



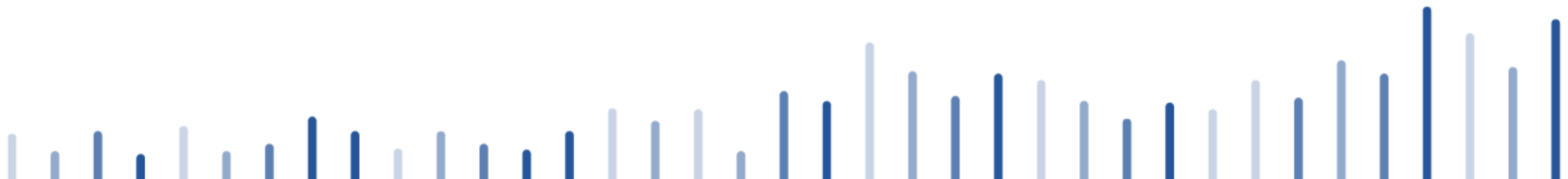
# Leading the Way

A guided eLearning Journey

Advanced Learning Path

Part 1: Turning the Tables with Advanced Calculations and Set Actions

June 4, 2020



# Welcome



Zach Wright  
Lead Solution Engineer



Scott Smith  
Senior Solution Engineer

# Agenda

- eLearning Review 5 min
- Advanced Table Calculations 25 min
- Set Actions 15 min
- Q&A 10 min

# eLearning review

Modules/Topics completed this week

- Desktop II Review
- Basic Calculations Review
- Custom Table Calculations
- Secondary Table Calculations
- Pareto Charts and Secondary Table Calculations

# Why Table Calcs?

- Answer more difficult questions
- Analyze faster

The image shows two overlapping dialog boxes from Tableau. The top dialog box is titled "LOD Percent of Total" and contains the following code: `{ FIXED [Segment], [Region]: SUM([Sales]) }` followed by a slash and `{ FIXED [Segment]: SUM([Sales]) }`. The bottom dialog box is titled "The calculation is valid." and contains the text "Totals summarize values from Table (across)." followed by the code `SUM([Profit]) / TOTAL(SUM([Profit]))`. Below the code in the bottom dialog box are the labels "Default Table Calculation", "Apply", and "OK".

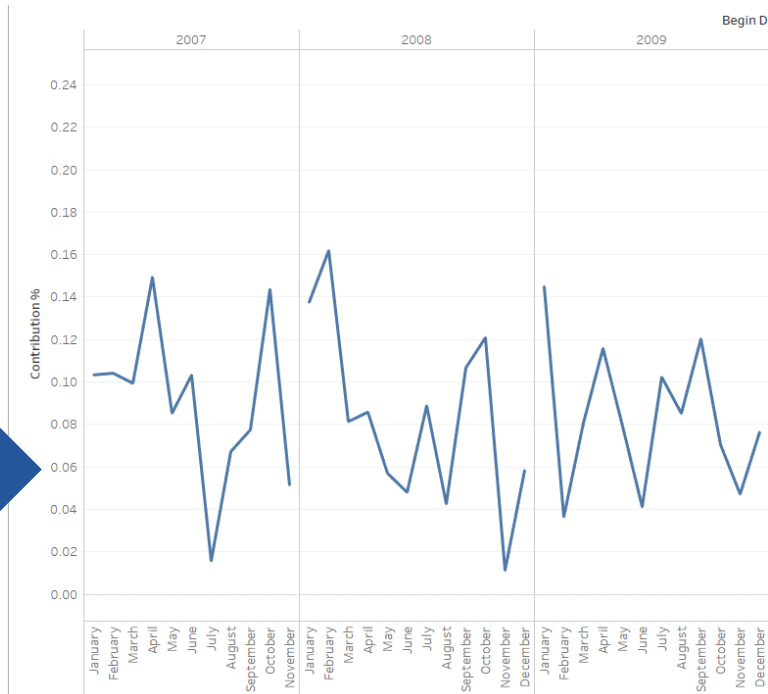
# What is a Table Calculation?

A type of calculation performed locally in Tableau by comparing data values within a visualization

Month of Begin Date	2007	2008	2009
January	12,784	26,462	39,714
February	12,881	31,156	9,980
March	12,295	15,654	22,082
April	18,473	16,504	31,736
May	10,548	10,963	21,710
June	12,767	9,237	11,283
July	1,934	17,083	28,031
August	8,310	8,189	23,34
September	9,583	20,523	32,963
October	17,769	23,255	19,313
November	6,365	2,154	12,924
December		11,225	20,931

## Percent Difference From

Month of Begin Date	2007	2008	2009
January	0.0%	0.0%	0.0%
February	0.8%	17.7%	-74.9%
March	-3.8%	-40.8%	-44.4%
April	44.5%	-37.6%	-20.1%
May	-17.5%	-58.6%	-45.3%
June	-0.1%	-65.1%	-71.6%
July	-84.9%	-35.4%	-29.4%
August	-35.0%	-69.1%	-41.2%
September	-25.0%	-22.4%	-17.0%
October	39.0%	-12.1%	-51.4%
November	-50.2%	-91.9%	-67.5%
December	-100.0%	-57.6%	-47.3%



# Terminology

## Table

Category	Qu.	Order Date			
		2014	2015	2016	2017
Furniture	Q1	224	244	332	280
	Q2	300	345	455	535
	Q3	429	479	558	612
	Q4	670	707	848	1,010
Office	Q1	642	573	656	1,174
Supplies	Q2	948	956	1,419	1,578
	Q3	1,333	1,348	1,750	2,118
	Q4	1,646	1,838	2,121	2,806

## Pane

Category	Qu.	Order Date			
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## Cell

Category	Qu.	Order Date			
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# Compute Using

Category	Qu..	Order Date			
		2014	2015	2016	2017
Furniture	Q1	→	20 →	88 →	-52
	Q2		45	110	80
	Q3		50	79	54
	Q4		37	141	162
Office Supplies	Q1		-69	83	518
	Q2		8	463	159
	Q3		15	402	368
	Q4		192	283	685
Technology	Q1		11	82	136
	Q2		28	63	72
	Q3		17	45	195
	Q4		44	19	262

Category	Qu..	Order Date			
		2014	2015	2016	2017
Furniture	Q1				
	Q2	76	101	123	255
	Q3	129	134	103	77
	Q4	241	228	290	398
Office Supplies	Q1	-28	-134	-192	164
	Q2	306	383	763	404
	Q3	385	392	331	540
	Q4	313	490	371	688
Technology	Q1	-1,484	-1,665	-1,866	-2,415
	Q2	113	130	111	47
	Q3	122	111	93	216
	Q4	158	185	159	226



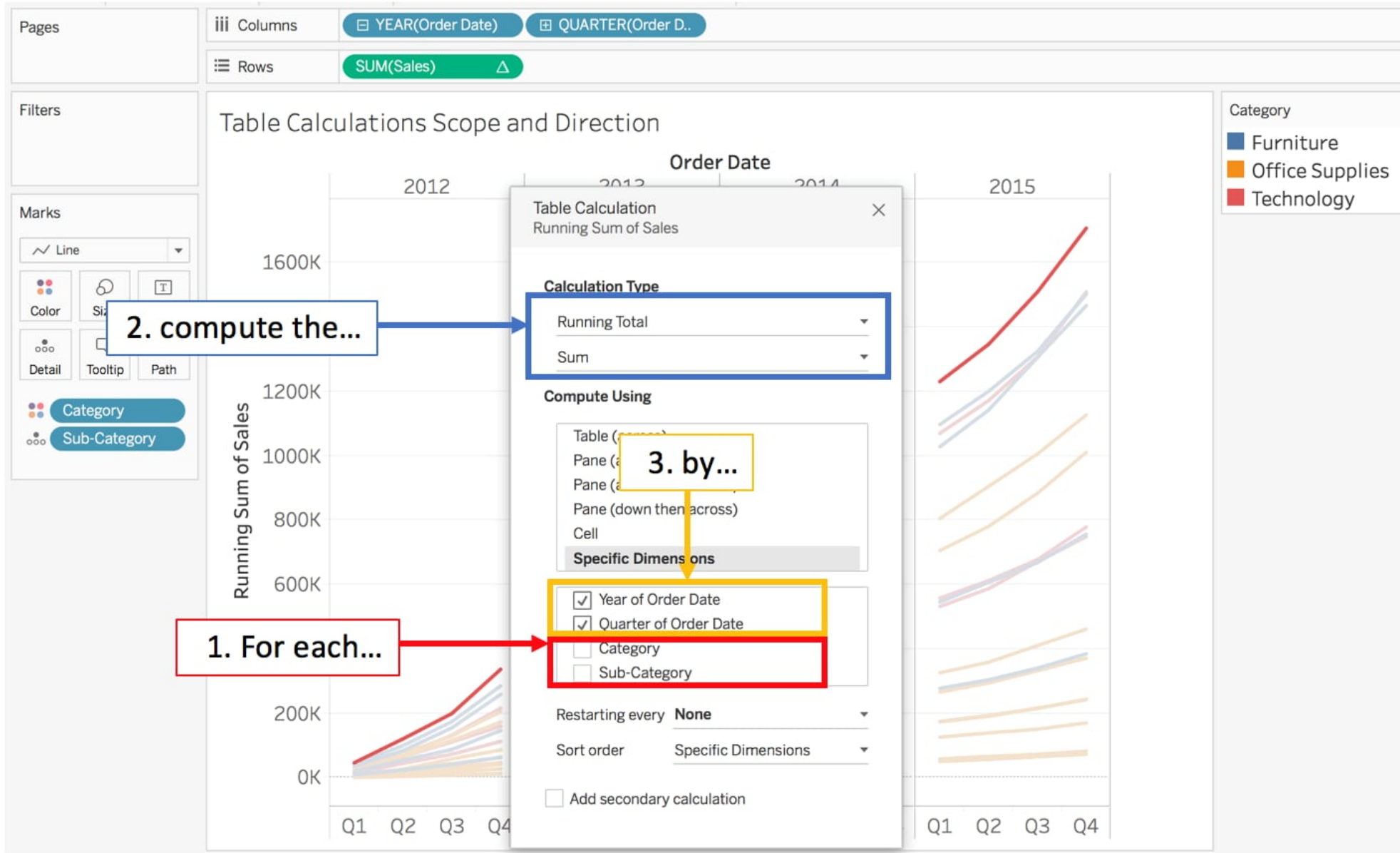
# Advanced Table Calculations



For each Sub-Category and Category,

Compute the Running Sum

By Quarter and Year



# Table Calculations – What We Learned

- Computing over specific Dimensions
- Sorting Computed Dimensions
- Nested Table Calculations
- PreviousValue()

Hands On Blogs

[Blog #1](#)

[Blog #2](#)

[Bronson's Challenge Workbook](#)

# Intro to Set Actions

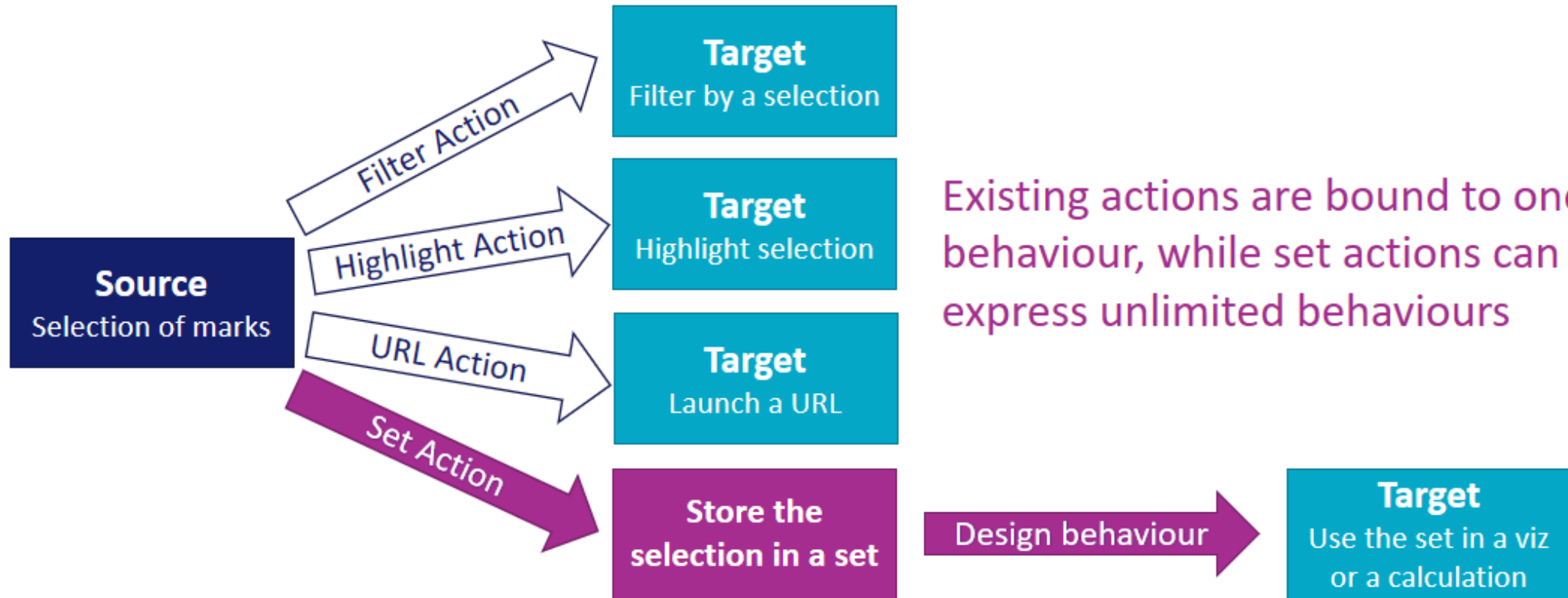


# What is a Set Action?

An Action that populates an existing Set

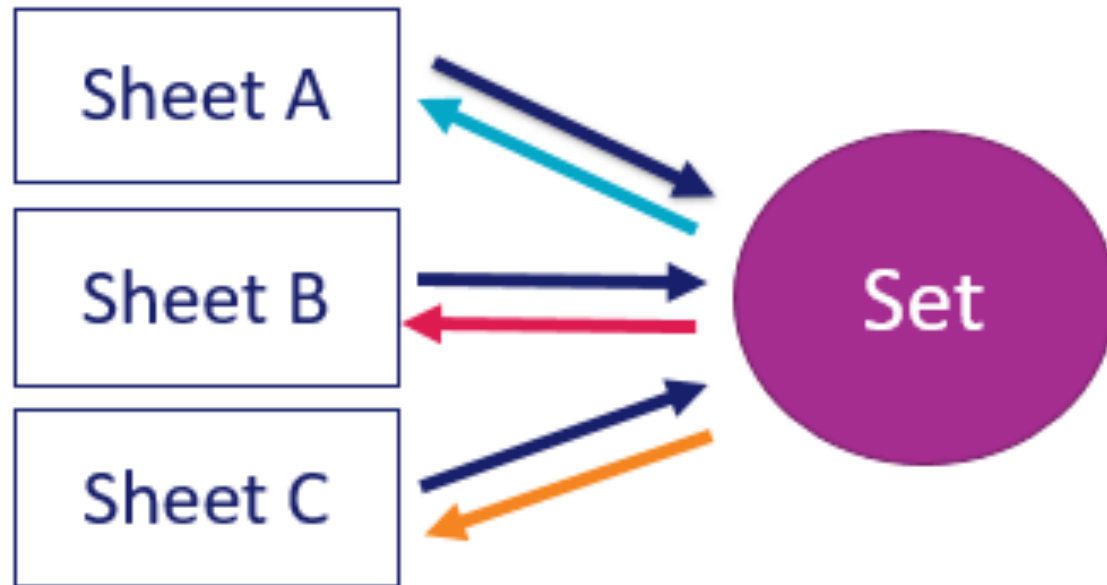
# What is a Set Action?

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# What is a Set Action?

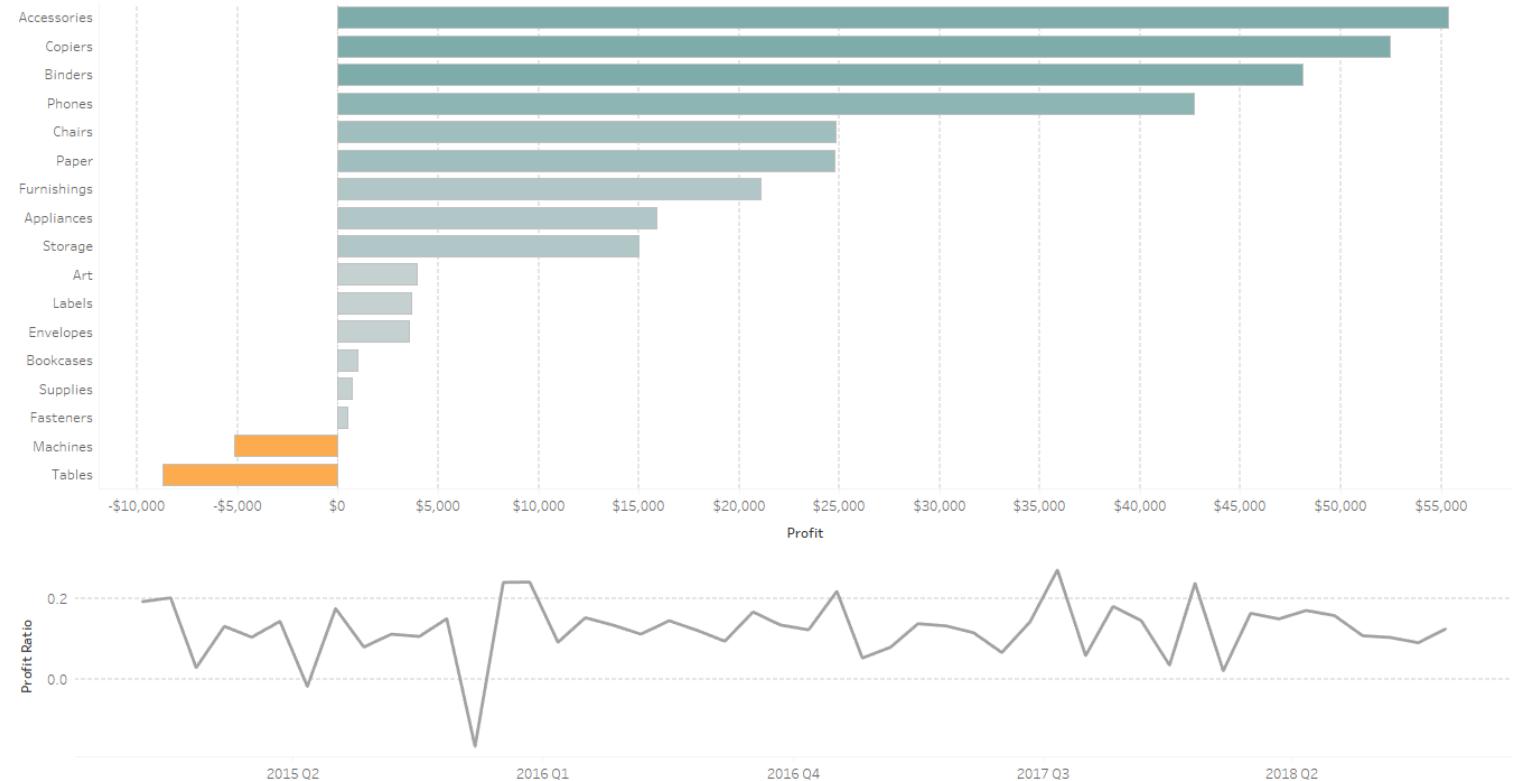
An Action that populates an existing Set



- Set colours viz
- Set hides data
- Set filters an axis
- Selection updates set

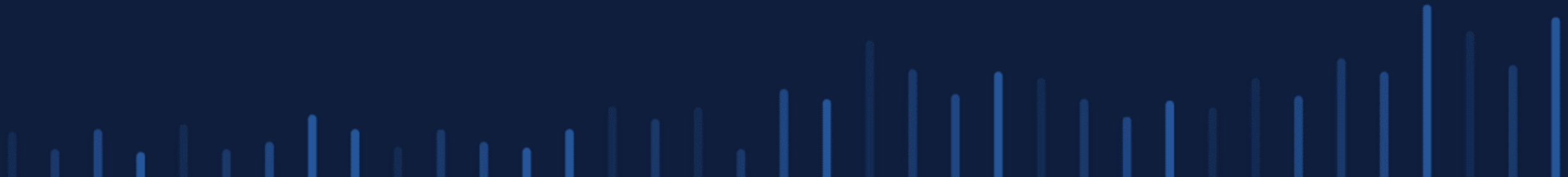
# Comparing a Part to the Whole

View the *Profit Ratio* per Month for *Selected Sub-Categories* and *Unselected Sub-Categories*





# Set Actions & Calculations

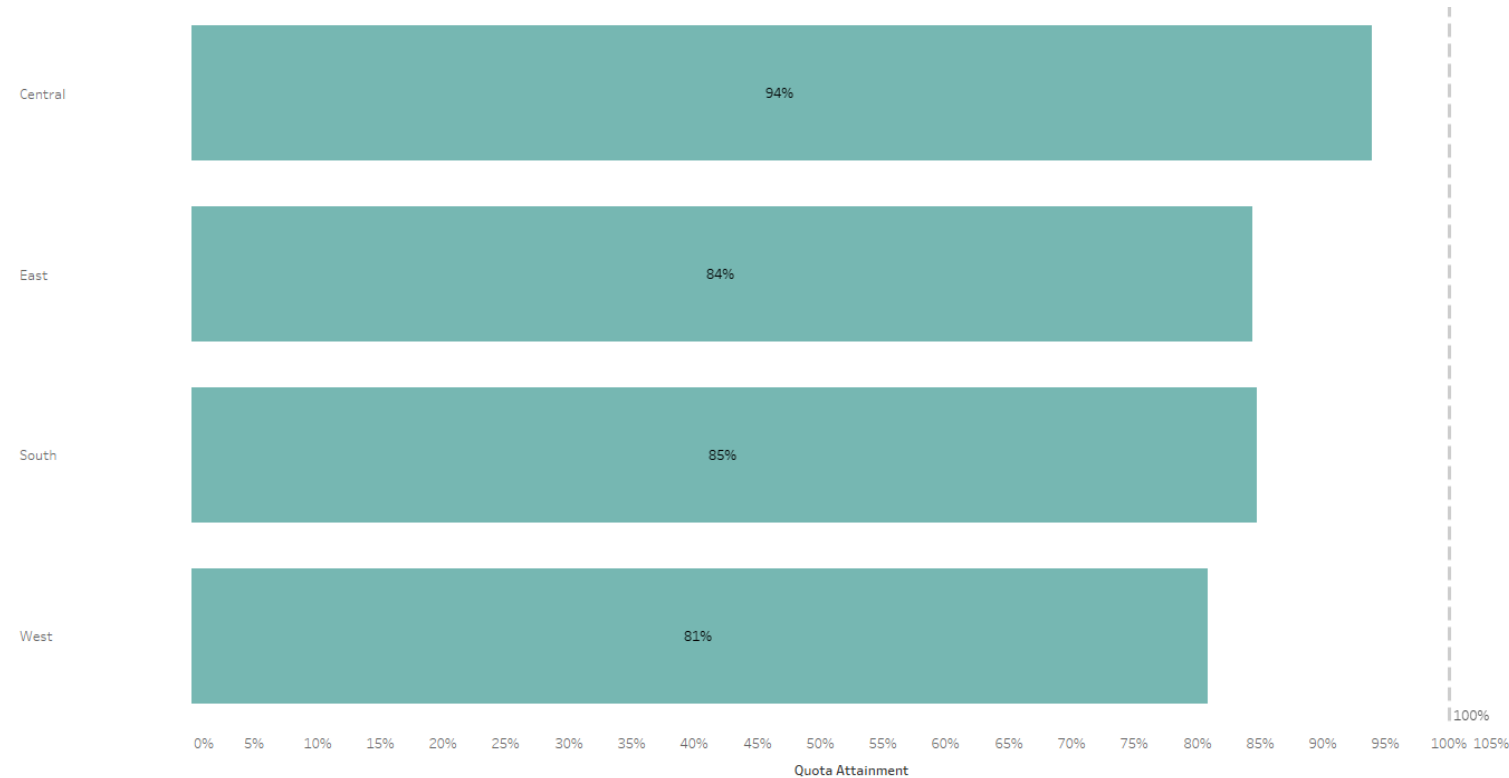


# Drill Down in Context

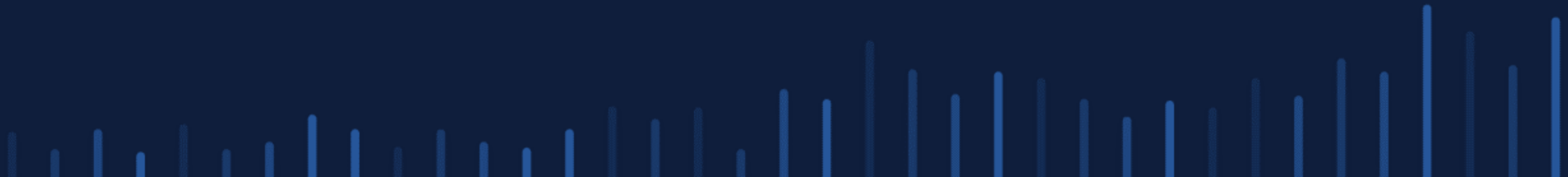
Drill-in in the past could be cluttered

Drill-In Sales Reps

```
IF [Selected Regions]  
THEN [Sales Representative]  
ELSE "" END
```



# Conditional Set Actions

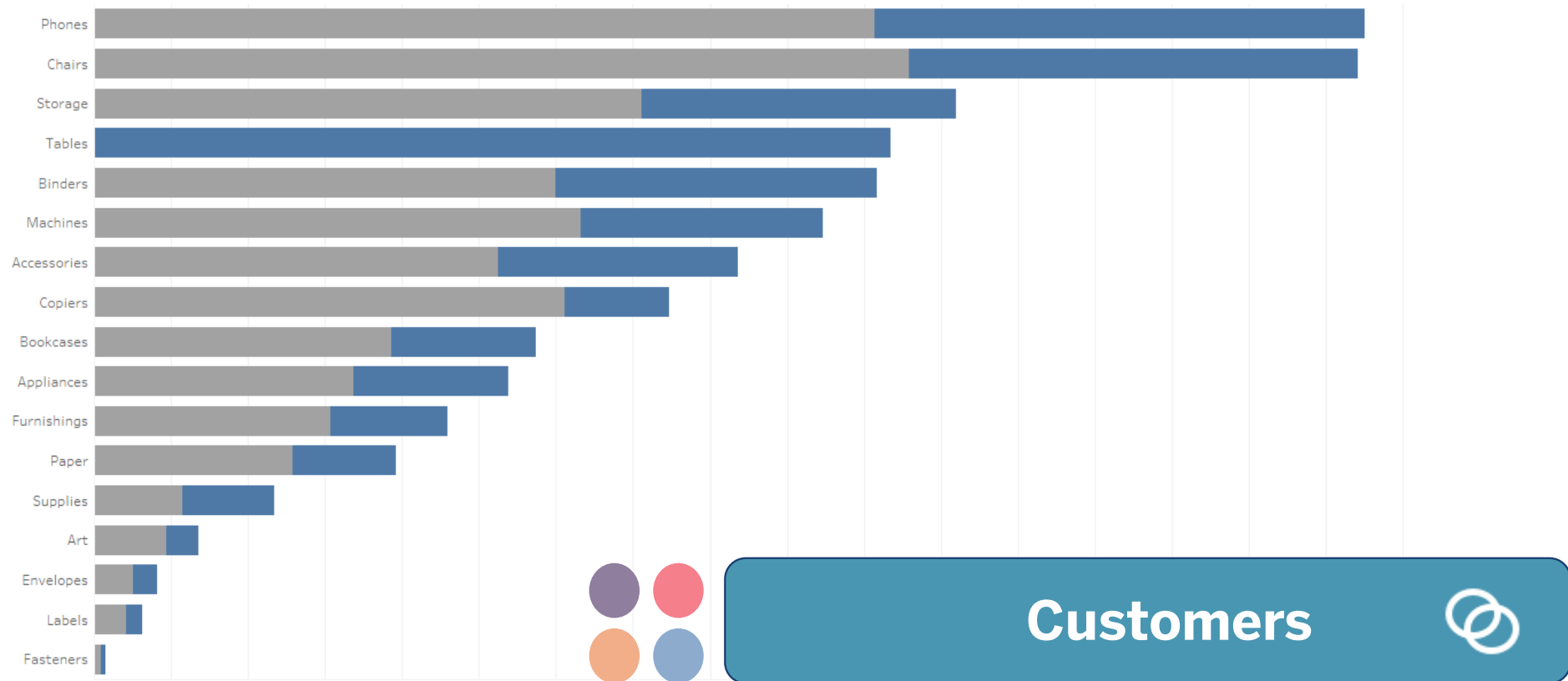


# Conditional Set Actions

A set of values based on the condition of another set of values

# Market Basket Analysis

If a Customer purchases a product, what else are they likely to purchase?



# Conditional Set Actions

“Selected” Customers



# Conditional Set Actions

**“Selected” Customers**

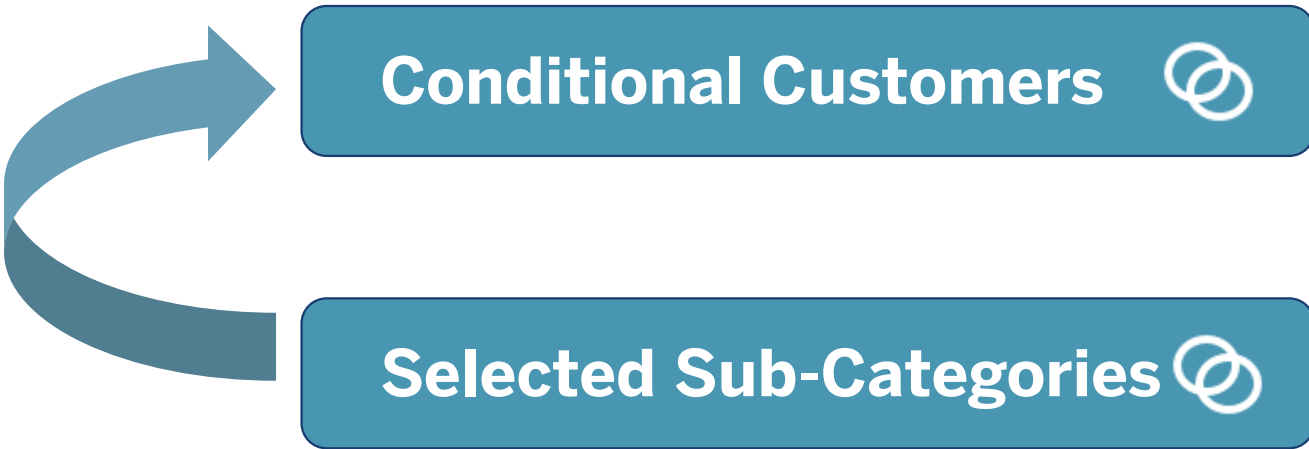


**Selected Sub-Categories**



# Conditional Set Actions

Customers who have Selected Sub-Categories





# Conditional Set Actions

Customers who have Selected Sub-Categories



Conditional Customers

Selected Sub-Categories

Edit Set [Conditional Customers]

Name: Conditional Customers

General Condition Top

None

By field:

Sales Sum

= 0

Range of Values

Min: Load

Max:

By formula:

```
MAX ([Selected SubCategories])
```

# Set Actions

- Comparing Part to Whole
- Comparing Part to Part
- Drill Down in Context
- Market Basket Analysis
- Dynamic Grouping

## Hands On Blogs

[Blog #1](#)

[Blog #2](#)

# Advanced Series Schedule

TITLE

TIME

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**June 4, 2020: Intro to Advanced eLearning: Turning the Tables with Advanced Calculations and Set Actions**

10:00 AM - 11:00 AM PST

[REGISTER](#)

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**June 11, 2020: Leveling Up with Advanced LOD Calculations**

10:00 AM - 11:00 AM PST

[REGISTER](#)

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**June 18, 2020: Introduction to Time Analysis**

10:00 AM - 11:00 AM PST

[REGISTER](#)

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**June 25, 2020: Map This!**

10:00 AM - 11:00 AM PST

[REGISTER](#)

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**July 1, 2020: Dashboard Makeover**

10:00 AM - 11:00 AM PST

[REGISTER](#)

# For next week

- Leveling Up With Advanced LOD Calculations
- Thursday, June 11

## eLearning Modules/Topics

- Level of Detail Expressions: Fixed
- Level of Detail Expressions: Include
- Level of Detail Expressions: Exclude

## On Deck

- Introduction to Time Analysis June 18
- Map This! June 25
- Dashboard Makeover July 1

# Join the Conversation Online: Tableau Communities

**500+**

User Groups

**150,000+**

Online Community  
Members

“One of the finer things about the Tableau Community is its authenticity, trust, and knowledge.”

“The point of where I’m at and where I’m going, it’s all thanks to the community, and people believing in and supporting me.”

“I definitely would not have my career to where it is or the success I've had with Tableau without the community.”

Join an Industry Community to connect with peers and problem solve together.

community.tableau.com

Tableau Community Forums

Forums ▾

Ideas

User Groups ▾

# Forums

Browse topics, ask questions, and share your insights.

Local

Industry



Topic

Tableau

Healthcare

Government

Manufacturing

Retail & Consumer Goods

Financial Services

Insurance

Telecom

Travel & Hospitality

Transportation and Logistics

Energy

# Q&A

