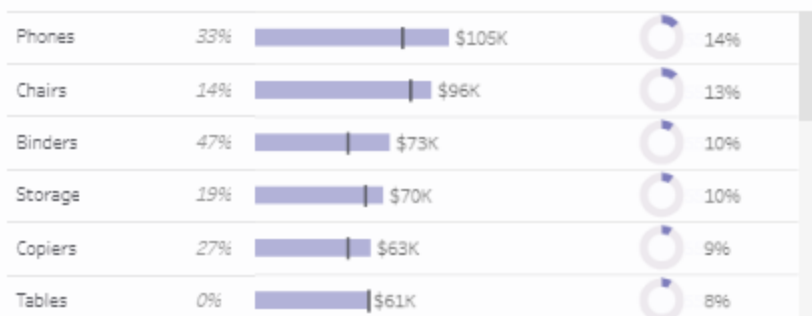
## Sales by State



- 1 California **\$146.4K**
- 2 New York **\$93.9K**
- 3 Washington **\$65.5K**
- 4 Texas **\$43.4K**
- 5 Pennsylvania **\$42.7K**

## Sales by Sub-Category

■ Current Year ■ Previous Year

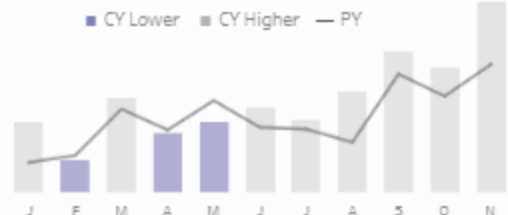


## Sales

Current Year

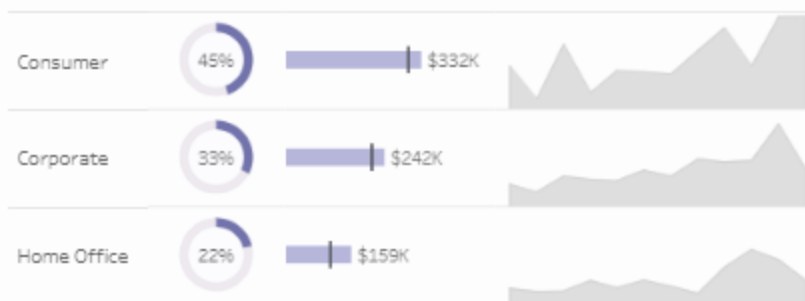
**\$733,215**

vs. Previous Year  
**+20.4%**



## Sales by Segments

■ Current Year ■ Previous Year





Superstore  
**Cockpit**

YTD October 2022

Top Sub-Categories

Top Locations

Most Active  
Customers

Underperformers

Pending Orders

Cockpit

Analysis

Details

Help

Settings

\$ Sales

Gross Sales

\$541,938 ▲24.0%

YoY sales increased by \$104,919

▲10% vs YTD Target ▼12% vs FY Target



Gross Sales vs Target by Segment

Consumer

▲6%

\$234,535

43%

Corporate

▲11%

\$182,814

34%

Home Office

▼7%

\$124,588

23%

Net Sales

\$528,954 ▲23.7%

Returns & Discounts

2.4% of Gross Sales

Profit

\$77,578 ▲27.7%

YoY profit increased by \$16,851

▼9% vs YTD Target ▼20% vs FY Target



Customers

Retention Rate

92%

Active

368 ▲16.8%

New

151

Total Customers

619 ▲11.1%

Orders

Total Orders

1,225 ▲26.0%

Average Order Value

\$442 ▼1.6%

Average Basket Size

7.4 ▲0.9%

Profitable Orders

79%

Shipping

Average Days to Ship

3.9 ▼1.0%

% Orders by Days to Ship

5 or more 39%

3-4d 38%

1-2d 18%

Same day 5%



# Super Store Data

[Reset Filters](#)

Region

(All)

State

(All)

Date

(All)

Segment

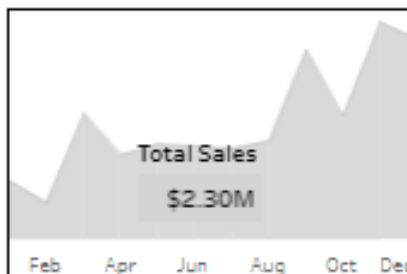
(All)

Ship Mode

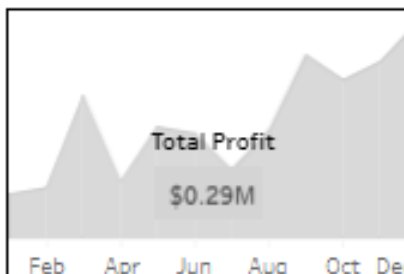
(All)

## Overall view of KPI by Category & Sub Category

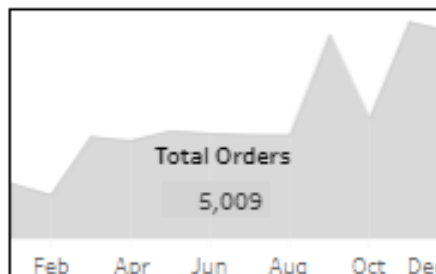
### Sales



### Profit



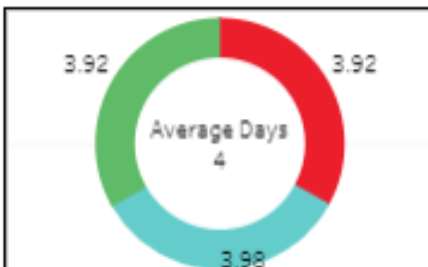
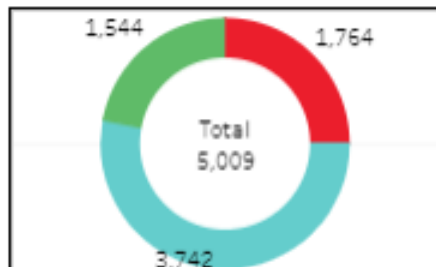
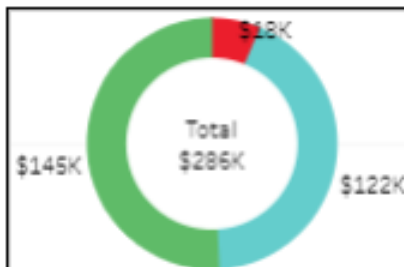
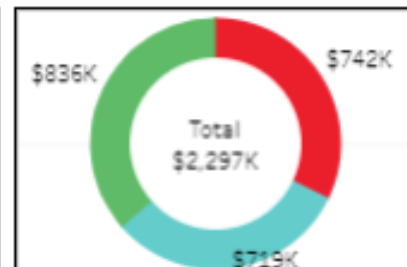
### Orders Placed



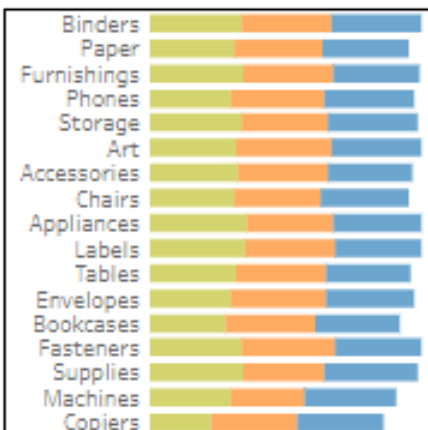
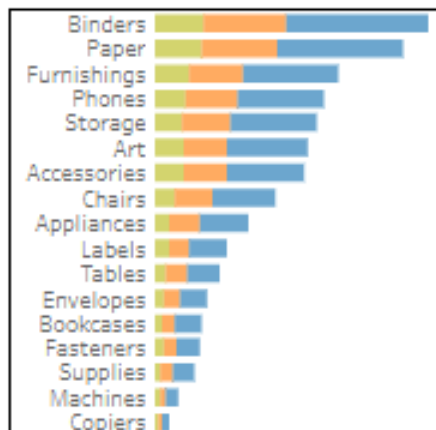
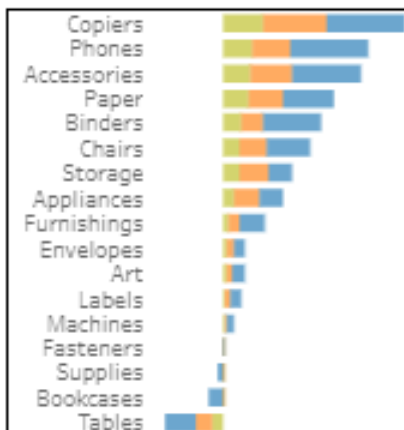
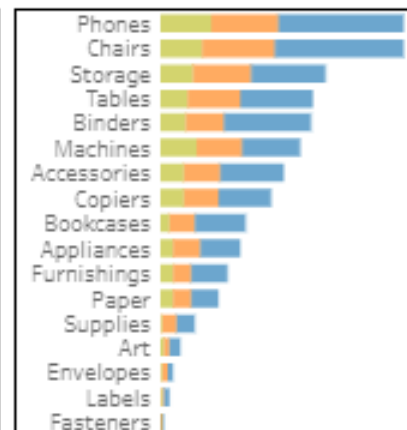
### Shippment Days



KPI via Categories



KPI via Sub Categories

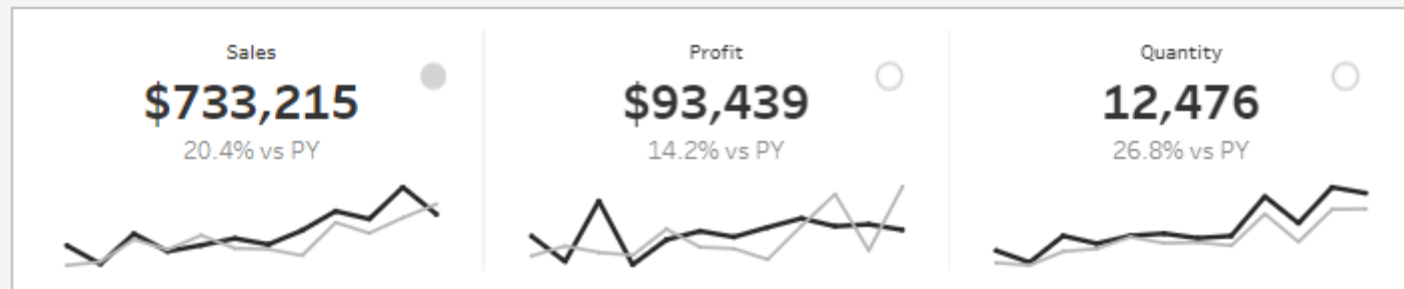


Segment Home Office Corporate Consumer

Category Furniture Office Supplies Technology

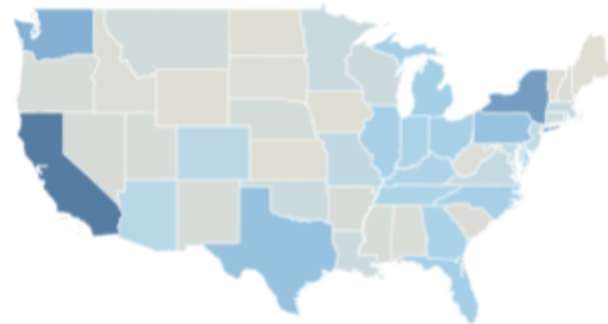


## SUPERSTORE TOTAL US SALES OVERVIEW | January 02, 2018 - December 30, 2019



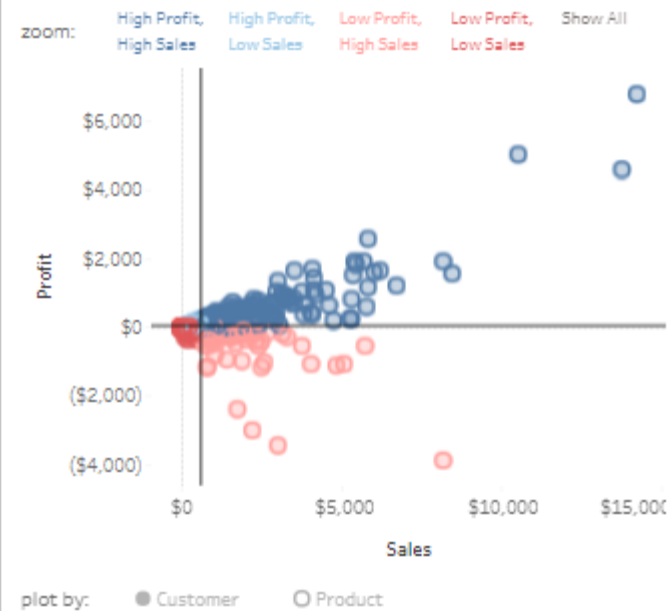
### Sales Overview by State

select to filter dashboard and see state specific performance



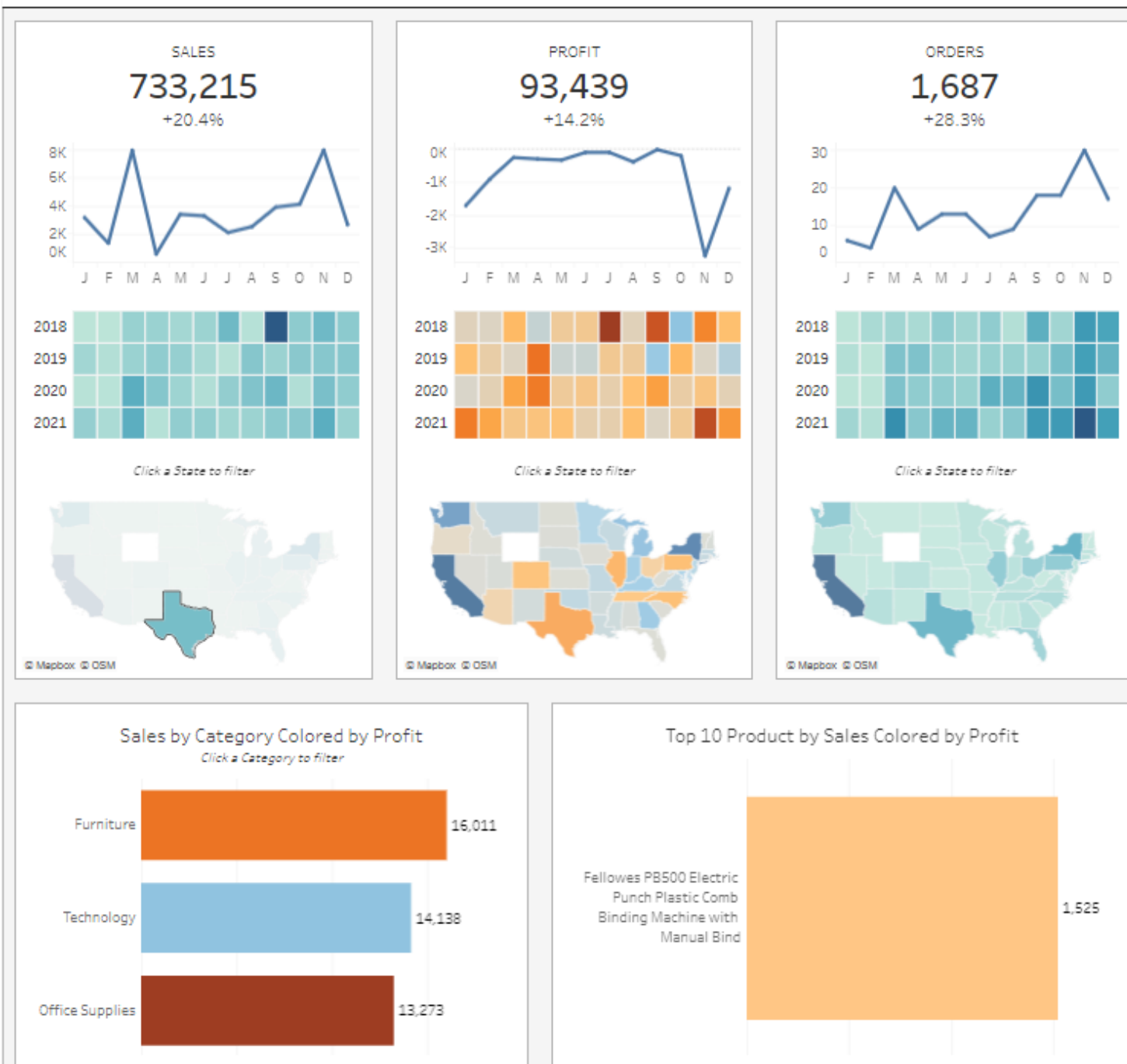
Reset

### Sales and Profit Analysis by Customer



# SUPERSTORE KPIs

Bad



Superstore Performance Dashboard

Select Year  
2020





# SAMPLE SUPERSTORE DASHBOARD

Segment

(All)

State

(All)

Order Mon...

(All)

Order Year

(All)

Discount

1,561

Sales

2,297,201

Profit

286,397

Profit %

100.0%

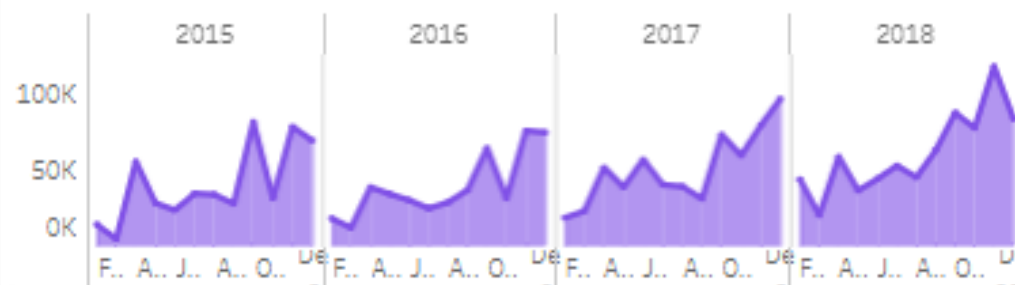
## Region-wise Sales and Profit



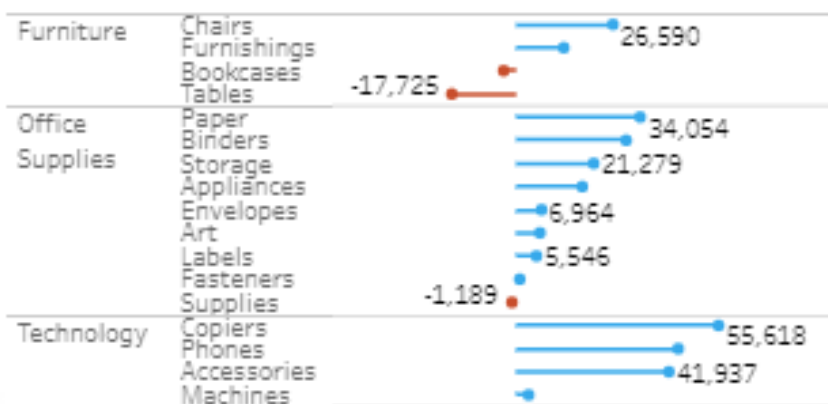
## Category- Profit %



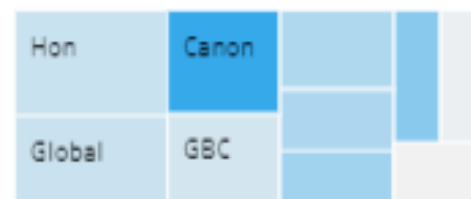
## Sales vs Order Date



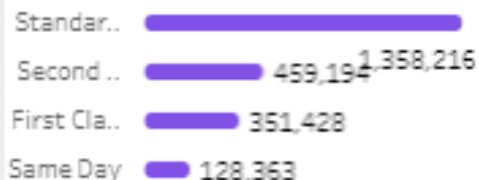
## Subcategory Profits



## Manufacturer Profit and Sales

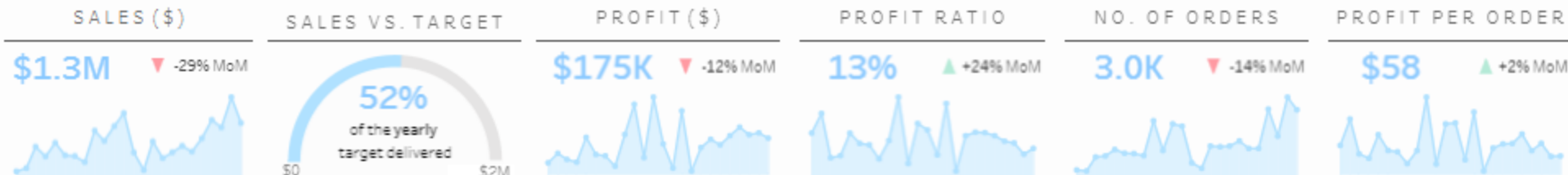


## Ship Mode Sales



# SALES DASHBOARD 2022.1 ?

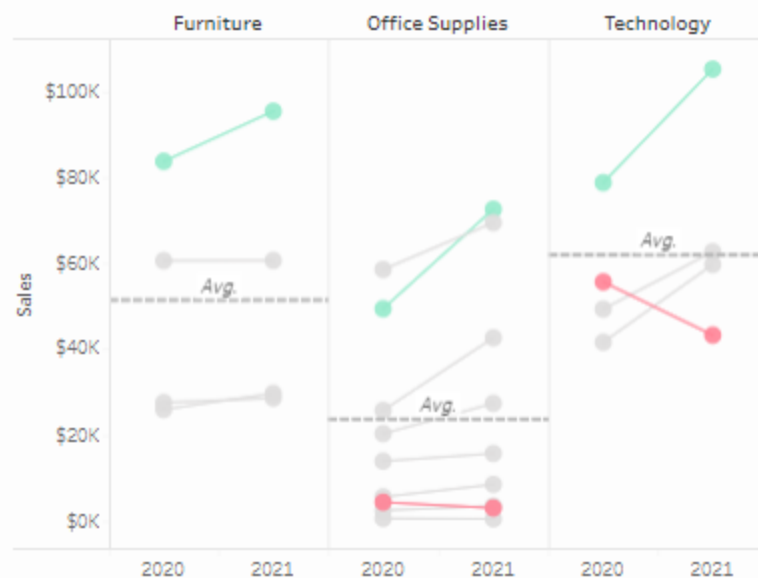
Topline Overview | High level breakdown of Sales and Profit by Product Category, Sug-Category, Segment and Region



## Sales Growth by Category & Sub-Category

Green lines indicate highest growth and red lines show biggest decline.

Selected metric to display:  
Sales



## Sales by Region and Segment

Consumer segment shows strongest performance across all regions.

TOPLINE / TREND  
VIEW?

Region	Segment	Sales	% of Target Sales	No. of Orders	Profit
Central	Consumer			2.5K	\$8.2K
	Corporate			1.7K	\$13.3K
	Home Office			1.0K	\$5.9K
East	Consumer			3.1K	\$19.7K
	Corporate			2.0K	\$16.4K
	Home Office			1.2K	\$17.2K
South	Consumer			1.9K	\$18.0K
	Corporate			1.0K	\$5.6K
	Home Office			0.7K	\$2.9K
West	Consumer			3.7K	\$35.4K
	Corporate			2.2K	\$22.4K
	Home Office			1.4K	\$10.1K

# **Stock Market – Predictive Analytics Project**

## **Time Series Forecasting**

### **Time Series Exponential Smoothing**

# Forecasting models in Power BI

Two versions of exponential smoothing:

1. Seasonal data (ETS AAA)
2. Non-seasonal data (ETS AAN)

Power BI automatically uses the appropriate model based on the analysis of historical data

## What is seasonality?

Seasonality is the presence of variations that occur at specific regular intervals within a year, such as weekly, monthly or quarterly.

Factors that may affect seasonality include:

- Weather
- Vacation
- Holidays

# Some datasets are not seasonal

Some datasets are cyclical.

Cyclical patterns are noticed when the data exhibits rises and falls that are not of a fixed period.

Such patterns are non-seasonal and can be due to various economic factors and outcomes.