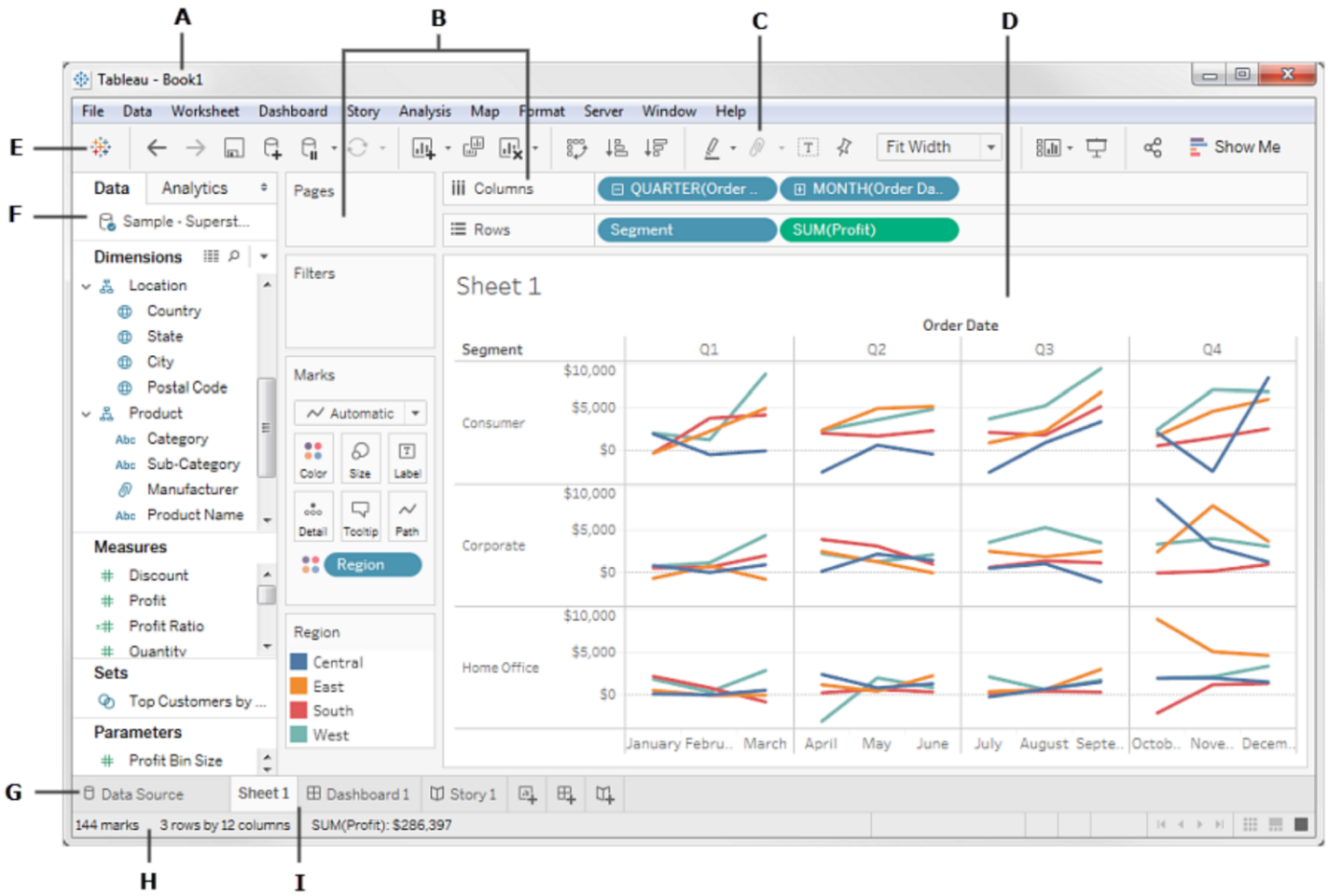
Getting Familiar with Tableau I

Workspace area



A. Workbook name. A workbook contains sheets. A sheet can be a worksheet, a dashboard, or a story. For more information, see Workbooks and Sheets.

B. Cards and shelves - Drag fields to the cards and shelves in the workspace to add data to your view.

C. Toolbar - Use the toolbar to access commands and analysis and navigation tools.

D. View - This is the workspace where you create your data visualizations.

E. Click this icon to go to the Start page, where you can connect to data. For more information, see Start Page.

F. Side Bar - In a worksheet, the side bar area contains the Data pane and the Analytics pane.

G. Click this tab to go to the Data Source page and view your data. For more information, see Data Source Page.

H. Status bar - Displays information about the current view.

I. Sheet tabs - Tabs represent each sheet in your workbook. This can include worksheets, dashboards, and stories. For more information, see Workbooks and Sheets.

Dimensions vs. Measures

- **Dimensions** = Categorical Fields
  - When dragged and dropped they come out into the view as themselves
  - They create colored labels
  - They are the categories for which we seek to break up our numerical measures
  - Their pills are color-coded **blue**
- **Measures** = Numerical Fields
  - They come out into the view as aggregates
  - Because they are continuous, they come into the view with axes
  - Their pills are color-coded **green**

Dimensions vs. Measure

Are all numbers measures?

- No. Not all fields containing numerical data are considered measures. A satisfaction rating, for example, makes more sense as a dimension.
- Say your visual has a field that contains product ratings out of 5-stars. Knowing that a certain product line received 10,000 stars in total is not particularly interesting. However, knowing which products in that line received the most 5-star ratings is useful.

Discrete vs. Continuous

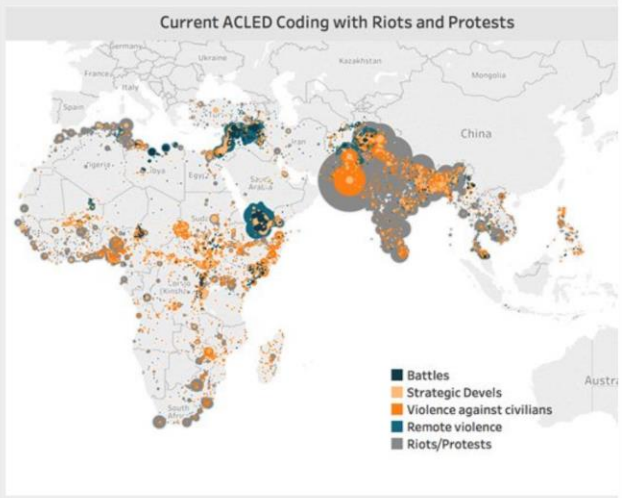
- Discrete/Continuous (are not the same as **Dimensions** and **Measures**)
- A continuous pill on the color shelf will create a **gradient**
- A discrete pill brought on the color shelf will create a color palette

ACLED

Bringing clarity to crisis

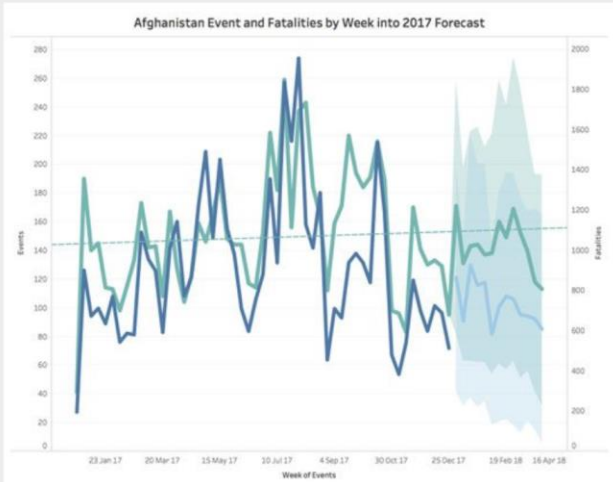
Dashboard

View and interact with data using our dashboard.



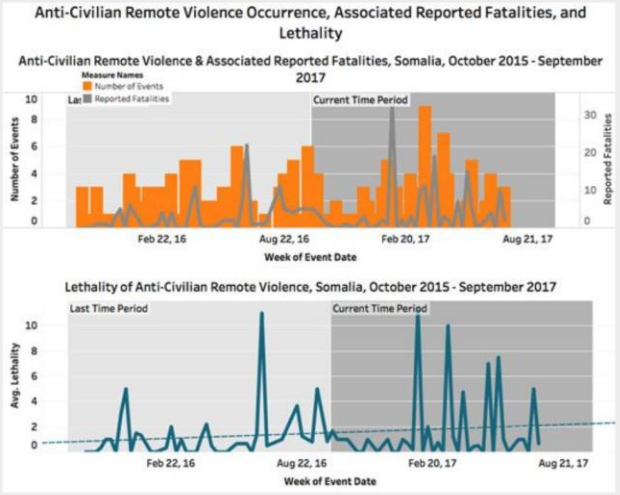
Data

Download political violence and protest data.



Analysis

Read ACLED analysis and infographics.



Data Types

1. Connect to ACLED Data *(text file)*
2. Observe how Tableau has stored the fields (Abc string vs. # number)
3. *Now going to sheet 1, observe the Data Pane and how the fields are split between Dimensions on top, and Measures on the bottom*
4. *Drag and drop Fatalities onto Rows. Observe how it's a single bar.*
5. *Add the dimension # Year, and observe how changing from discrete to continuous changes the automatic marks (bar vs. line graph)*

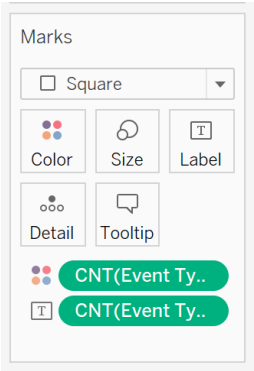
Data Types

6. Now take out # *Year*, and add '*Event Date*' [*discrete*] in its place
   a) Notice how weird it's displayed when you add the 'Event Date' field? It's because date is stored as a string. Let's go into Data Source and change the data type to Date (conversely this can be done through the Data Pane within a Worksheet)
   b) Remove 'Event Date' from Columns, and add it again
7. Let's switch marks to "Bar" and also add Event Date to color. It automatically colors it by year. Notice how the mark option has a '+' at the end of year to allow further *granulation*.
   - Try and throw other Dimensions into the color option to give it a try.

Managing Metadata

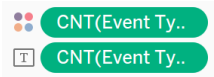
8. We can hide some fields and we can rename fields.
9. We can organize dimensions to be layered into hierarchies by dragging subordinate fields onto another field. For example, let's create hierarchies for Location, Events, and Sources.
10. To observe how hierarchies layer dimensions, drag Location onto rows.
    - Observe how clicking the "+" drills the field down even further in the view
11. Fill the table with count of Events per Region
    - In order to retrieve the count of events, we have to convert the dimension Events into a measure (count).
12. Colorize the table by dragging count of Events onto color, and changing the mark type to Square

To construct the highlight table, the marks shelf should look like this →



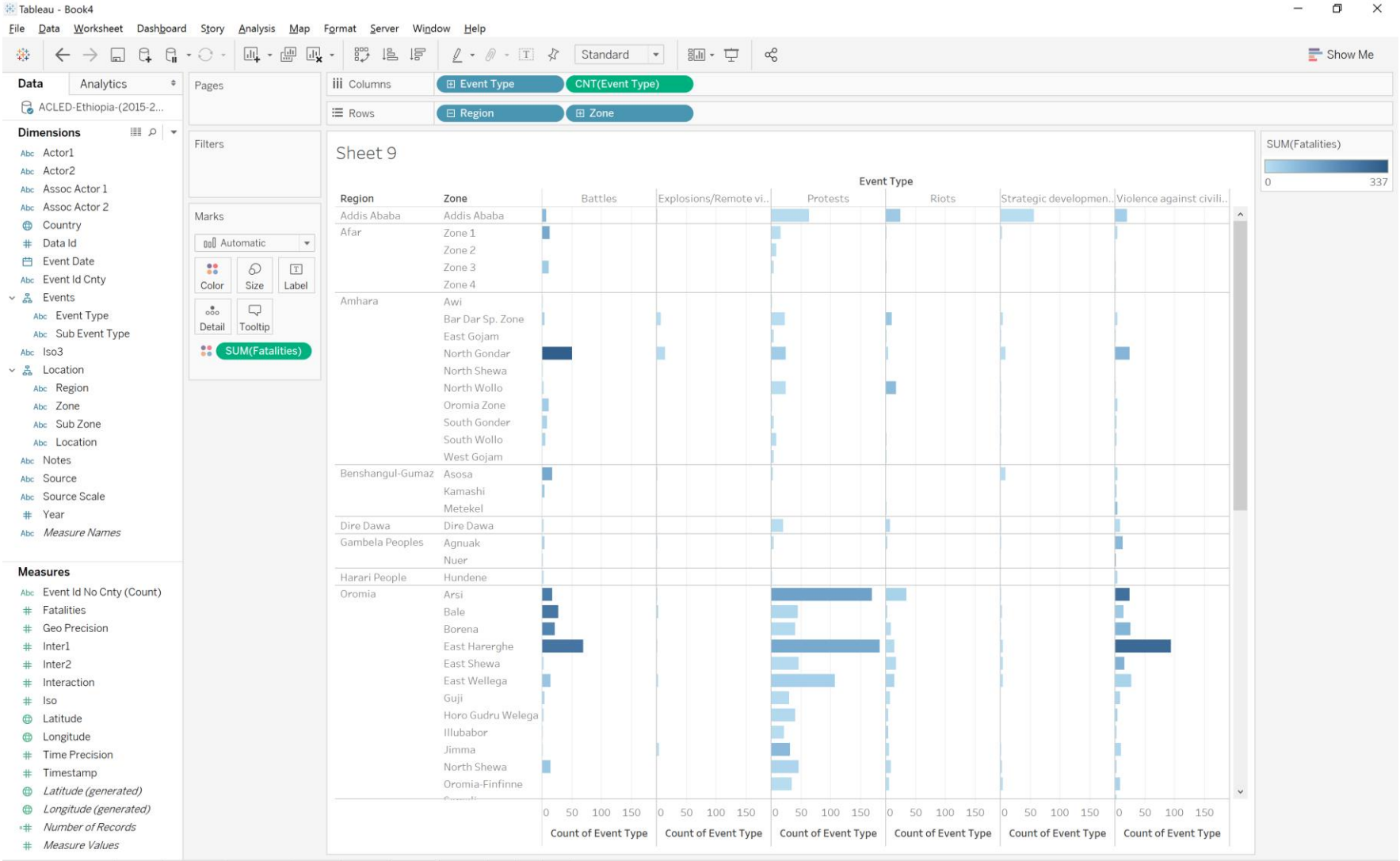
Managing Metadata

Now, let's see a Bar Graph breakdown of Regional occurrences of events

12. Right+click the sheet at the bottom of the window and select duplicate. Rename the original sheet "Events by Region – Highlight Table"
13. In the duplicate sheet, clear 

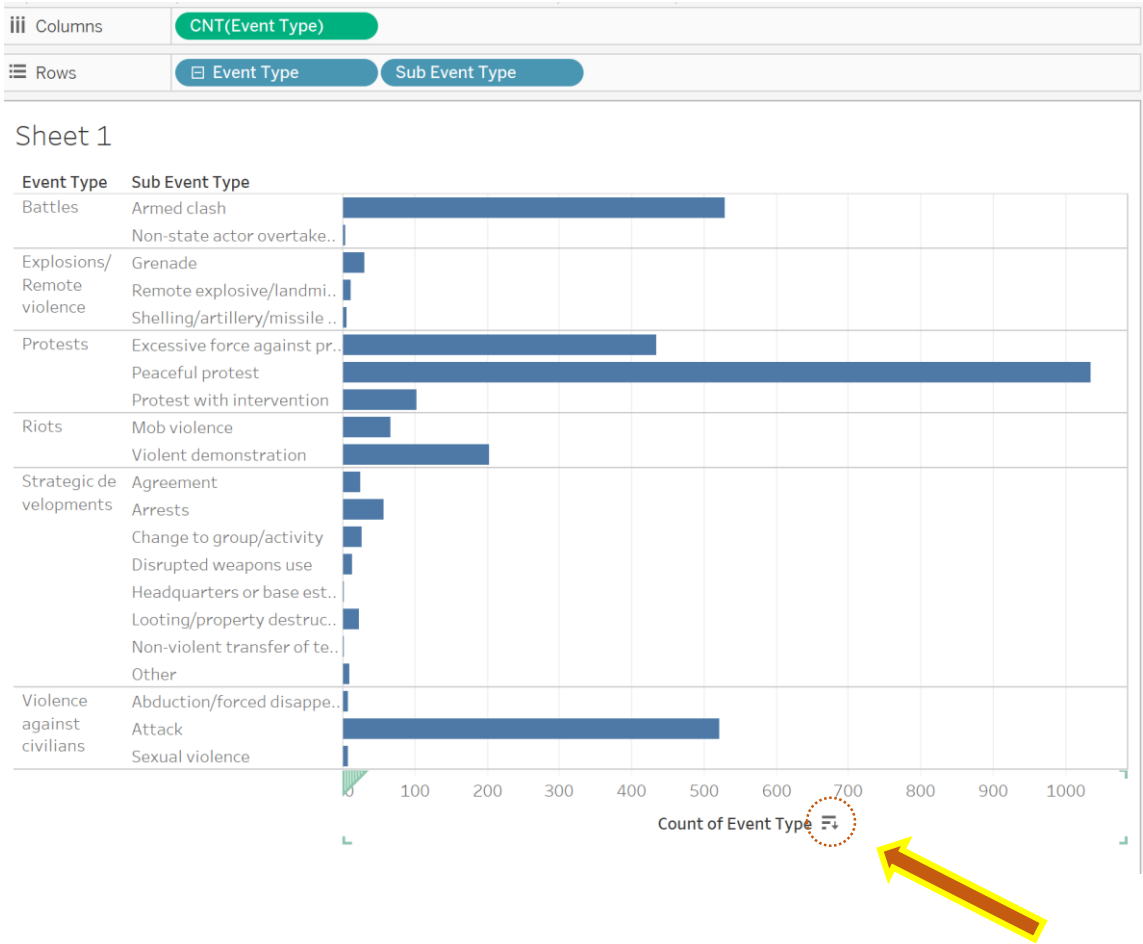
from the marks card, then change the mark type to Bar.
14. For the bars to appear drag the Count of Events to Columns
    - *Remember: Right+click and drag Event, then select the # CNT() option*
15. Finally, drag "Event" over to Columns
    - ➢ While we're at it, let's drag the # Fatalities Measure onto Color

We should arrive at this:

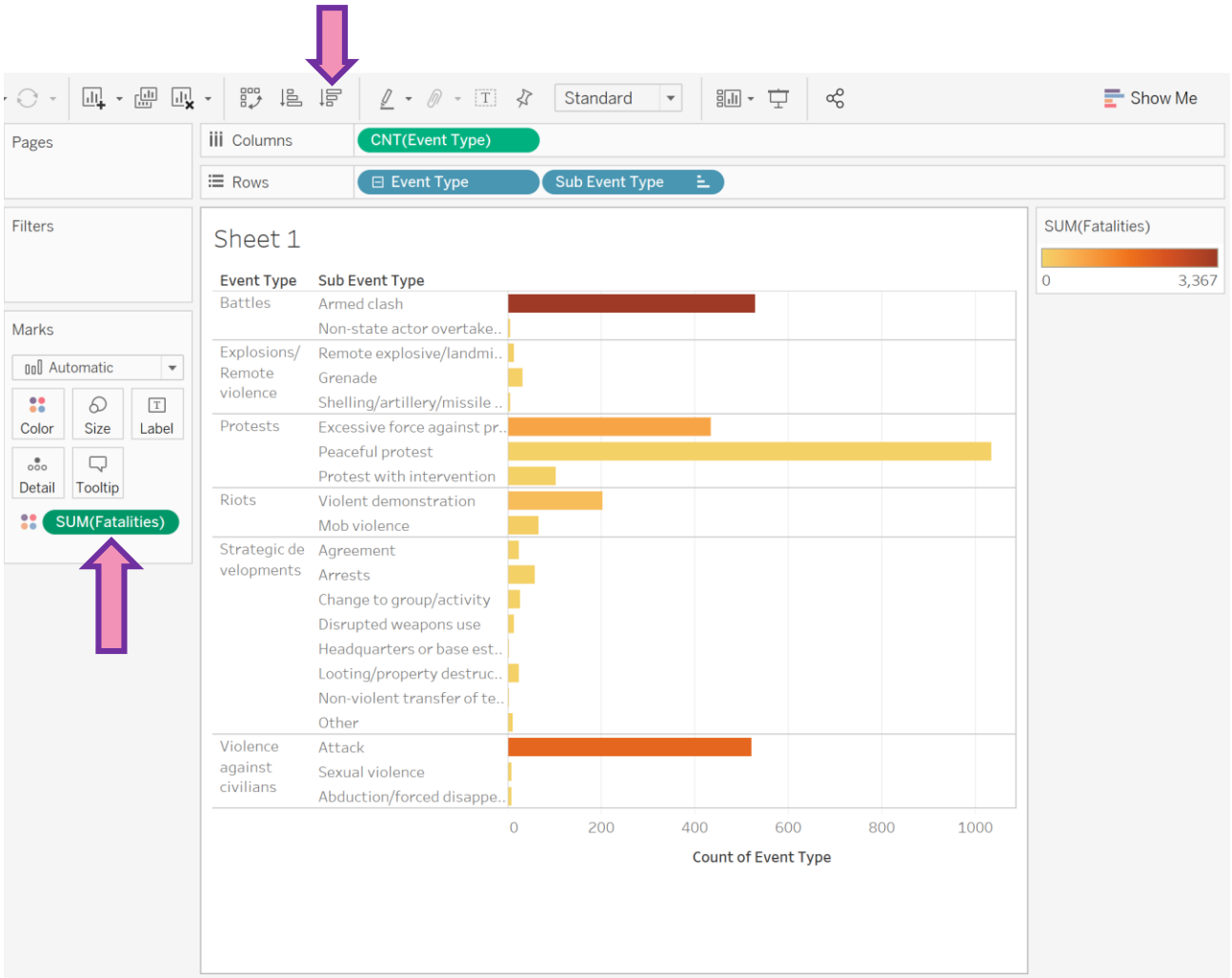


Sorting

- Quick Sort on the axis
  - 1st click – sorts bars descending
  - 2nd click – sorts bars ascending
  - 3rd click – clears the sort
  - This helps identify top or bottom values within the context of how the view has been built

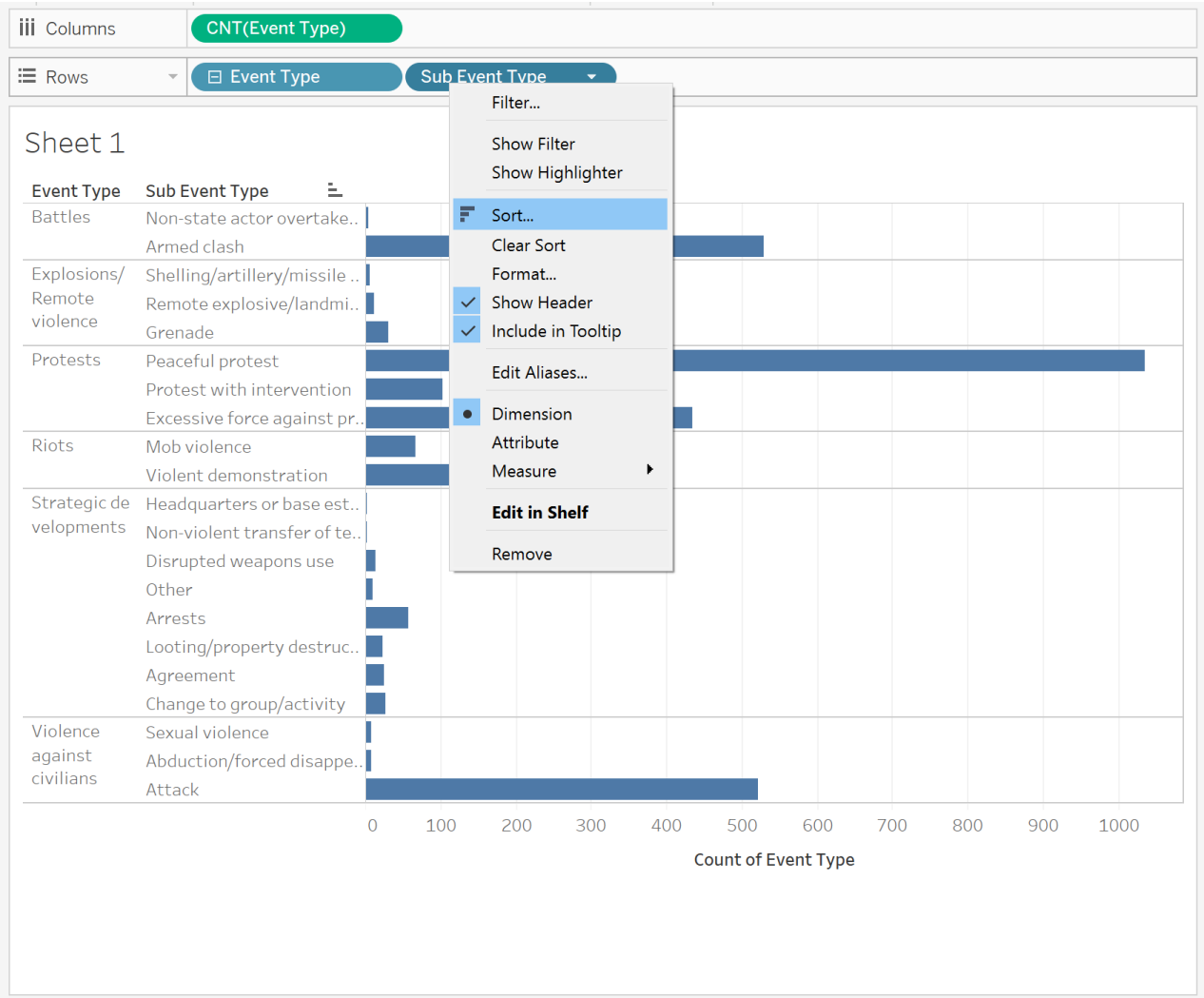


Sorting



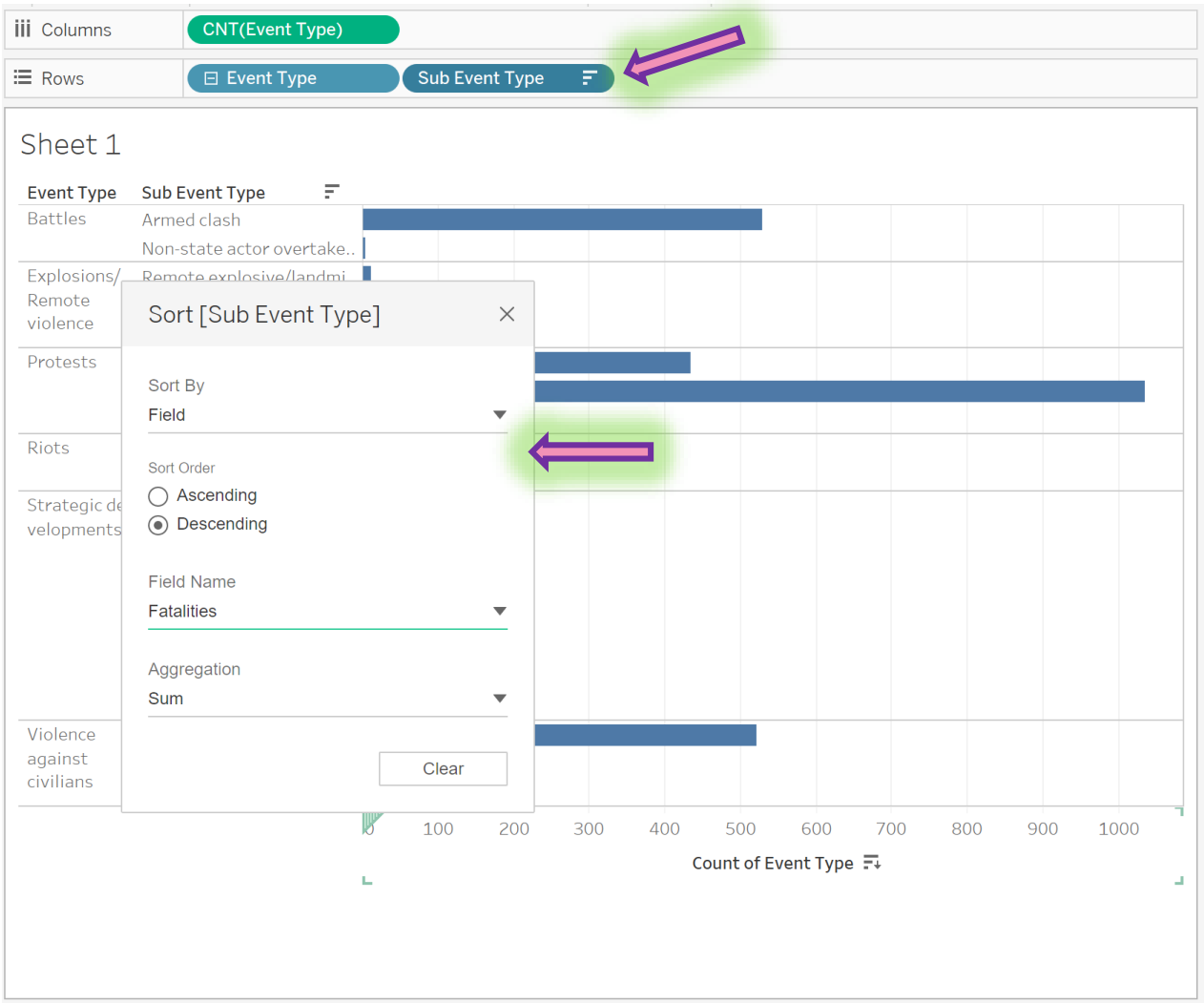
- To sort by another field, say a colored field of Fatalities
  - click the SUM(Fatalities) pill in the marks
  - Click either of the sorting buttons in the tool bar

Sorting



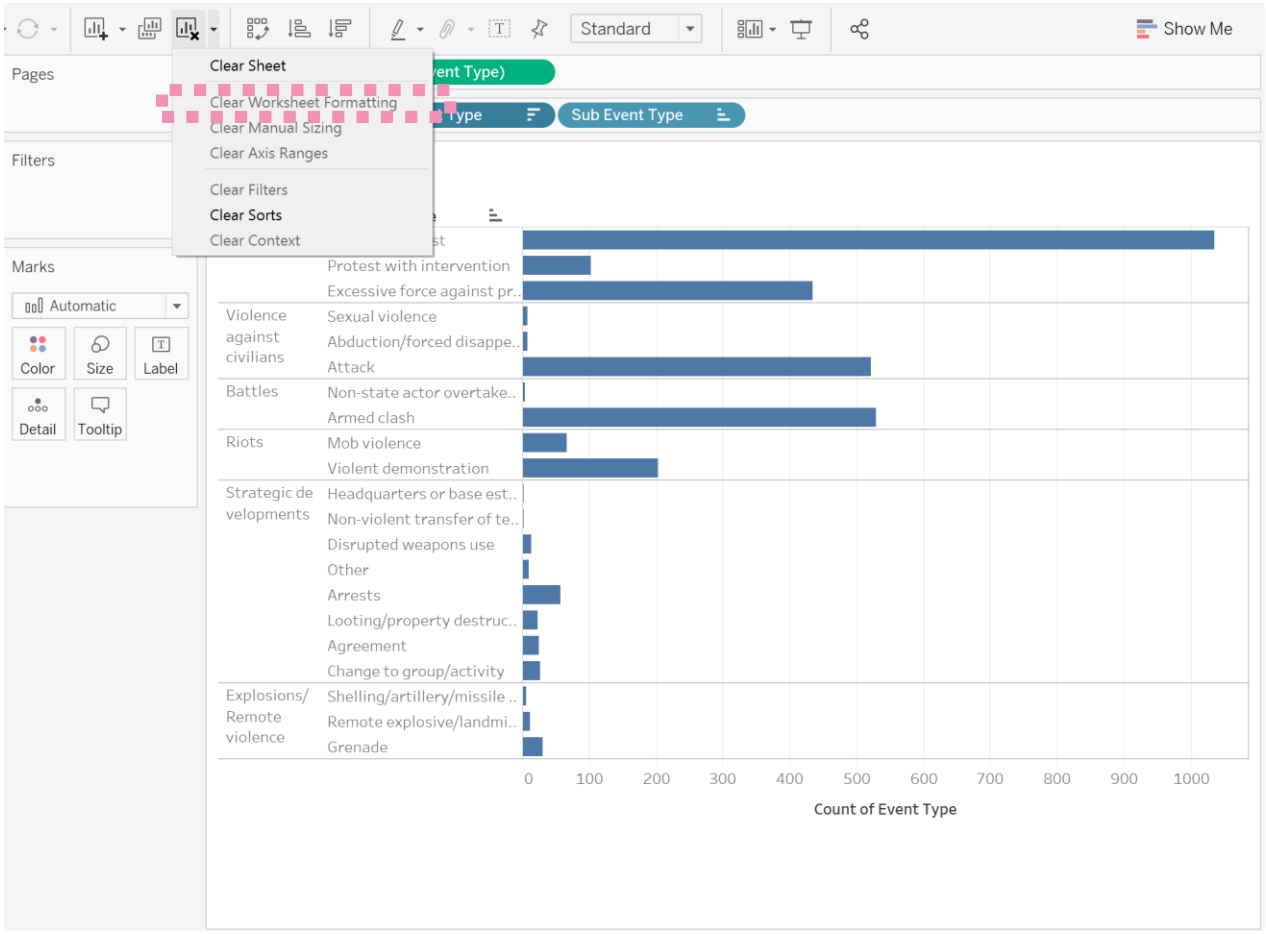
- For the most control, we can sort from the pill itself.

Sorting



- For the most control, we can sort from the pill itself.
- *A sorted pill always has the sort icon present.*
- Sorting by field can be done with fields that are not even present in the View

Sorting



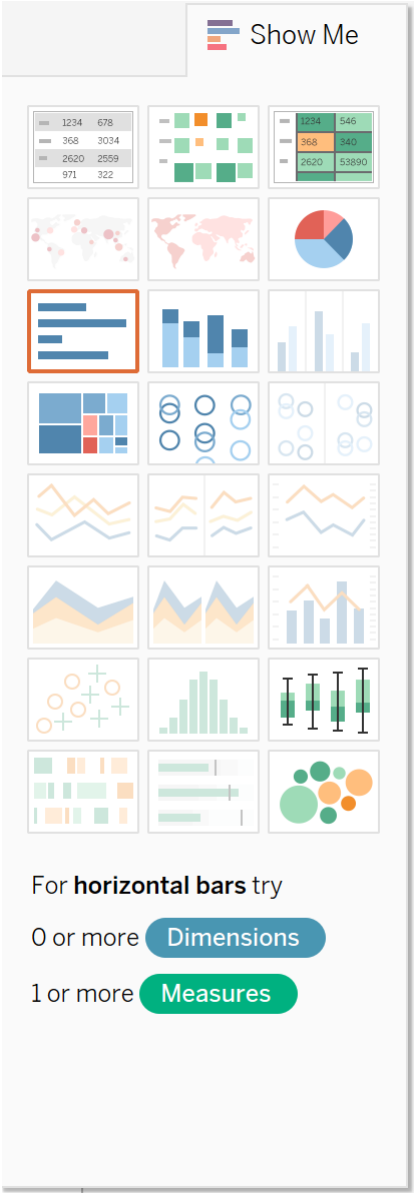
- For the most control, we can sort from the pill itself.
- *A sorted pill always has the sort icon present.*
- Sorting by field can be done with fields that are not even present in the View
- You can clear the entire worksheet's sort settings by dropping down next to the Clear Sheet icon and selecting "Clear Sorts"

Save the Workbook as: "ACLED Workbook"

- After saving, open a new workbook and connect to the DHS Dataset

Show Me

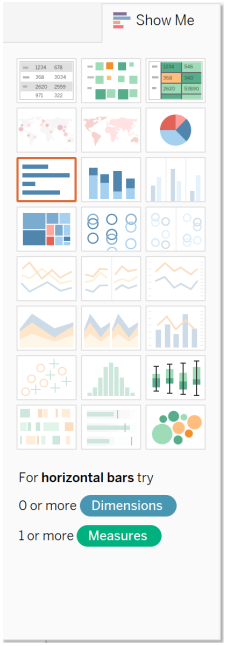
- Tableau Desktop provides a simple tool called “Show Me” to help in cases where we know the data we want to look at, but want to quickly create an effective view.
- “Show Me” contains a list of common chart types that can help you start your analysis



Note: it’s possible to build an enormous variety of charts in Tableau – Show Me are the one-click options, and not a comprehensive list of possibilities

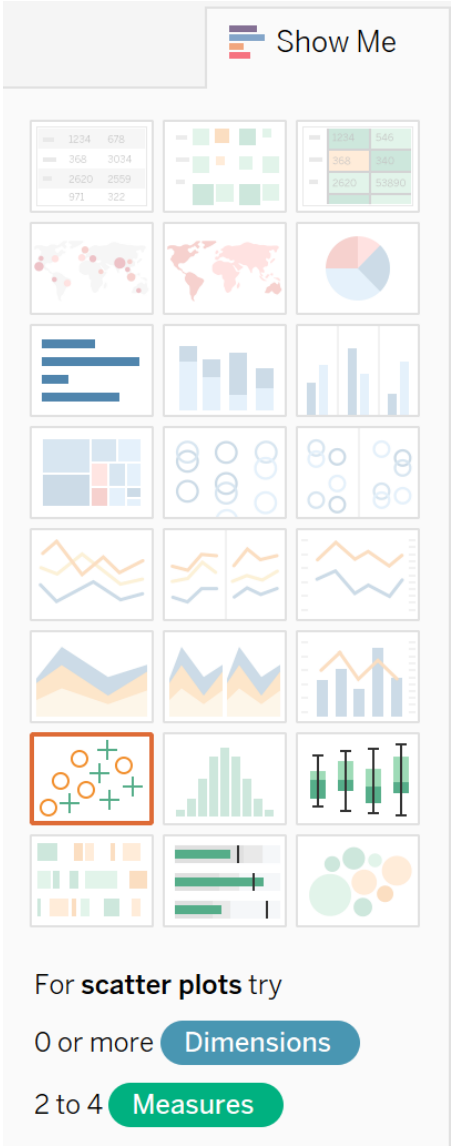
Show Me

- With the Show Me menu open, you can hover over chart options to see what type of data is needed to build a chart.
- Conversely, selecting different dimensions and measures in the Data Pane while holding down the control key provides chart options for the given fields highlighted



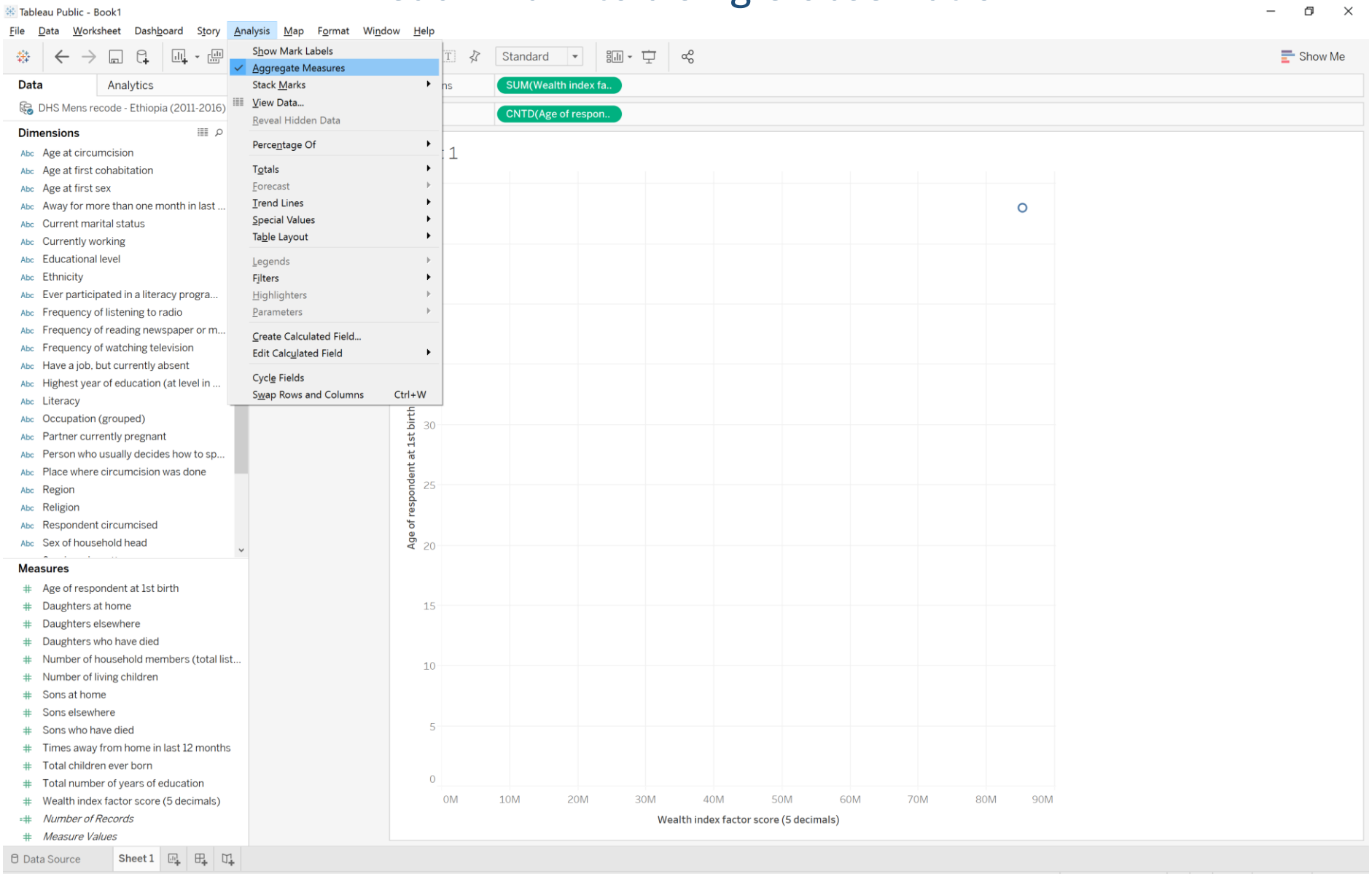
Show Me

- To build a scatter plot, for example, hovering over that option will provide you with the necessary type of data needed.
- Let's build a scatter plot using # *Wealth Index Factor Score* and # *Age of Respondent at 1st Birth**

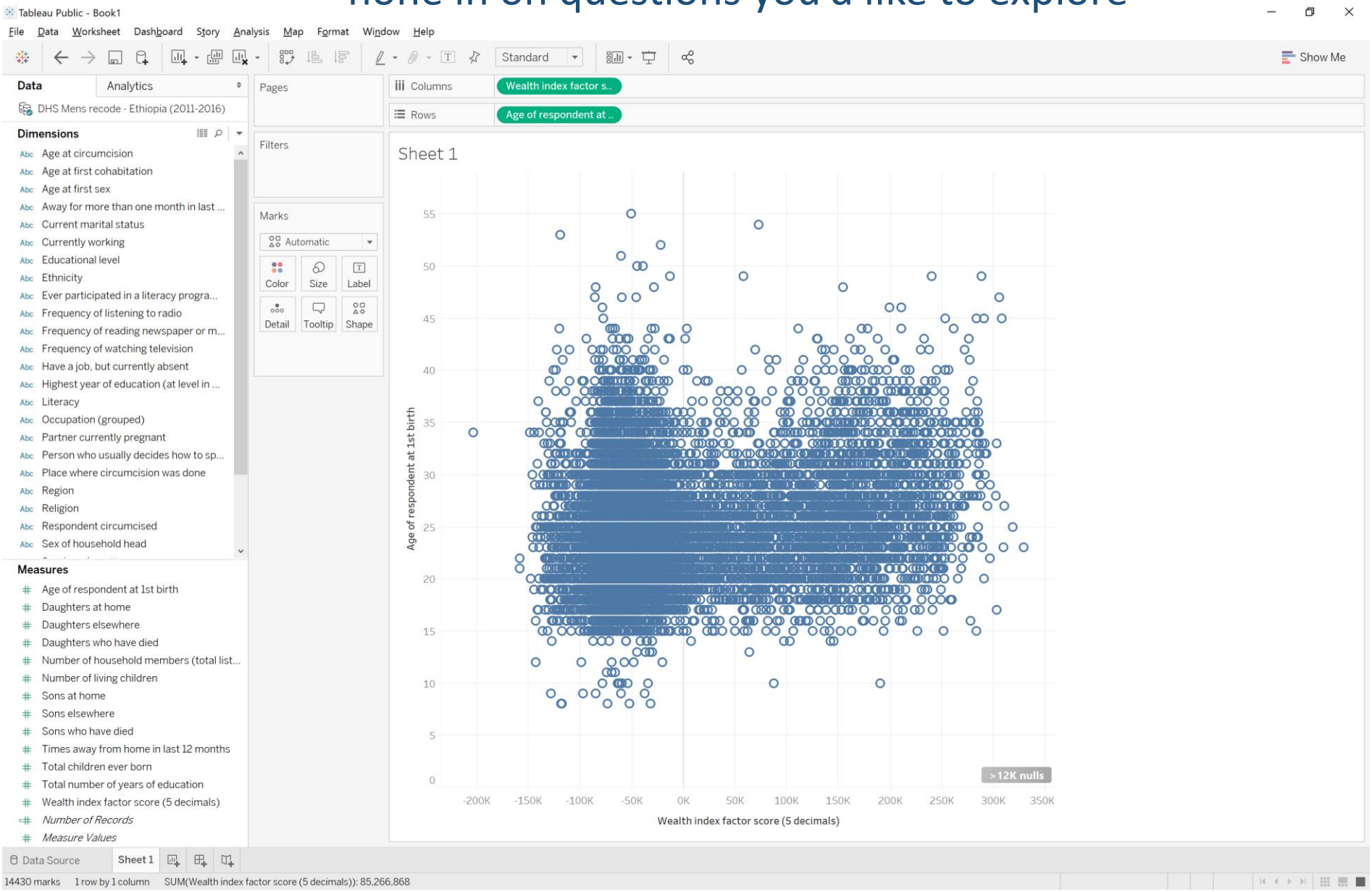


*NOTE: You need to convert "Age of respondent at 1st birth" to a measure, and then a number (whole)

De-Select “Aggregate Measures” to transform each mark to a single observation



You can add color, shapes, and filters *(next lesson)* to hone in on questions you'd like to explore



You can easily run basic analytics from the Analytics Pane (within the Data Pane)

End of Module 2

End of Day 1