Calculated Fields

What is Calculated field?

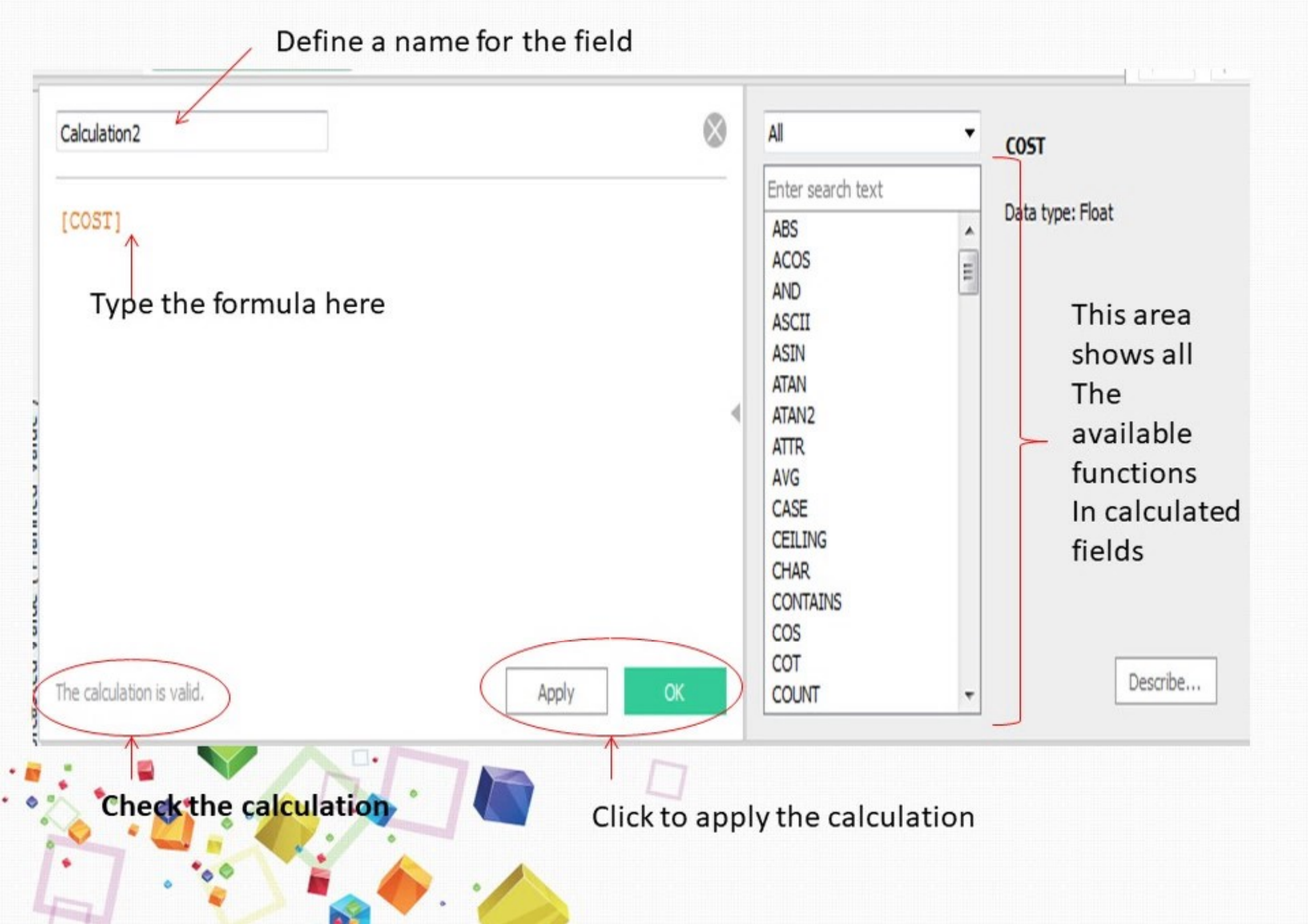
When the data source does not include all the measures and dimensions we need , we need to create Calculated Fields

Examples: a data set including the measures revenues and costs, but lacking a profit field.

This is where Tableau's Calculated Fields come into play. This functionality enables you to add new fields based on dimensions and measures from your data source.

You can use Calculated Fields in the same way you are using the dimensions and measures from your source data. So if you create a calculated field (Revenue – Cost) in the above example it can give you Profit .

Calculated field is created by defining a Formula . Formulas are composed of "built in functions" and "operators" and "fields" from the Data window.


Define a name for the field
Calculation2
[COST]
Type the formula here
All
COST
Enter search text
Data type: Float
ABS
ACOS
AND
ASCII
ASIN
ATAN
ATAN2
ATTR
AVG
CASE
CEILING
CHAR
CONTAINS
COS
COT
COUNT
This area shows all The available functions In calculated fields
The calculation is valid.
Apply
OK
Describe...
Check the calculation
Click to apply the calculation

Components used in calculated field

Fields: The Field on which the new calculated field is to be created needs to be dragged / typed to the calculation editor.

Functions: Tableau functions are listed on the right in the calculation editor. Click a function in the function list to view a brief description and an example on the right.

Operators: All standard operators such as addition (+), subtraction (–), multiplication (*), and division (/) are supported.

Parameters: Parameters are placeholder variables that can be inserted into calculations to replace constant values.

Comments: To add a comment to a calculation, type two forward slash. For example: Sales * Profit //John's calculation.

A multiline comment can be written by starting each line with two forward slashes (//).

Types of Calculated Fields

String Calculation:
A calculation which is done on dimensions. For eg: When we want to see our customers **residing in** a particular state. Here the name & state is from data and residing in is what we want to add.

Numeric Calculation:
A calculation which is done on measures. For eg: When we want to analyse the Profit Ratio, then we have to write a calculation : Sum(Profit) / Sum(Sales)

Date Calculation:
A calculation which is done on Dates. For eg: When we want to analyse the difference between the Ship date and the Order Date, then the Calculation is : DATEDIFF (Ship Date, Order Date

Logical Calculation:
A calculation which is done on the basis of some logic. For eg: When we want to see our customers having Sales >=2k in green, then the calculation is : If Sum(Sales) >= 2000, then "Green" End. & use it with Customer Id

Ways to Add Calculation In Tableau

Basic Calculation: Where we create a Calculated fields with formulas.

Table Calculation: Where we create a Calculation using pre-written formulas, or defining the table calculation formula in the calculated fields.

LOD Calculation: Just like basic calculations, LOD calculations allow you to compute values at the data source level and the visualization level.

How to create Calculated field

- Click on Analysis in the main menu or right click on a dimension or measure and select Create Calculated Field .

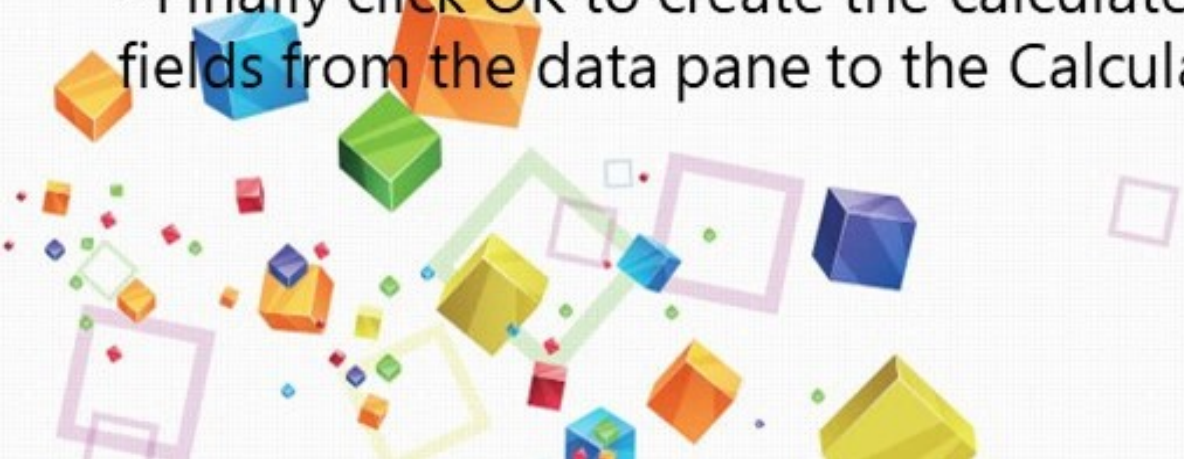
- A dialog window appears.

- Define a name for your Calculated Field.

- Type in the formula to define your Calculated Field.

- Click on the "Apply" button to make sure your calculation is valid and can directly be used in your workbook.

- Finally click OK to create the calculated field. You can also drag the fields from the data pane to the Calculation dialog box.



Fields that cannot be dragged to calculated field

It is not possible to drag

- numeric bins,
- generated latitude and longitude fields,
- Measure Names,
- Measure Values

into the calculation editor.

Copy & Paste Calculated Field

- Calculated fields are available to all sheets that use the same data source in a single workbook by default.

- To copy and paste calculated fields between workbooks, right-click the **calculated field** in the **Data window** of the source workbook and choose **Copy. Then Right-click in the Data window** of the destination workbook and choose **Paste.**