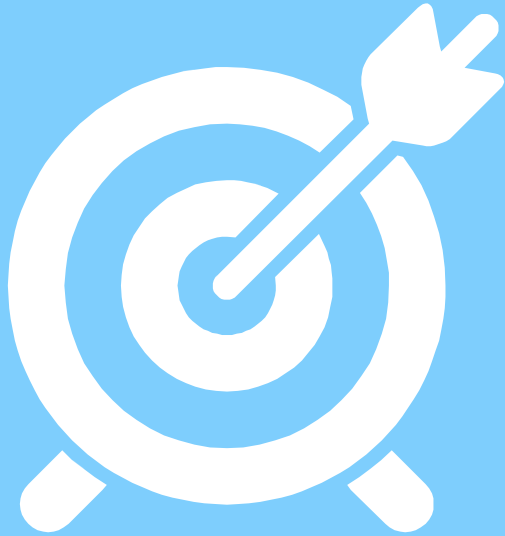




Visualizing Open Data with +tableau++public

Karen Parker
Business Solutions Analyst
Open City & Innovation, City of Edmonton

ace@edmonton.ca
<http://ace.edmonton.ca>



Objective

Learn how to use Tableau Public to create engaging open data visualizations

High-Level Agenda

- ▶ Tableau Public Overview
- ▶ Case Study
 - 2016 Municipal Census Data
 - Edmonton Neighbourhood Boundaries
 - EPS Crime Data

Tableau Public Overview

- ▷ **Software tool** for creating interactive, sharable visualizations from a variety of data

- ▷ Quick
- ▷ Easy
- ▷ Sharable

- ▷ **Free! (with some restrictions)**



Tableau Public Overview

- ▶ **Web-based platform** for sharing visualizations created with Tableau Public software

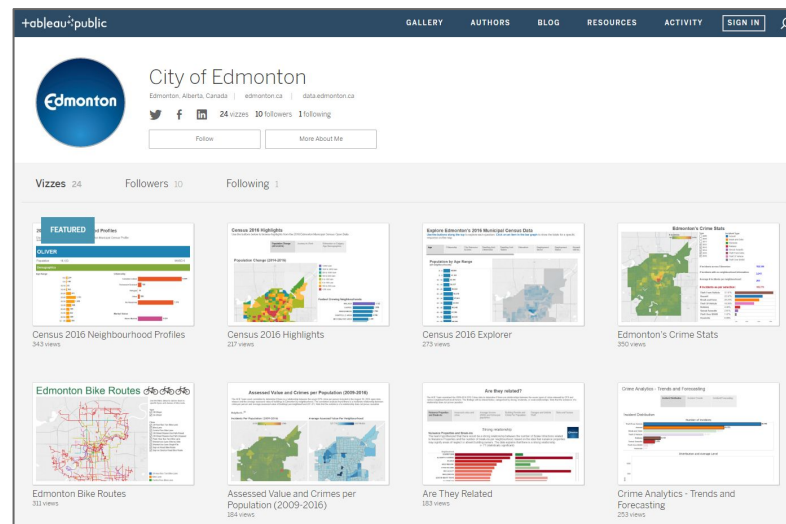


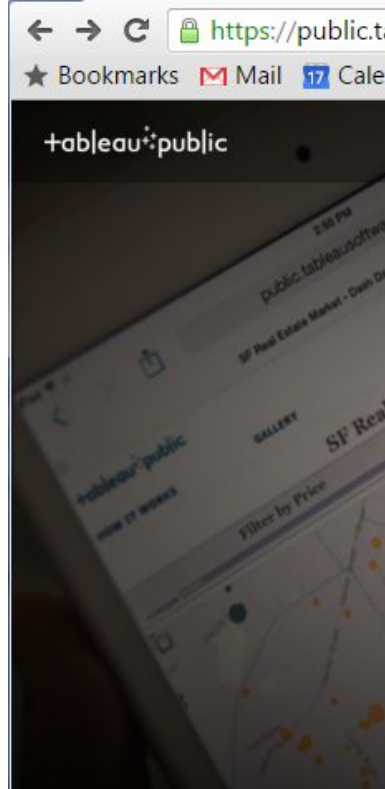
Tableau Public vs Tableau Desktop

	Tableau Desktop	Tableau Public
Platform	Desktop (Windows/Mac)	Desktop (Windows/Mac)
Pricing	\$999 USD for Personal \$1999 USD for Professional	Free
Features	Save locally or publish to the web Connect to: Google Sheets, Excel, CSV, oData, most databases No data source size limits	Publish to the web only. Workbooks and data are freely accessible to the world. Connect to: Google Sheets, Excel, CSV, OData, Data sources have limit of 1 millions rows.

Activity

Create a Tableau Public Account

<https://public.tableau.com/>



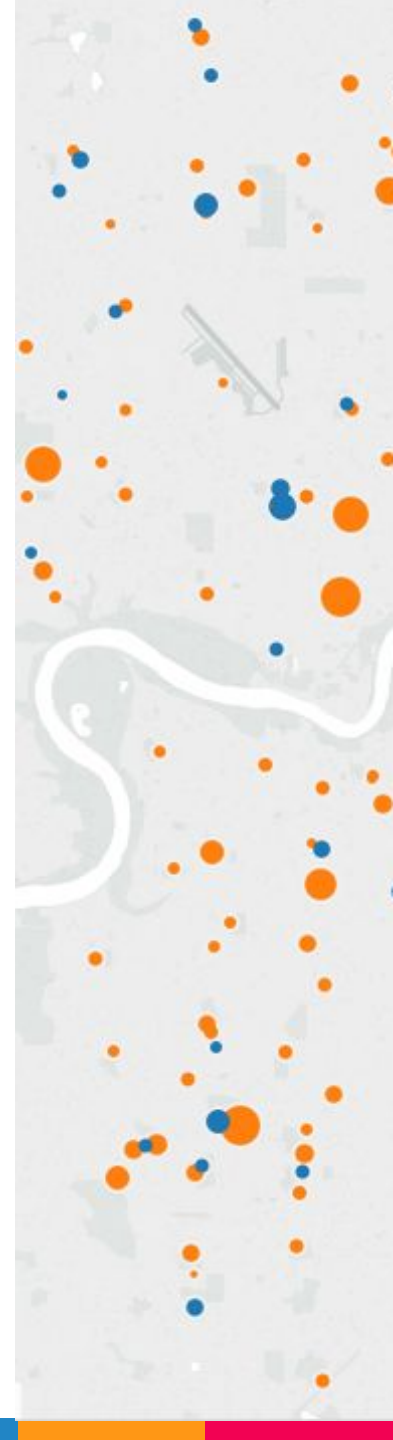
Explore with the App

Open data and explore it with Tableau Public Desktop Public Edition. Drag & Drop your data into the app. Create stunning visualizations with the app. [Download the app.](#)

Activity

Download and open an existing workbook

http://public.tableau.com/profile/city.of.edmonton#!/vizhome/EdmontonStrathconaSt_AlbertSchoolExplorer/SchoolExplorer




The Tableau Workspace

The image shows a Tableau Public workspace with the following components and labels:

- Columns shelf:** Contains the calculated field `AVG(Longitude)`.
- Rows shelf:** Contains the calculated field `AVG(Latitude)`.
- Pages shelf:** Currently empty.
- Data window:** Shows the 'Schools' data source.
- Filters shelf:** Contains 'Grades Offered', 'Action (City/Town)', and 'SUM(Total Enrolm...)'. An arrow labeled 'Filter' points to this shelf.
- Dimensions shelf:** Lists fields like City/Town, E-mail Address, Fax Number, Grades Offered, Phone Number, Postal Code, Province, School District, School Name, School Number, Street Address, Website, and Measure Names.
- Marks card:** Set to 'Automatic' with options for Color, Size, Label, Detail, and Tooltip.
- Pills:** Four pills are placed on the map: 'School District', 'SUM(Total E...)', 'School Number', and 'ATTR(School N...)'. An arrow labeled 'Worksheet' points to the map area.
- Measures shelf:** Lists fields like Latitude, Longitude, Latitude (generated), Longitude (generated), Number of Records, and Measure Values.
- Colour legend:** A legend for 'School District' with categories: Edmonton Catholic, Edmonton Public, Elk Island Catholic, Elk Island Public, and St. Albert Catholic.
- Size legend:** A legend for 'SUM(Total Enrolment)' with sizes: 10, 500, 1,000, 1,500, and 2,000.
- Grades Offered filter:** A list of grade ranges with checkboxes, including (All), Preschool to 6, K to 1, K to 3, K to 4, K to 6, K to 8, K to 9, K to 12, 1 to 6, 1 to 9, 1 to 12, 2 to 6, 2 to 12, 5 to 8, 7 to 9, 7 to 12, 7 to 12 & Adult, 9 to 12, 10 to 12, and Special.

Anatomy of a Tableau Workbook

Story  (contains a sequence of worksheets or dashboards)

Dashboard  (displays one or more worksheets)

Worksheet 
(where you create visualizations)

Case Study

- ▶ **EPS Crime Data**
- ▶ **Edmonton Neighbourhood Boundaries**
- ▶ **2016 Municipal Census Data**

For each step

1. You'll be shown how to do it
2. You'll have additional time to complete the work yourself



Key Concepts

- ▷ Connecting to text files and oData
- ▷ Text tables, bar graphs
- ▷ Mapping co-ordinates and polygons
- ▷ Data blending
- ▷ Subtotals
- ▷ Number format
- ▷ Calculated Fields
- ▷ Filters

Case Study Manual:

<http://bit.ly/aods2016>

Case Study - Step A

Connecting to a text file

Case Study - Step B

Creating a text table

Case Study - Step C

Adding subtotals

Case Study - Step D

Creating a bar graph

Case Study - Step E

Adding a filter

Case Study - Step F

Displaying a value by colour

Case Study - Step G

Connecting to a text file

Case Study - Step H

Mapping coordinates

Case Study - Step I

Mapping polygons

Case Study - Step J

Blending data

Case Study - Step K

Displaying a value by colour

Case Study - Step L

Connecting to oData

Case Study - Step M

Creating a calculated field

Case Study - Step N

Blending data

Case Study - Step 0

Creating a calculated field

Case Study - Step P

Displaying a value by colour

Case Study - Step Q

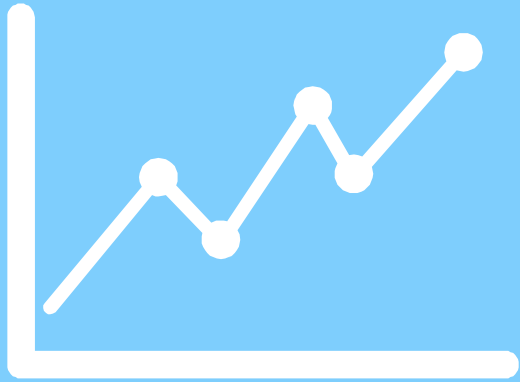
Adding a filter

Case Study - Step R

Creating dashboards

Case Study - Step 5

Publishing to Tableau Public



Q & A

Use this time to ask questions and further explore the data

Thanks!

More questions?

Reach our team at ace@edmonton.ca

Check out our work at <http://ace.edmonton.ca>