

**TABLEAU**

**CONFERENCE**

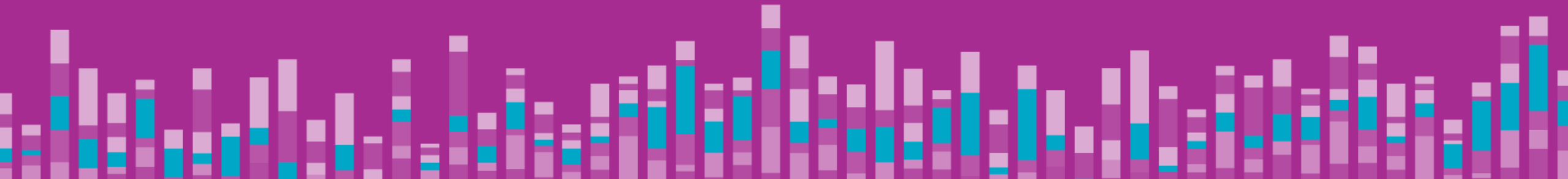
Workbook available at

<https://public.tableau.com/profile/johanna.knapp>

# Welcome

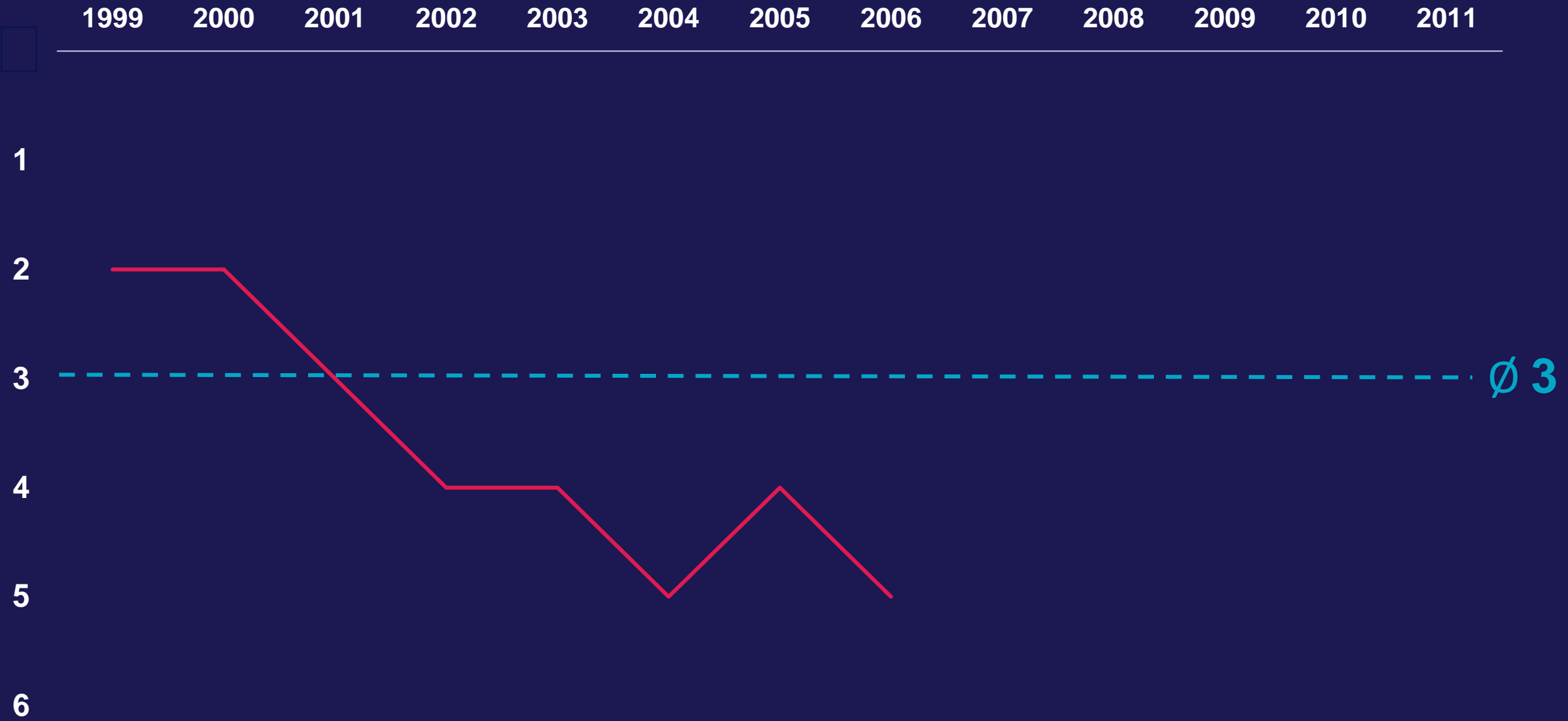
Greatest of All Time Analytics

24<sup>th</sup> October 1.45 pm – 2.45 pm



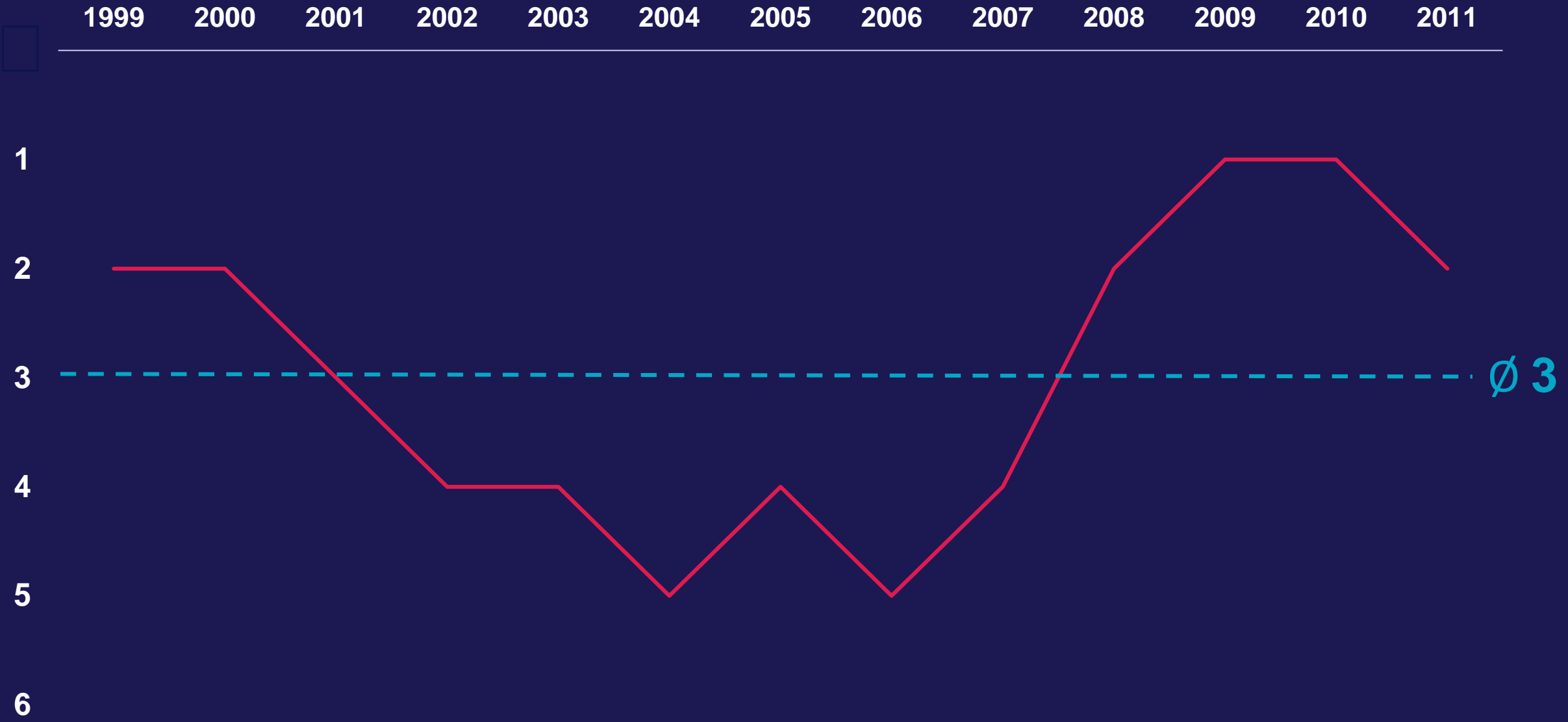
# Measuring Performance

TABLEAU  
CONFERENCE



# Measuring Performance

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# Challenges with time-based analysis



## Popular Content

Browse a collection of the most active, insightful threads across our forums.

[BROWSE ALL DISCUSSIONS](#) →

- ?

Current YTD vs Previous YTD and Dynamic Update

2 HOURS AGO

BY HARRY
- ?

Individual KPI Indicators for Individual Measures

2 HOURS AGO

BY KOUSHI
- ?

Exclude Holiday & Weekends to find ONLY Business Days

6 HOURS AGO

BY JIN
- ✓

To solve some basic questions regarding Tablue

9 HOURS AGO

BY JOSH
- ?

Need Current month, Quarter to date, and Year to Date and now: Quarter over Quarter \$ and Q over Q

2 HOURS AGO

BY KAMAL

[START A DISCUSSION](#) →

#TC18

# Greatest of All Time Analytics

**Johanna Knapp**

Team Lead Product Consulting

Tableau



# Agenda

Date parts vs. date values

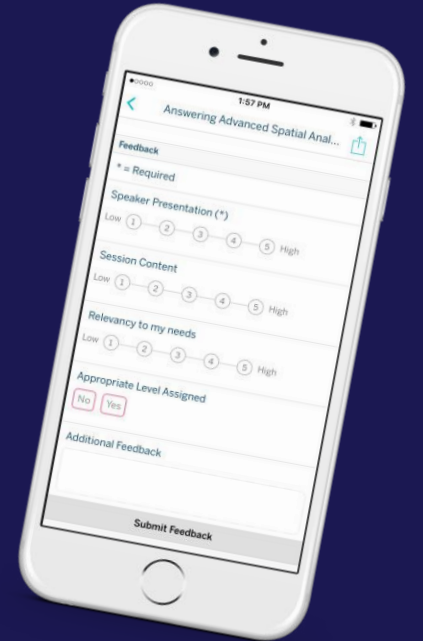
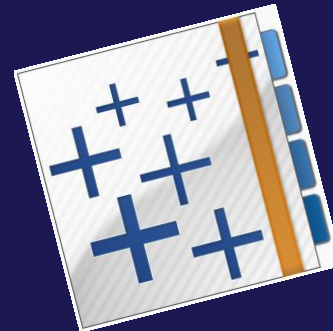
Inspiration

Time-based analysis

- Year-to-Date vs. previous Year-to-Date
- Time to ship excluding weekends
- Quarterly performance across week of quarter
- Customer acquisition

# Housekeeping

# Q&A







Standard

Data

## Analytics

 My Datasource

## Dimensions



📅 Login Day



 Login Time

Abc *Measure Names*

Pages

### iii Columns

Rows

## Filters

Marks

**T Automatic**



Color



Size



Text



## Detail



Toolbox

# Date Part or Date Value?



Columns

YEAR(Order Da..

Rows

SUM(Sales)

Order Dat

650K

600K

550K

500K

Filter...

Show Filter

Show Highlighter

Sort...

Format...

✓ Show Header

✓ Include in Tooltip

Show Missing Values

• Year 2015

Quarter Q2

Month May

Day 8

More ▶

Year 2015

Quarter Q2 2015

Month May 2015

Week Number

Weekday

Custom...

T

Label

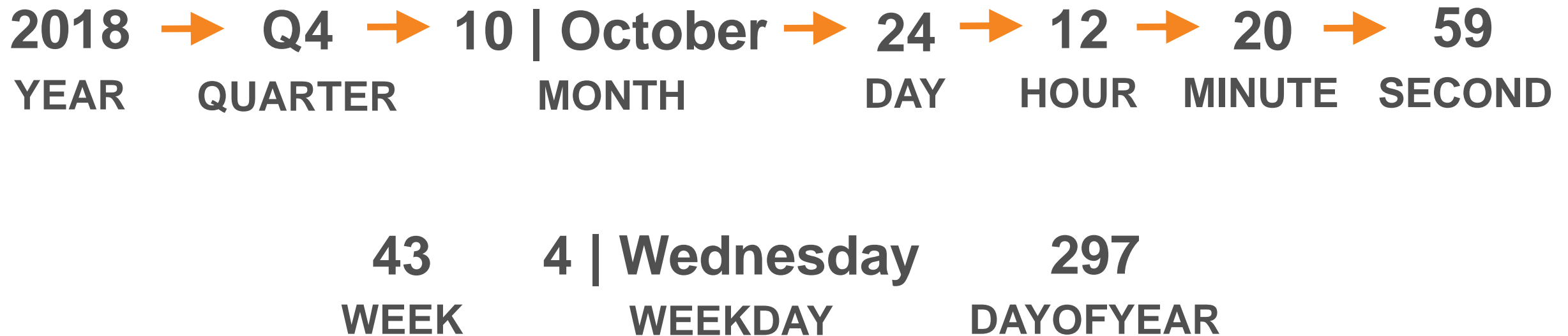
~

Path

# Date Parts

Date parts result from the **DATEPART** function

They represent individual parts of a date, all by themselves:



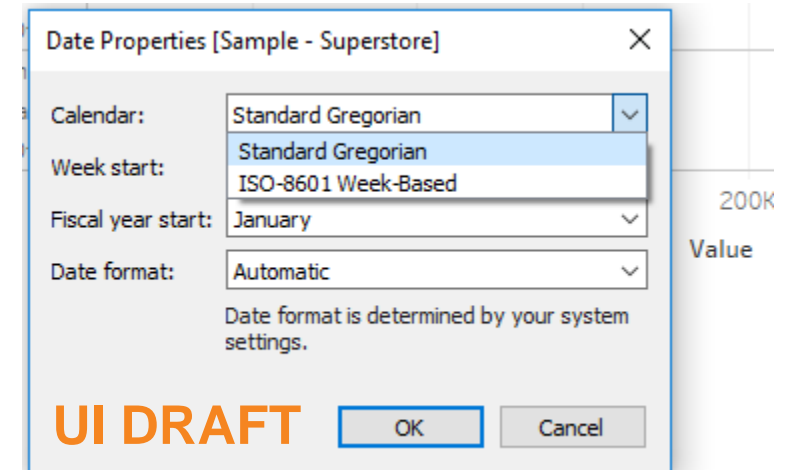
# ISO8601 Standard Date Parts

Available in date functions as of version 2018.2 on Hyper

2018 → Q4 → 10 | October → 24  
ISO-YEAR      ISO-QUARTER      MONTH      DAY

1  
ISO-WEEK

4 | Wednesday  
ISO-WEEKDAY



Columns **QUARTER(Ord..**

Rows **SUM(Sales)**

240K

220K

200K

180K

160K

Filter...

Show Filter

Format...

☒ Show Header

☒ Include in Tooltip

Show Missing Values

Year 2015

Quarter Q2

Month May

Day 8

More ▶

Year 2015

● Quarter Q2 2015

Month May 2015

Week Number Week 5, 2015

Day May 8, 2015

More ▶

T

Label

~

Path

# Date Values

Date values result from the **DATETRUNC** rounding operation. The result is always a full date value, automatic formatting enabled:

**SECOND**

**10/24/2018 09:40:02**

# Date Values

Date values result from the **DATETRUNC** rounding operation. The result is always a full date value, automatic formatting enabled:

**MINUTE**

**10/24/2018 09:40:00**



# Date Values

Date values result from the **DATETRUNC** rounding operation. The result is always a full date value, automatic formatting enabled:

**HOUR**

**10/24/2018 09:00:00**

# Date Values

Date values result from the **DATETRUNC** rounding operation. The result is always a full date value, automatic formatting enabled:

**DAY**

**10/24/2018 00:00:00**

# Date Values

Date values result from the **DATETRUNC** rounding operation. The result is always a full date value, automatic formatting enabled:

**WEEK**

**10/22/2018**

# Date Values

Date values result from the **DATETRUNC** rounding operation. The result is always a full date value, automatic formatting enabled:

**MONTH**

**10/01/2018**

# Date Values

Date values result from the **DATETRUNC** rounding operation. The result is always a full date value, automatic formatting enabled:

QUARTER

**10/01**/2018

# Date Values

Date values result from the **DATETRUNC** rounding operation. The result is always a full date value, automatic formatting enabled:

**YEAR**

**01/01/2018**

# Get Inspired



# Quarterly Sales Result

Ellie Rogers's team

Days Before EOQ	Sales	Open Pipeline	Avg Deal Size	Number of Deals
79	\$3.400K ↗ 5%	\$1.025K ●	\$45.946 ●	74 ↘ 12%

Use Options Below to Filter

Date Range

Last 14 quarters

Manager

(All)

Opportunity Type

(All)

Product

(All)

Billing Country

(All)

Billing State/Province

(All)

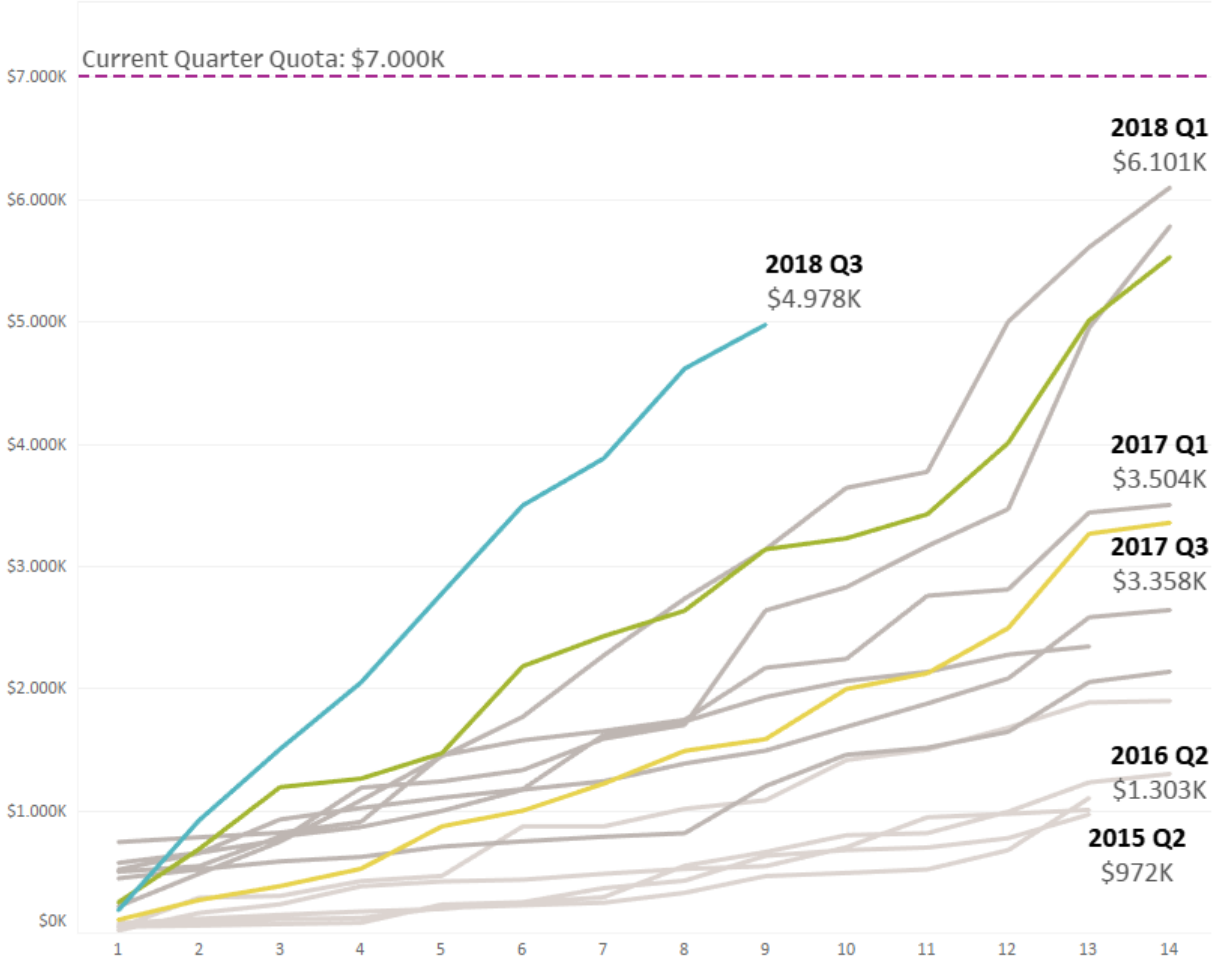
Opportunity Type

All

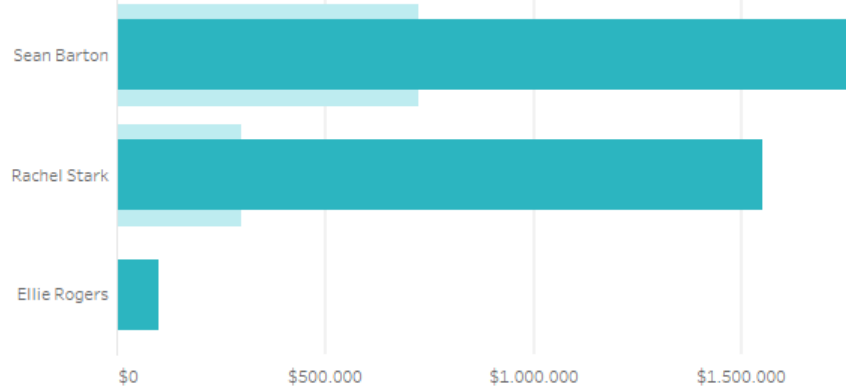
Product Name

All

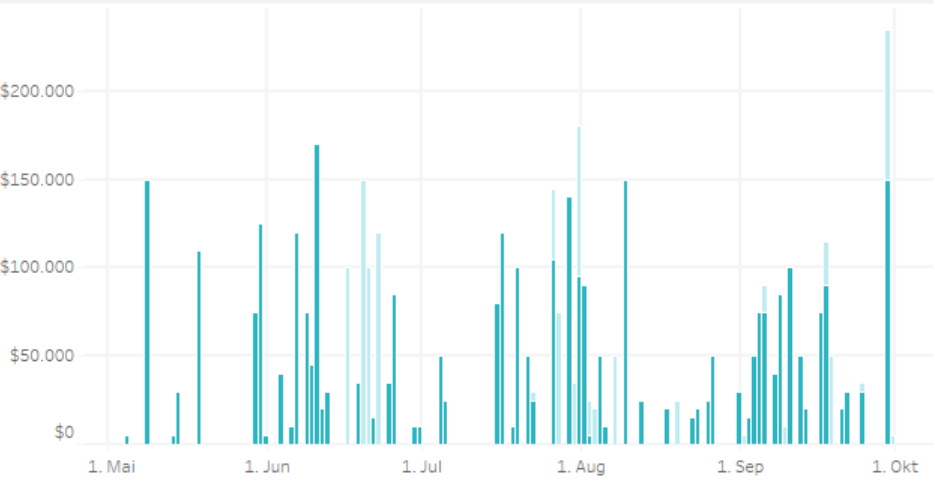
Baseline **Current quarter** | Previous | This Q previous year | Other



Breakdown by Salespeople **Sales** vs **Open Pipeline**

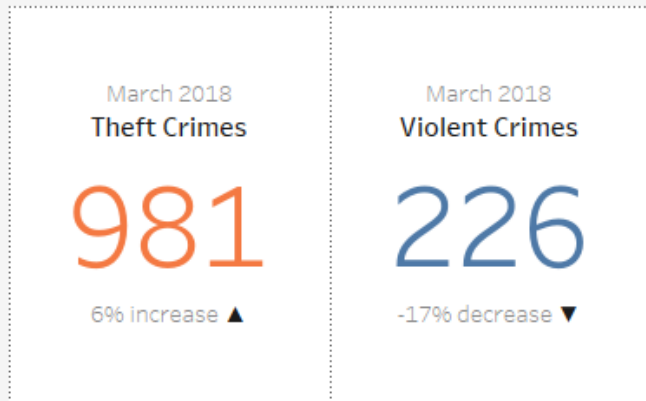


**Sales vs Open Pipeline** | Amount by Close Date

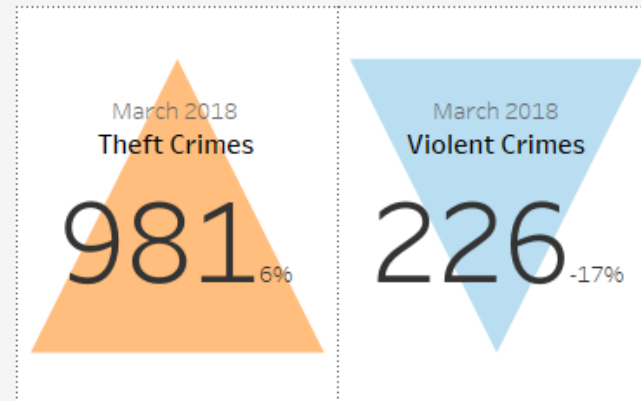




BAN Text

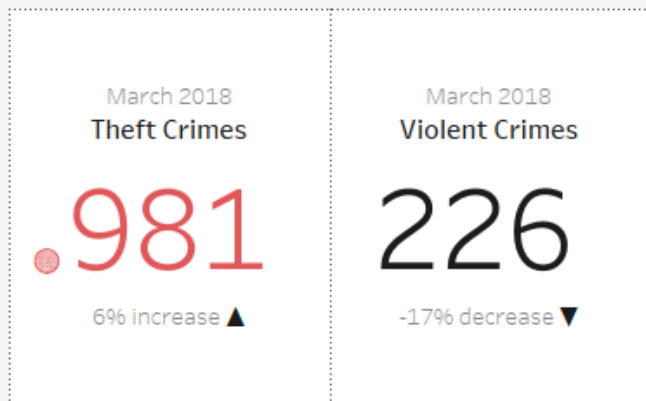


BAN Arrow

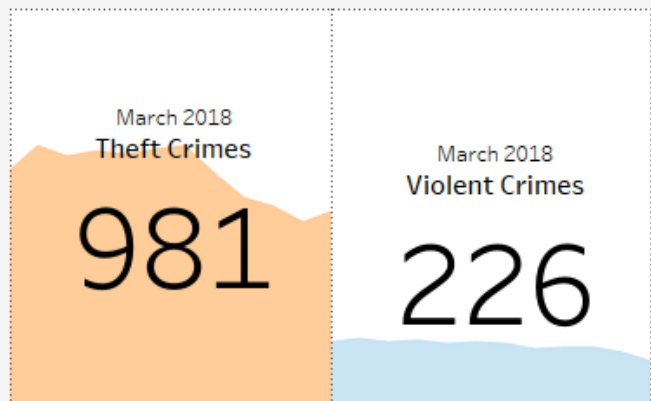


## 20 Ways to Visualize KPIs

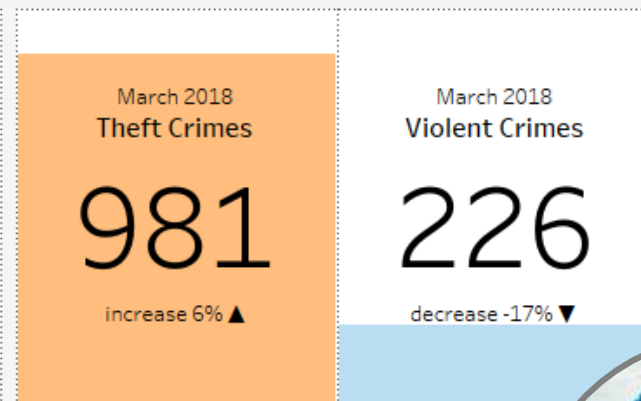
BAN Dot Signal



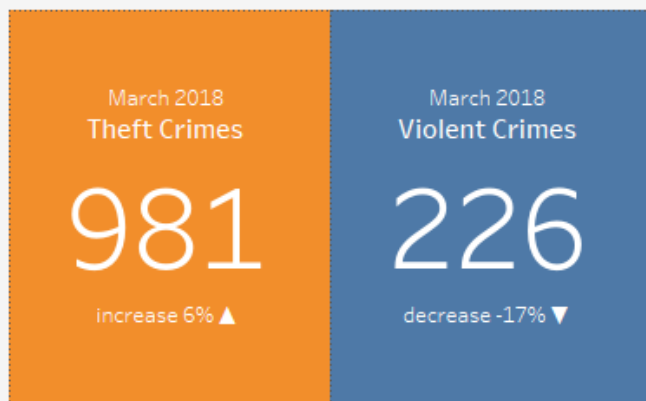
BAN Area



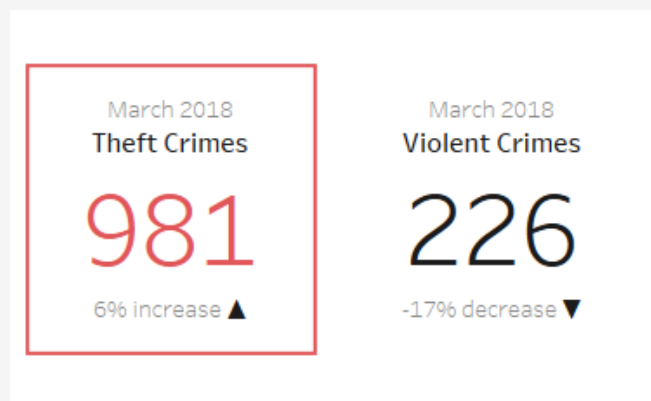
BAN Column



BAN Color Box



BAN Box Signal



BAN Glow





# Washington Metropolitan Area Transit Authority

## September 2016 Goal Performance

Select a month:

September 2016



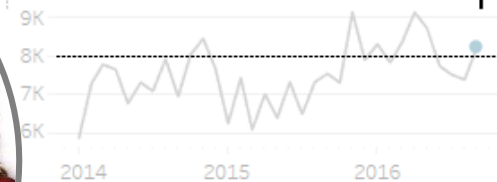
### QUALITY SERVICE

#### Bus Fleet Reliability

miles between failures

8.231

8.000



#### Bus On-Time Performance

72,4%

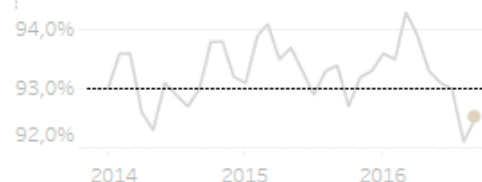
79,0%



#### Elevator Availability

96,6%

97,0%



Goal Not Met Goal Met

#### Rail Fleet Reliability

miles between delays

65.416

65.000



#### Rail On-Time Performance

77,6%

91,0%



#### Escalator Availability

92,5%

93,0%



### SAFETY & SECURITY

#### Employee Injuries

per 200,000 hours worked

5,7

4,5



#### Customer Injuries

per million passengers

2,0

1,8



#### Crime

per million passengers

4,5

5



# Historical Avocado Price and Volume

YoY VOLUME INCREASE • YoY VOLUME DECREASE

## Avocado Type

- ☒ Conventional
- ☐ Organic



### South Central

2017 vs. 2016 VOLUME

318.317.944

**\$0,93**  
2017 Avg Price

**\$0,84**  
2016 Avg Price

**+10,1%**  
Change



### MidSouth

2017 vs. 2016 VOLUME

158.505.865

**\$1,31**  
2017 Avg Price

**\$1,17**  
2016 Avg Price

**+12,1%**  
Change



### West

2017 vs. 2016 VOLUME

332.812.570

**\$1,06**  
2017 Avg Price

**\$0,89**  
2016 Avg Price

**+18,1%**  
Change



### Southeast

2017 vs. 2016 VOLUME

192.639.817

**\$1,30**  
2017 Avg Price

**\$1,03**  
2016 Avg Price

**+25,8%**  
Change



### Northeast

2017 vs. 2016 VOLUME

212.887.297

**\$1,50**  
2017 Avg Price

**\$1,29**  
2016 Avg Price

**+16,3%**  
Change



### Great Lakes

2017 vs. 2016 VOLUME

180.425.782

**\$1,28**  
2017 Avg Price

**\$1,12**  
2016 Avg Price

**+14,0%**  
Change



### Total US

2017 vs. 2016 VOLUME

1.801.769.881

**\$1,19**  
2017 Avg Price

**\$1,02**  
2016 Avg Price

**+16,4%**  
Change



### California

2017 vs. 2016 VOLUME

309.227.377

**\$1,20**  
2017 Avg Price

**\$1,01**  
2016 Avg Price

**+18,7%**  
Change



# Compare Metrics Across Periods of Time



# Increment or Decrement Dates

## Examples:

`YEAR([Order Date]) -1` or `DATEADD("year", -1 , [Order Date])`

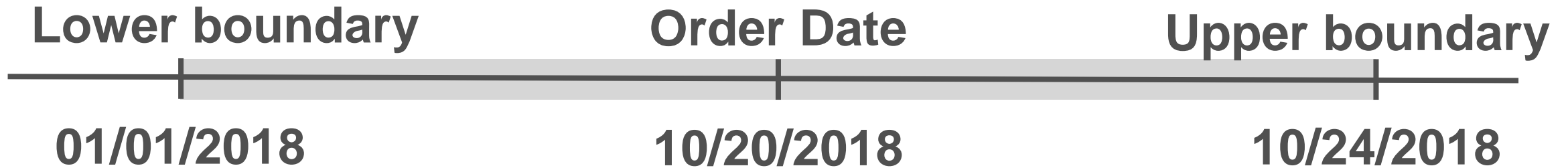
`YEAR(TODAY() )+1` or `DATEADD("year", 1 , TODAY() )`

Caution: `[Order Date] – 1`

# Use Equations to Define Conditions

Example:

**[Order Date] <= TODAY() AND  
YEAR([Order Date]) = YEAR(TODAY())**



# Calculate Duration

## Examples:

**DATEDIFF**("day", [Order Date] , [Ship Date])

**DATEDIFF**("year", [Order Date] , **TODAY**())

**DATEDIFF**("week", **DATETRUNC**("quarter", [Order Date]), [Order Date])+1

Caution: [Ship Date] – [Order Date]

# Dates in Level of Detail Calculations

You can insert a date into an  
**Aggregate Expression**

```
{ FIXED [Email] : MIN([Visit Date]) }
```

You can use dates or date functions in the  
**Dimension Declaration**

```
{ INCLUDE DATETRUNC("day",[Timestamp]) : COUNTD([Email]) }
```



# Learnings and Homework

The right calculation syntax depends on the layout of your viz

Make it visual to provide context for the interpretation of numbers



Recreate two examples using your own data

# Questions?

Workbook available at  
<https://public.tableau.com/profile/johanna.knapp>



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