Introduction to Tableau Public

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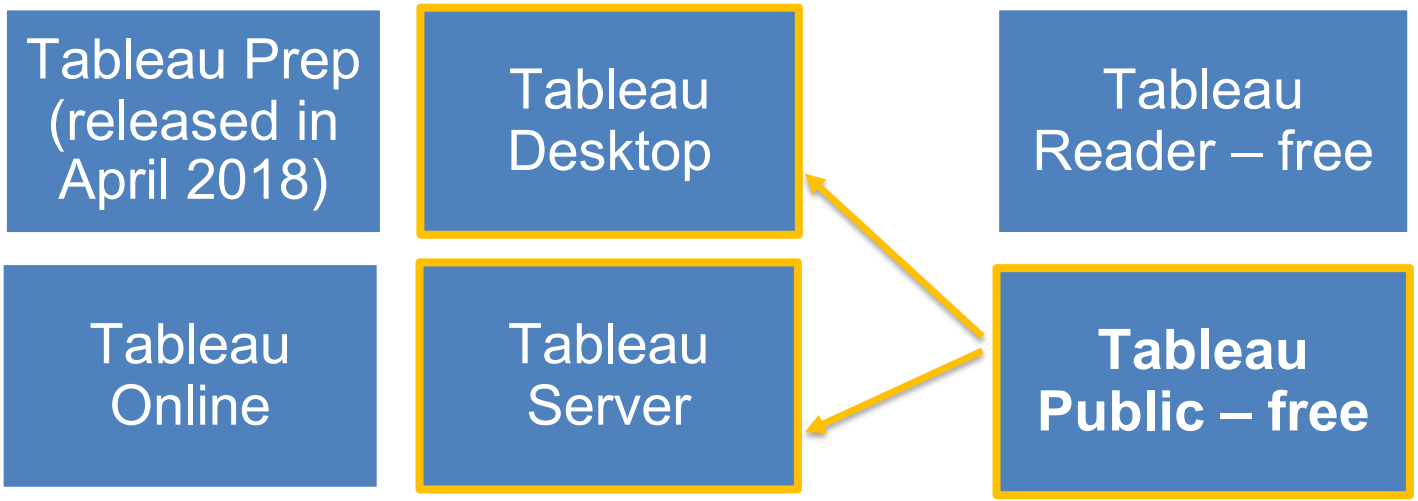
Tableau is software that helps people see and understand their data.

Objectives

- Learn Tableau product suite and know what Tableau Public is and its limitations.
- Master how Tableau Public works and its basic workflow.

Tableau Products



To Use Tableau Public

- Download Tableau Desktop(public edition) at https://public.tableau.com/s/download
- Create an account on Tableau Public server at https://public.tableau.com/s/

Tableau Public limitations

- Tableau desktop public edition
  - Connection to data sources are limited to static data such as file based (Excel, csv, json, pdf, etc.) and cloud-based API.
  - **It can’t save work locally. It can only save to Tableau public server.**
  - Up to 15,000,000 rows per workbook
- Tableau public server
  - Up to 10GB online storage per free Tableau Public account

Security on Your Data

Once a visualization is published on Tableau Public, it is open to everyone.

There is a setting to prevent people from downloading the workbook and getting to the underlying data.

Tableau Academic Programs

Tableau Desktop and Tableau Prep are free for students and instructors around the world.
https://www.tableau.com/academic#8PcZYr0tkUl2ZvFG.99

- Tableau for Students
  free one-year license https://www.tableau.com/academic/students#form
- Tableau for Instructors
  free one-year license for teaching and non-commercial academic research.
  https://www.tableau.com/academic/teaching - form

Data Visualization Workflow with Tableau

Connect

Analyze

- Create a basic view with worksheet

- Build an interactive dashboard

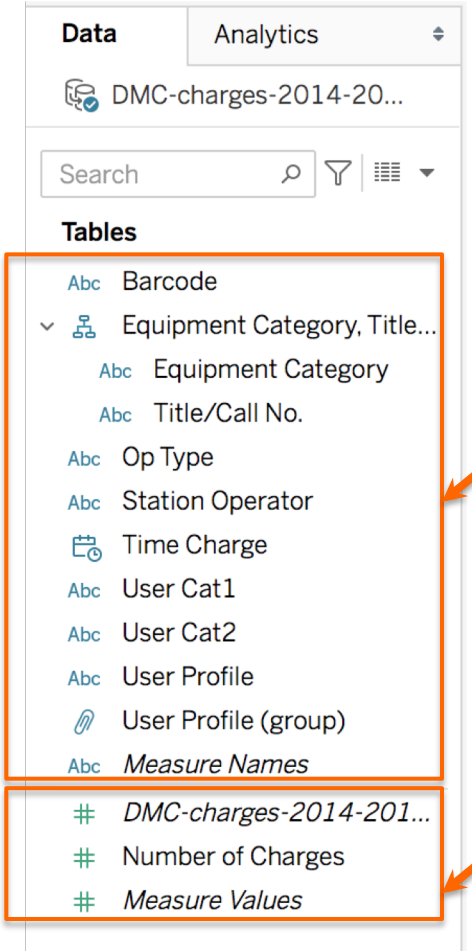
Save/Share

- Save as .twbx, a packaged workbook

- Tableau server or Tableau online

- Tableau public server

Exploring the Desktop Workflow with Tableau eLearning: https://www.tableau.com/learn/training/elearning



Dimension

- **qualitative** values (such as names, dates, or geographical data).
- affect the level of detail in the view.
- dragging a discrete dimension field to Rows or Columns creates **column or row headers**.

Measure

- numeric, **quantitative** values that you can measure.
- can be aggregated.
- dragging a measure into the view creates an **aggregation** to that measure (by default).

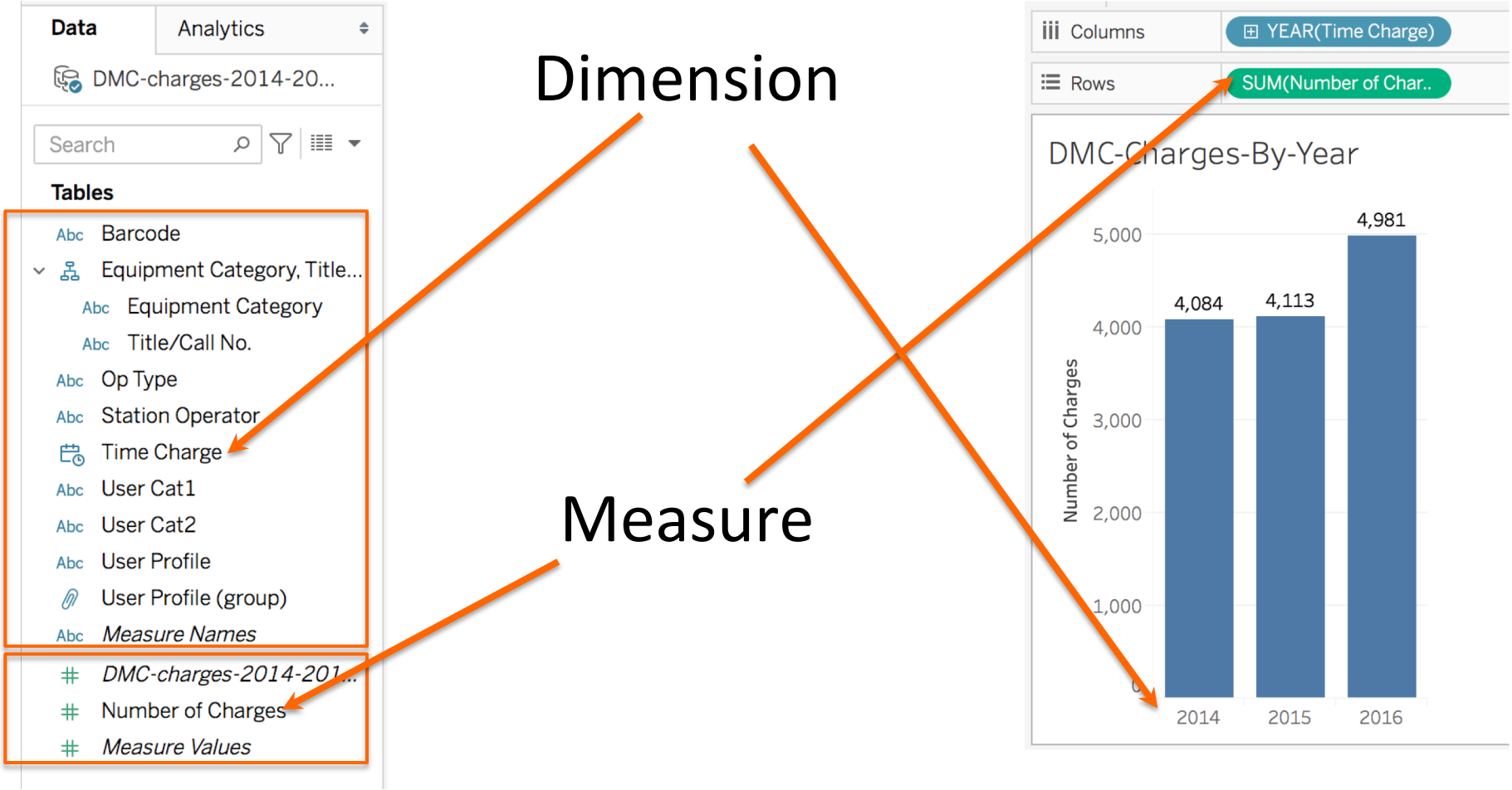
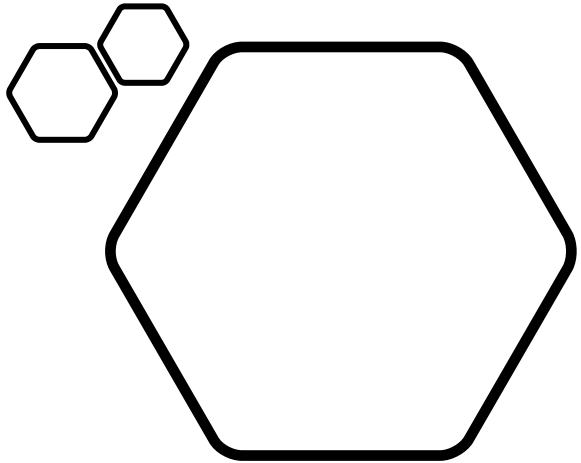

Data
Analytics
DMC-charges-2014-20...
Search
Tables
Abc Barcode
Equipment Category, Title...
Abc Equipment Category
Abc Title/Call No.
Abc Op Type
Abc Station Operator
Time Charge
Abc User Cat1
Abc User Cat2
Abc User Profile
User Profile (group)
Abc Measure Names
DMC-charges-2014-201...
Number of Charges
Measure Values
Dimension
Measure
Columns
YEAR(Time Charge)
Rows
SUM(Number of Char..
DMC-Charges-By-Year
Number of Charges
5,000
4,000
3,000
2,000
1,000
0
4,084
4,113
4,981
2014
2015
2016

Tableau Viz Examples



- Rice University Enrollment - OIR
  https://public.tableau.com/views/RiceUniversityEnrollment/EnrolledStudents?:language=en-US&:display_count=n&:origin=viz_share_link
- DMC equipment circulation data
  https://public.tableau.com/views/DMCEquipmentCirculationDataViz-TableauI-Demo/DMC-Equipment-Circulation-Story?:language=en-US&:display_count=n&:origin=viz_share_link

DMC short courses data exercises

1) Connect to the DMC short courses Excel file and verify the assigned data types are correct
2) Compare the number of participants over years with a bar chart
3) Group undergraduate students, graduate students and postdoc students together and name it Students. Form a data hierarchy of User Group. Show the number of participants per user group over years. Filter the data by User Group and make the filter interactive.
4) Show the number of participants per class name and description group over years with a circle chart
5) Create a text table with the number of participants, class name and description group, user group, and year. Add an interactive filter using class name and description group.
6) Create a Participant Dashboard with two worksheets, one is from step 3, one is from step 4. Enable the funnel filter function to add interactivity to the dashboard. Make sure the filter from step 3 can control both worksheets on the dashboard.