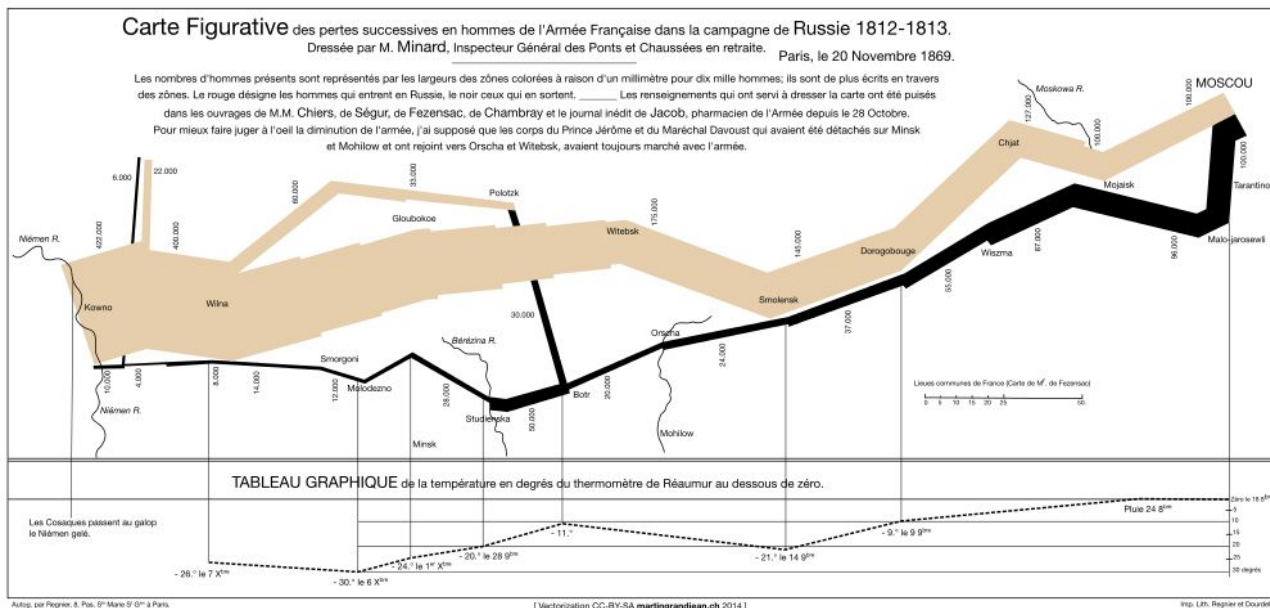


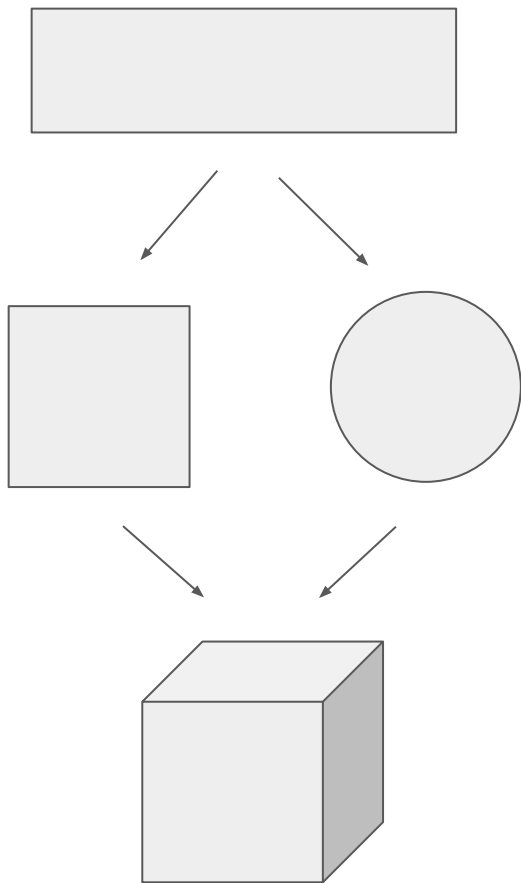
Choose Your Dataviz



	2012
January	132
February	31
March	47
April	132
May	62
June	119
July	100
August	63
September	88
October	245
November	112
December	206

| Table

- ▼ Value
- ▼ Mnemonic empan = 7
- ▼ Accurate



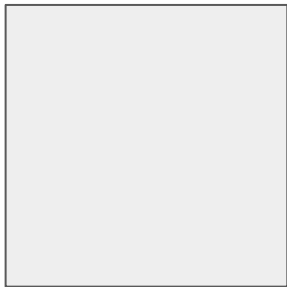
| Simple Shape

- ▼ comparison
- ▼ rectangle > circle or square > 3D shape
- ▼ area or volume



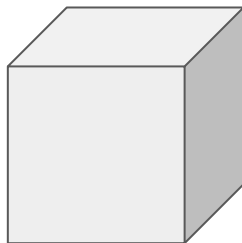
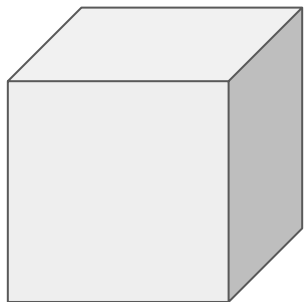
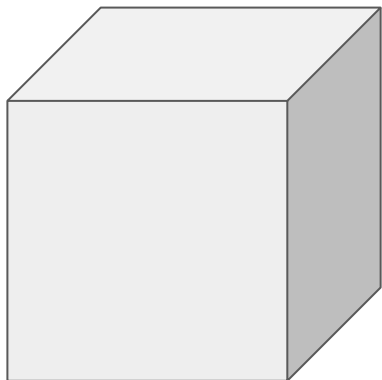
| Simple Shape

- ▼ comparison
- ▼ rectangle > circle or square > 3D shape
- ▼ area or volume



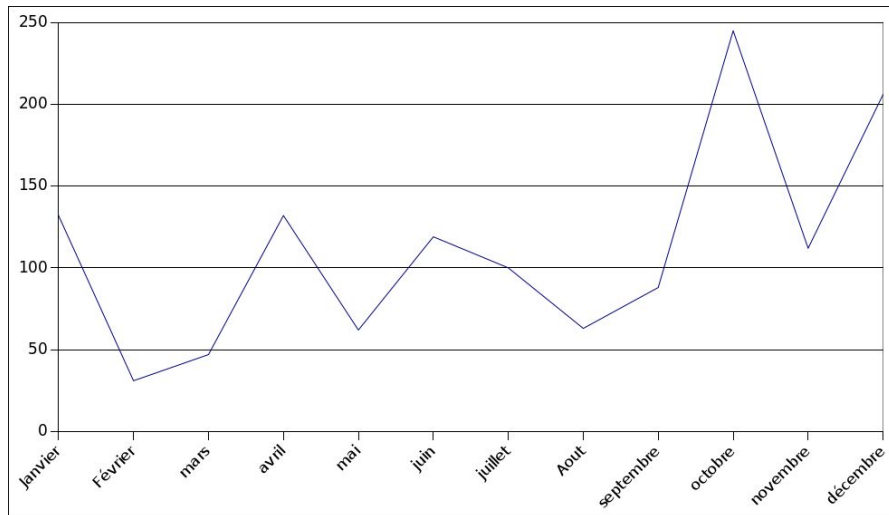
| Simple Shape

- ▼ comparison
- ▼ rectangle > circle or square > 3D shape
- ▼ area or volume



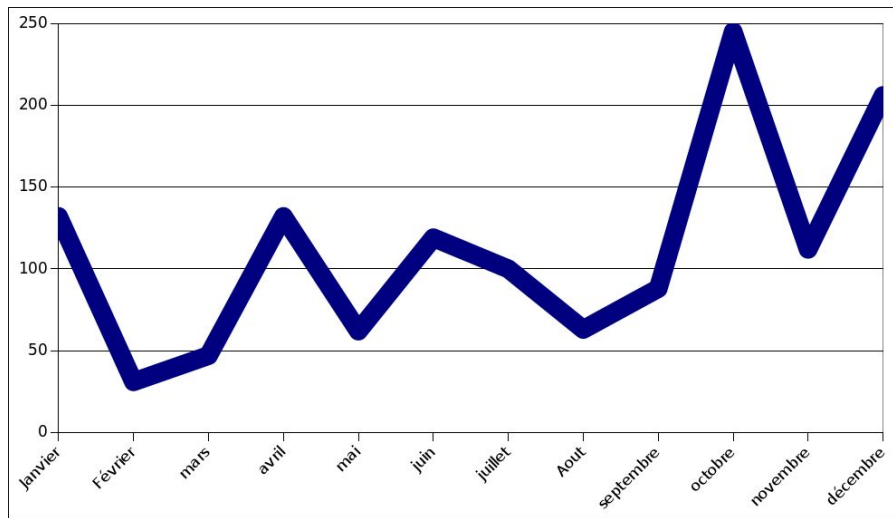
| Simple Shape

- ▼ comparison
- ▼ rectangle > circle or square > 3D shape
- ▼ area or volume



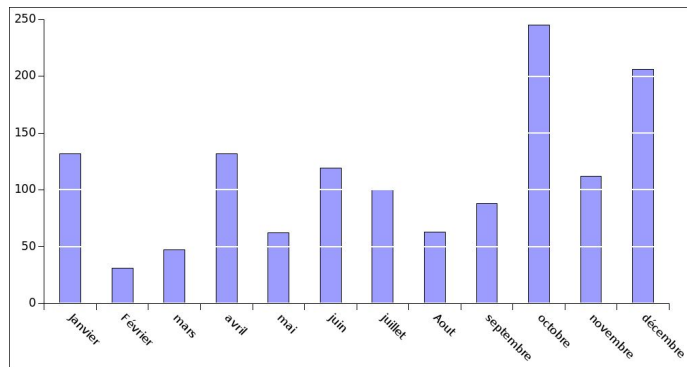
Line Chart

- ▼ evolution
- ▼ angle
- ▼ X axis = cause
- ▼ Y axis = effect
- ▼ line thickness



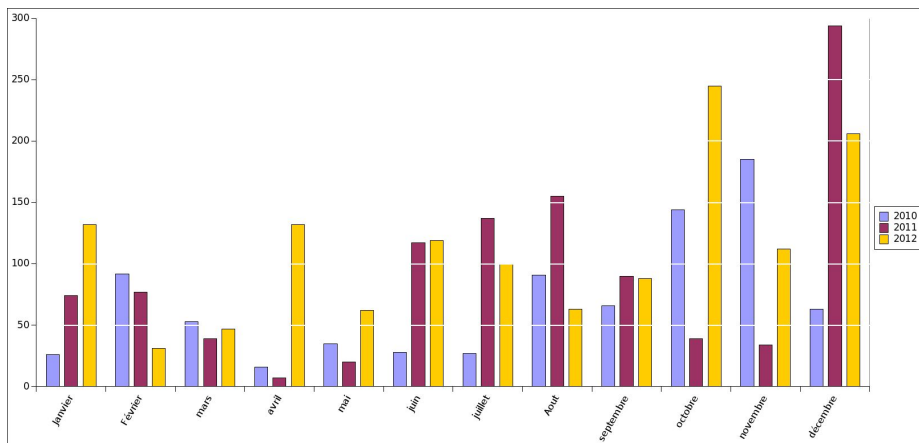
Line Chart

- ▼ evolution
- ▼ angle
- ▼ X axis = cause
- ▼ Y axis = effect
- ▼ line thickness

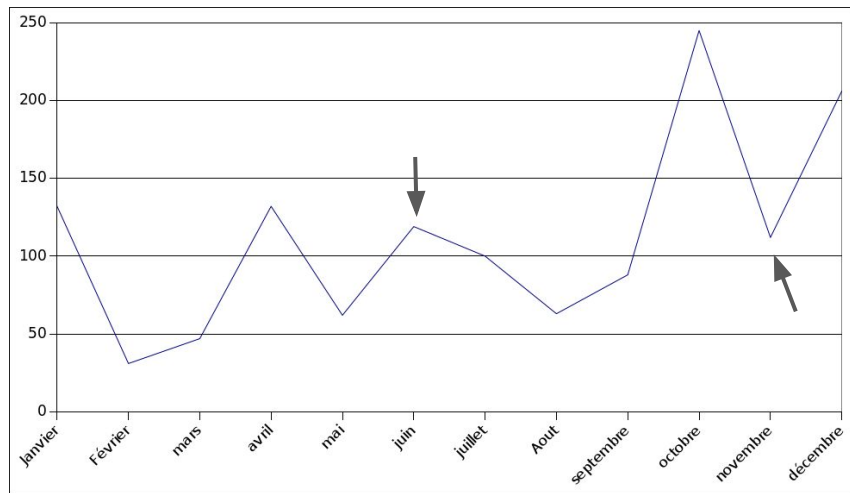


Bar Chart

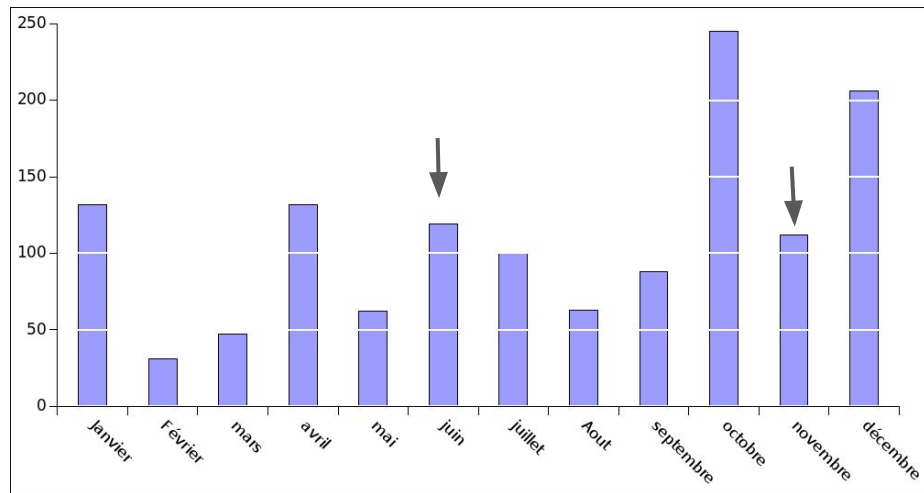
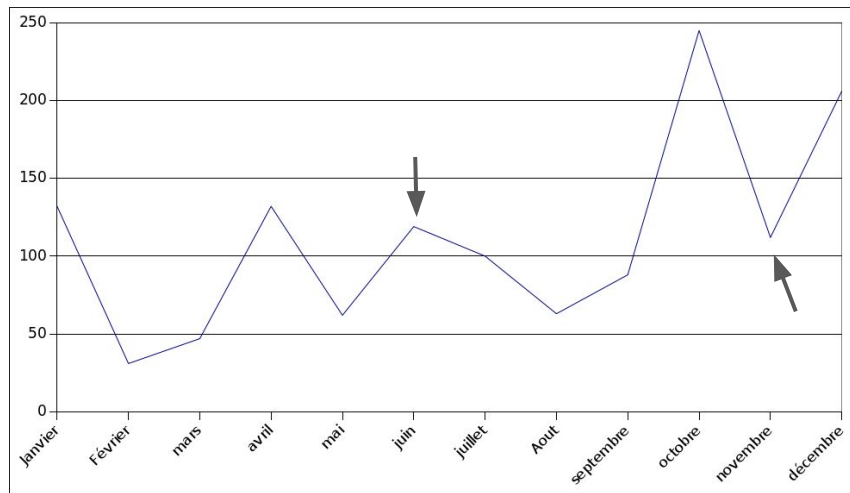
- ▼ comparison
- ▼ group dimension to compare



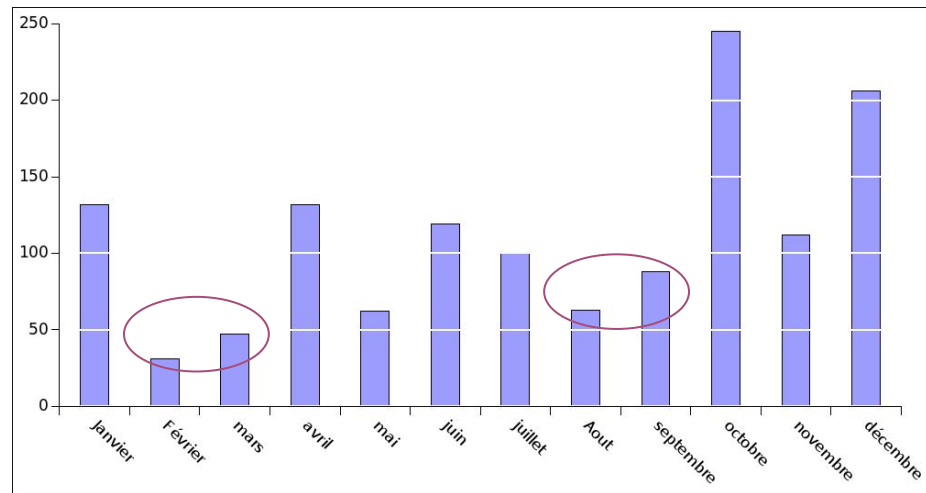
Line Vs Bar



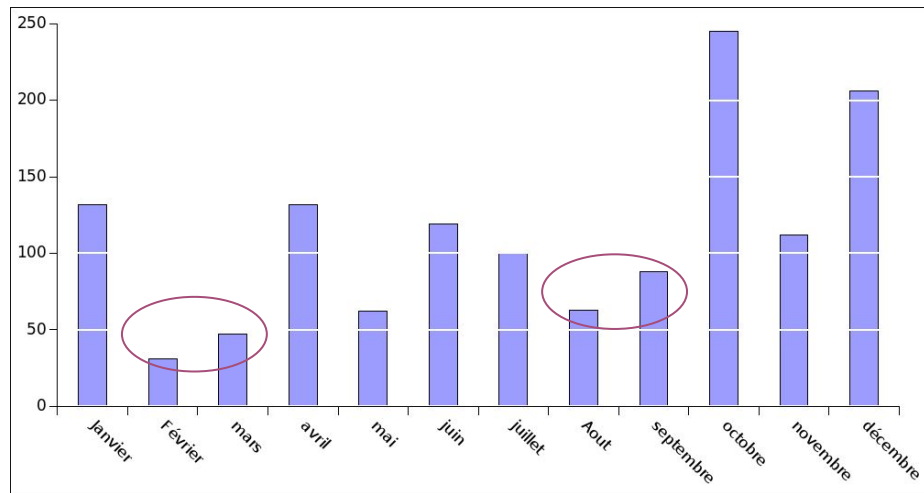
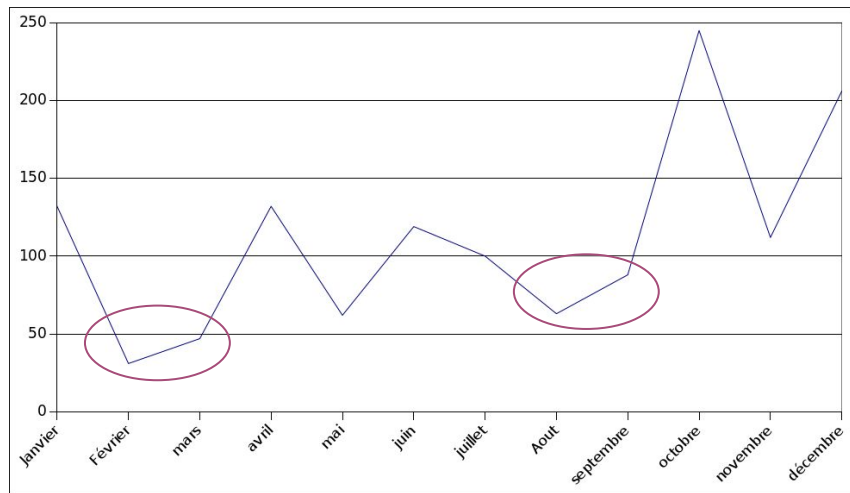
Line Vs Bar



Line Vs Bar



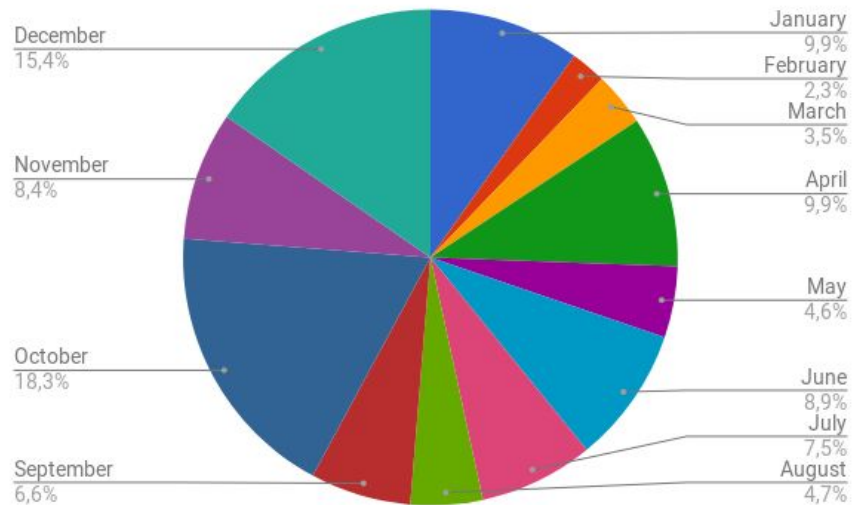
Line Vs Bar



| Bar

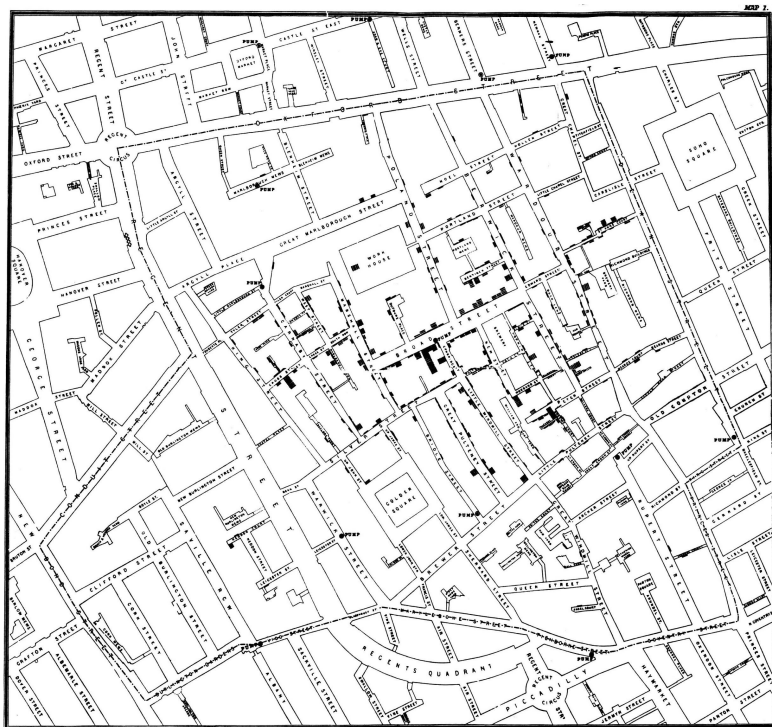


- ▼ Composition
- ▼ Better than pie chart for few value



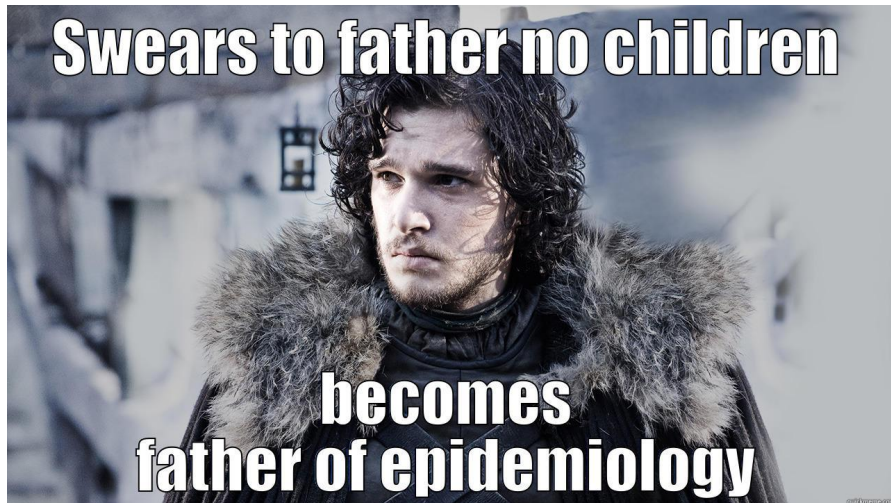
Pie Chart / Donuts

- ▼ composition
- ▼ 100%
- ▼ Brain use Arc, Area or Angle to compare



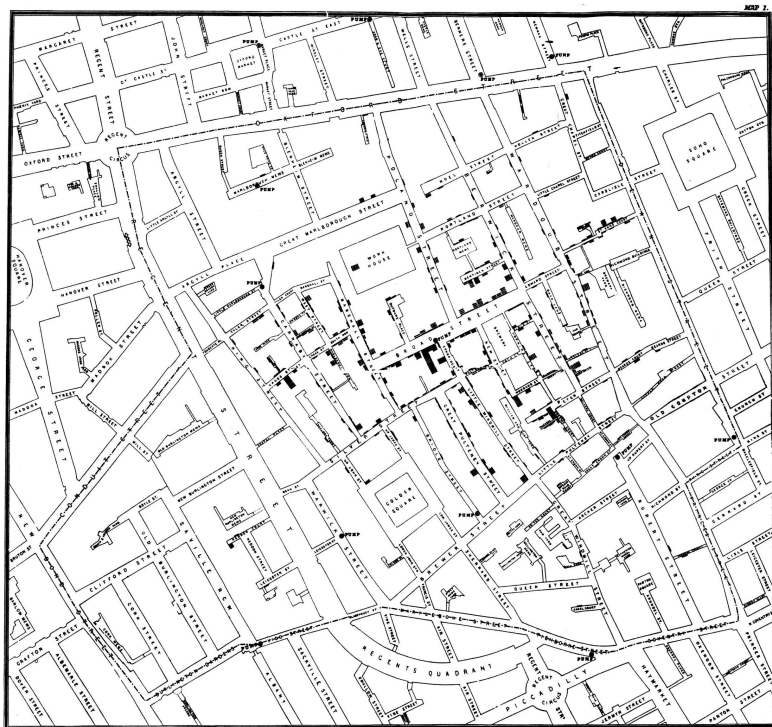
Map

- ▼ First DataViz ever
- ▼ specific location
- ▼ bar can be better



| Map

- ▼ First DataViz ever
- ▼ specific location
- ▼ bar can be better



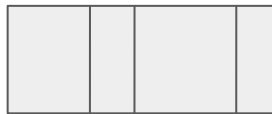
© J. Collins Ltd. London, 1911

SCALE 80 INCHES TO A MILE.

Map

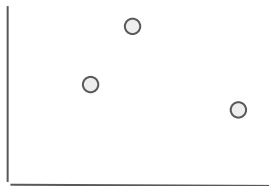
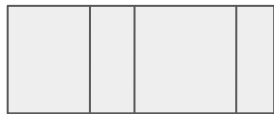
- ▼ First DataViz ever
- ▼ specific location
- ▼ bar can be better

| Dimension



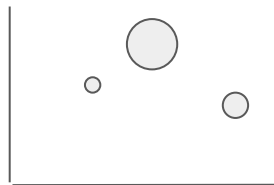
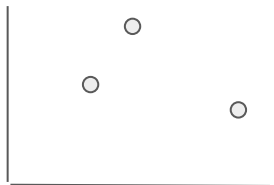
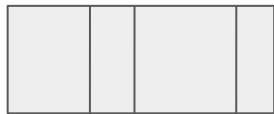
| Dimension

▼ 1



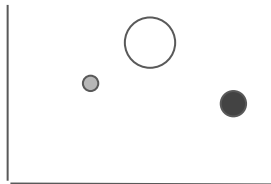
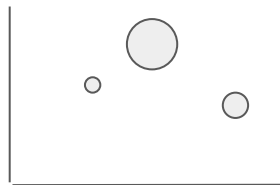
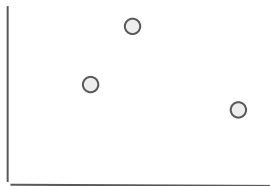
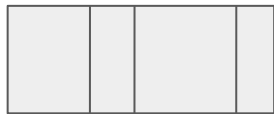
Dimension

- ▼ 1
- ▼ 2



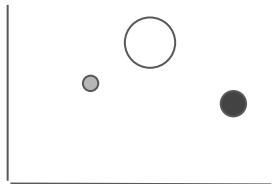
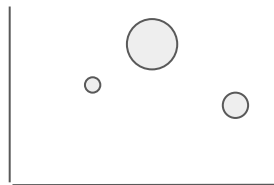
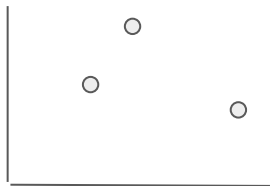
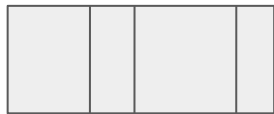
Dimension

- ▼ 1
- ▼ 2
- ▼ 3



| Dimension

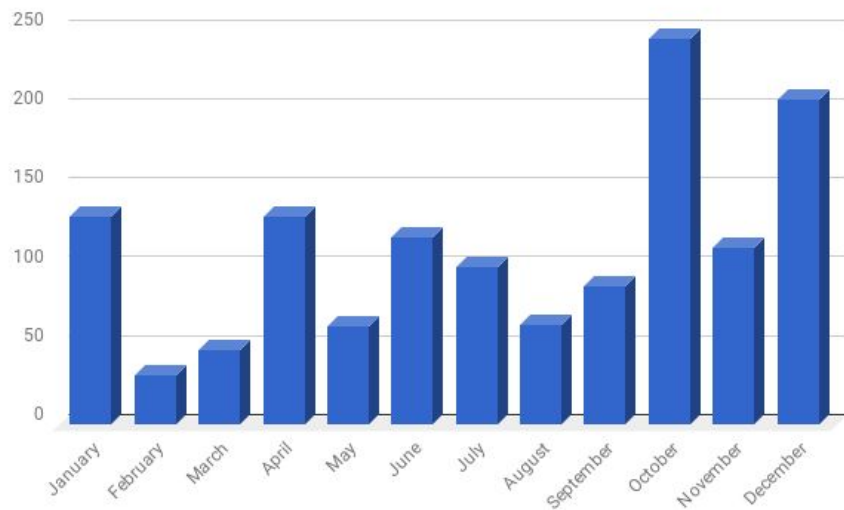
- ▼ 1
- ▼ 2
- ▼ 3
- ▼ 4



| Dimension

- ▼ 1
- ▼ 2
- ▼ 3
- ▼ 4
- ▼ ... probably not a good idea

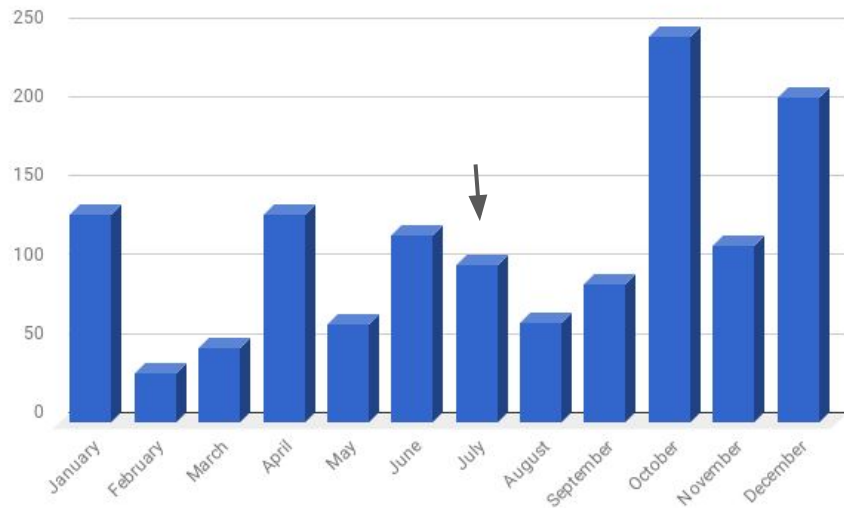
| 3D



3D



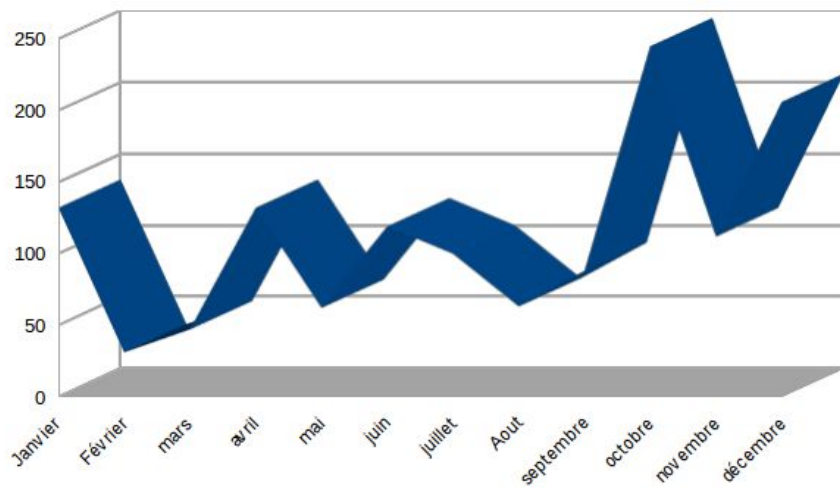
Bar Chart: Never



3D

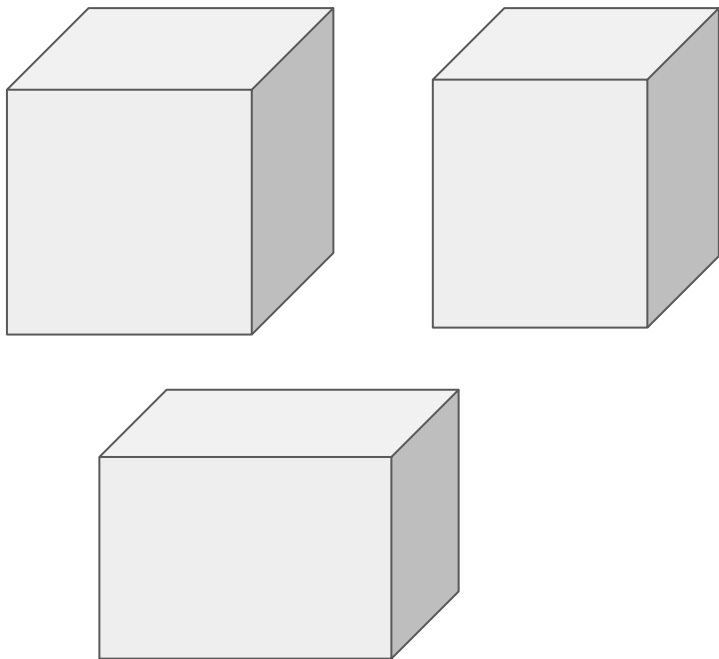


Bar Chart: Never



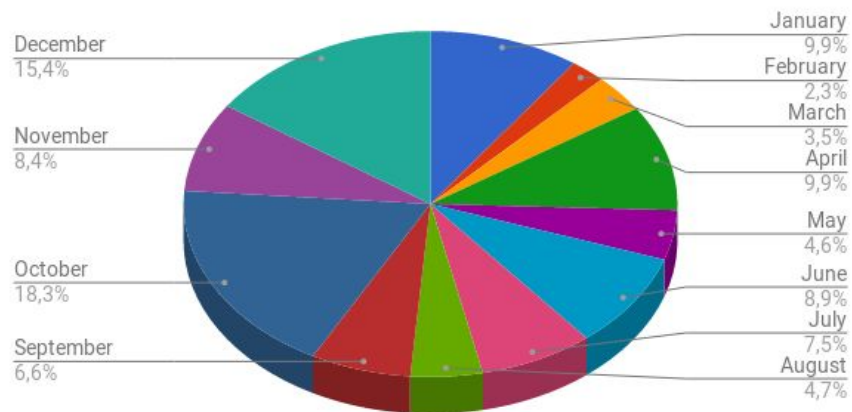
| 3D

- ▼ Bar Chart: Never
- ▼ Line Chart: Never



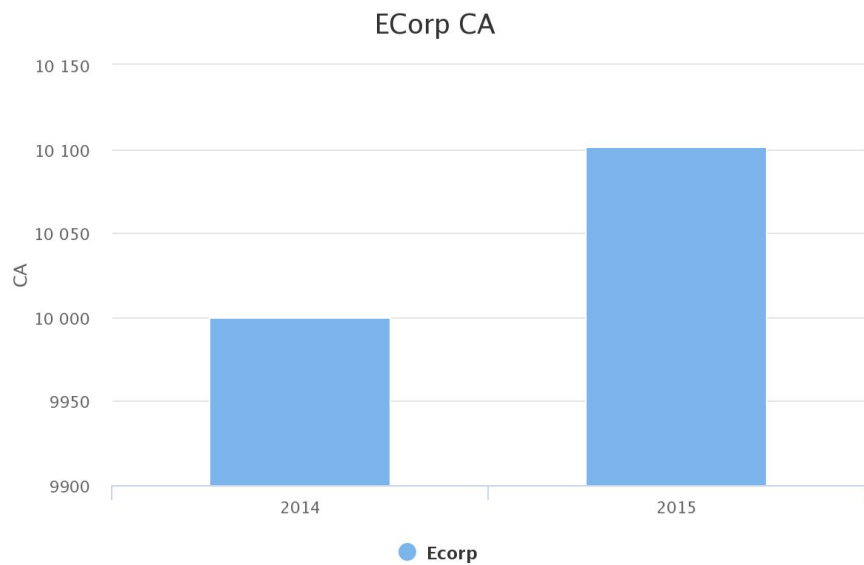
| 3D

- ▼ Bar Chart: Never
- ▼ Line Chart: Never
- ▼ Shape: Never



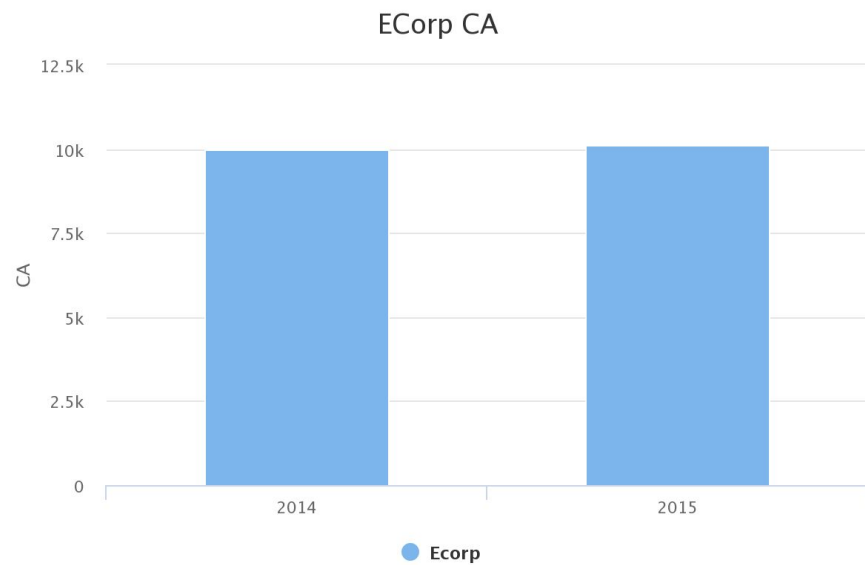
3D

- ▼ Bar Chart: Never
- ▼ Line Chart: Never
- ▼ Shape: Never
- ▼ Pie Chart: Oh god no



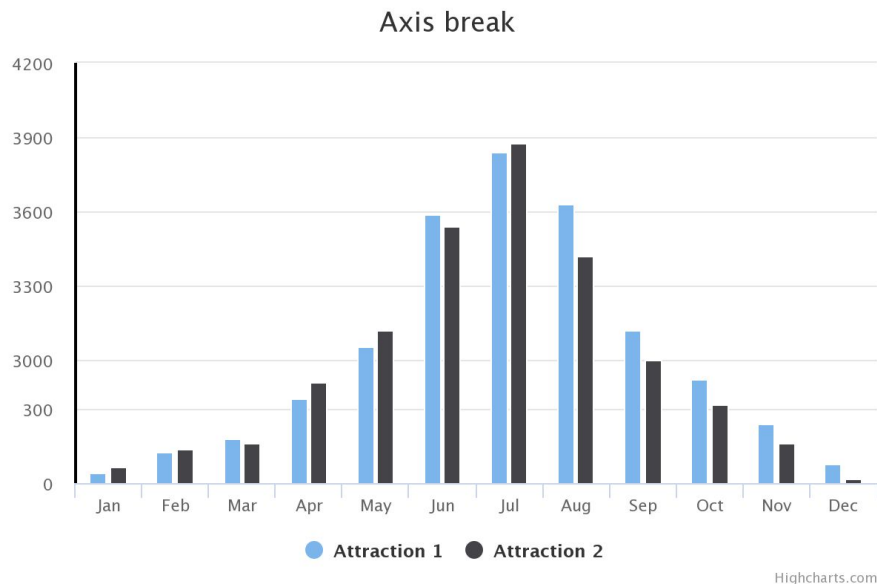
Lie Factor

- ▼ Size of effect in chart / Size of effect in data
- ▼ Axis should start at Zero



Lie Factor

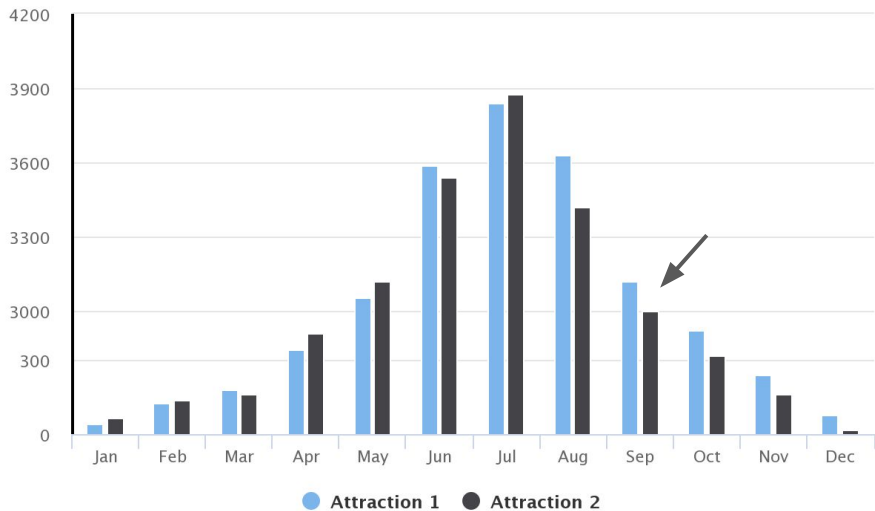
- ▼ Size of effect in chart / Size of effect in data
- ▼ Axis should start at Zero



Lie Factor

- ▼ Size of effect in chart / Size of effect in data
- ▼ Axis should start at Zero
- ▼ Scale should not be cut

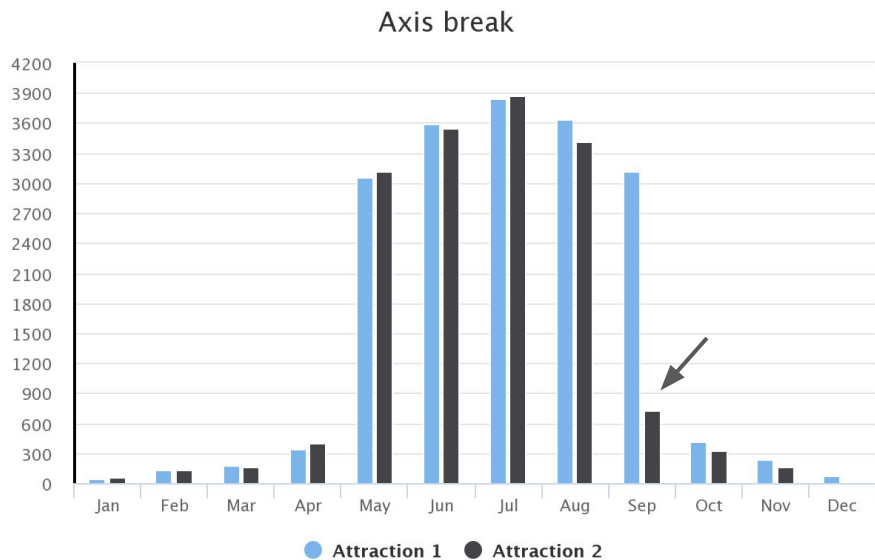
Axis break



Highcharts.com

Lie Factor

- ▼ Size of effect in chart / Size of effect in data
- ▼ Axis should start at Zero
- ▼ Scale should not be cut

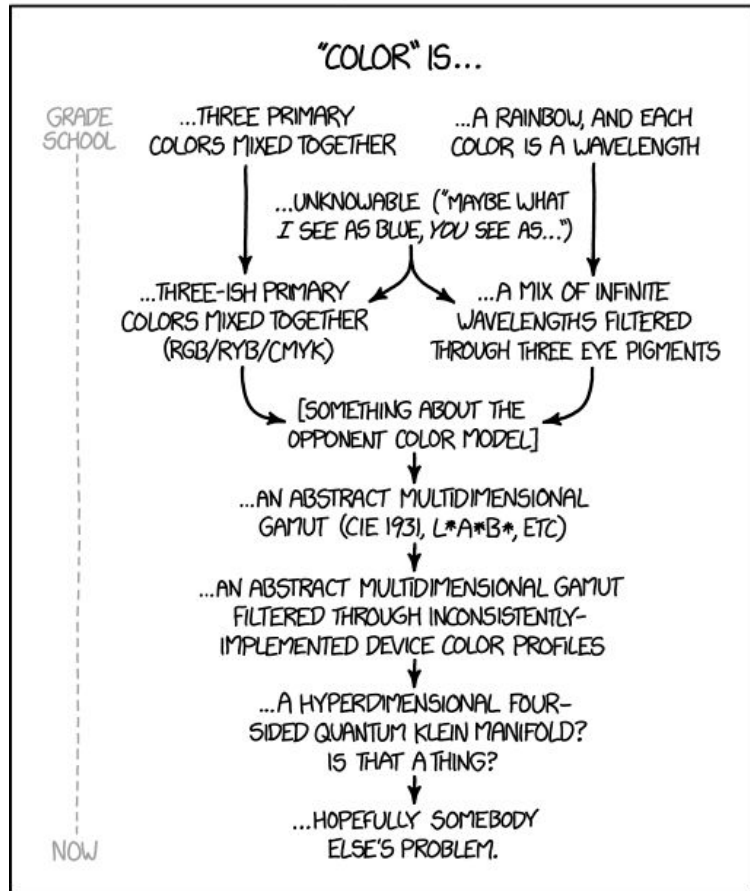


Highcharts.com

Lie Factor

- ▼ Size of effect in chart / Size of effect in data
- ▼ Axis should start at Zero
- ▼ Scale should not be cut

EVOLUTION OF MY UNDERSTANDING OF COLOR OVER TIME:



| Color



| Color

(Hopefully somebody else's problem)

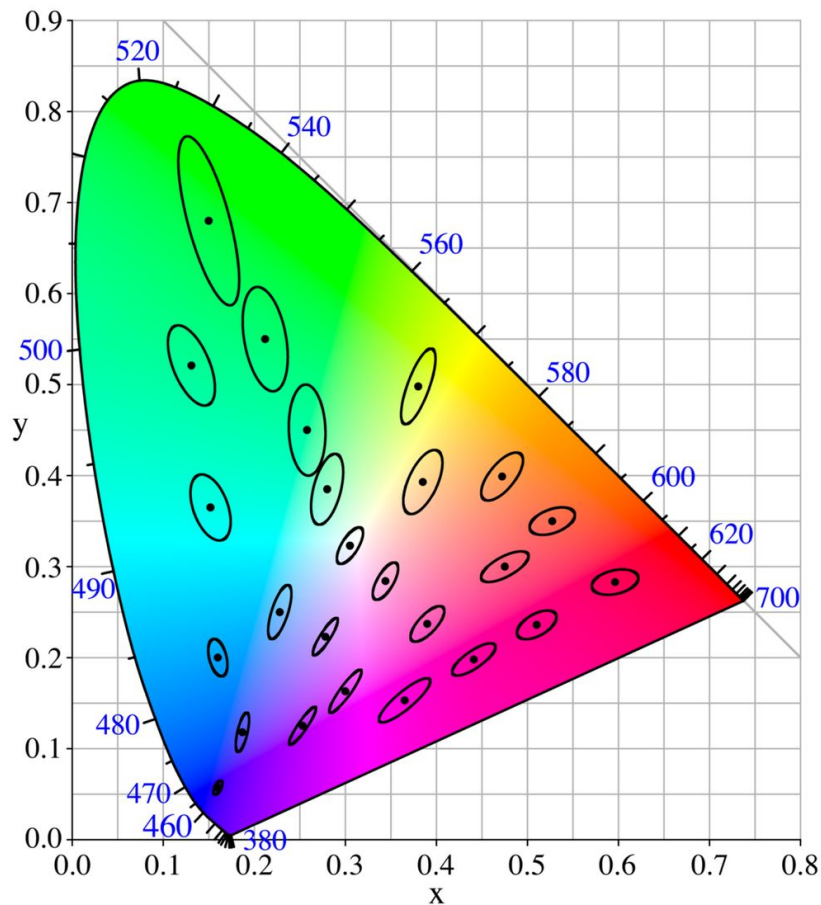
- ▼ 8% of Men are colorblind (0.5% of Women)



| Color

(Hopefully somebody else's problem)

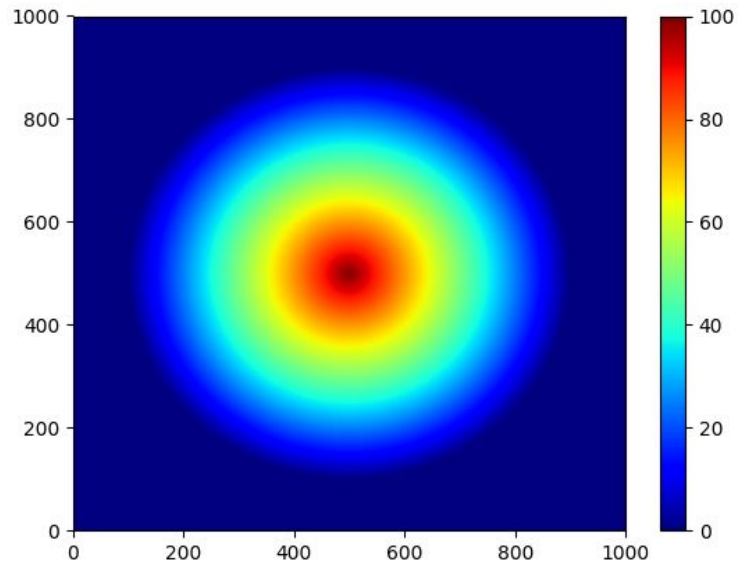
- ▼ 8% of Men are colorblind (0.5% of Women)
- ▼ respect existing convention (banana = yellow)
- ▼ grey = no data



| Color

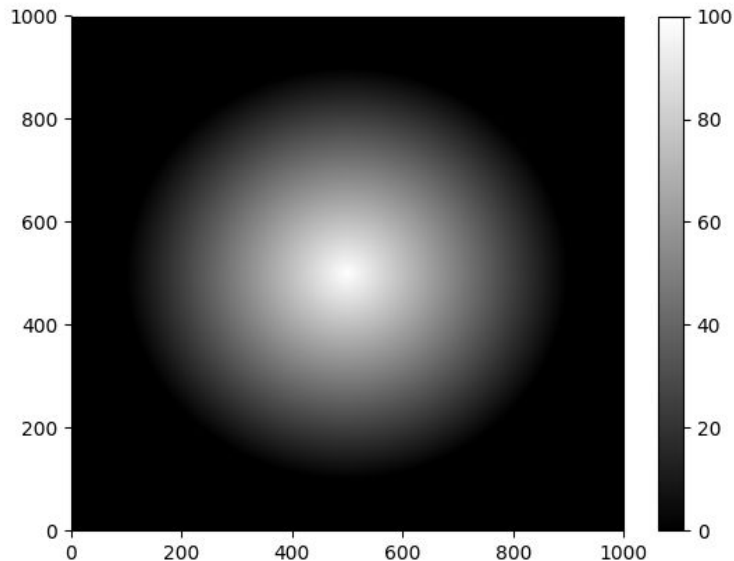
(Hopefully somebody else's problem)

- ▼ 8% of Men are colorblind (0.5% of Women)
- ▼ respect existing convention (banana = yellow)
- ▼ grey = no data
- ▼ double encoding
- ▼ MacAdam ellipsis



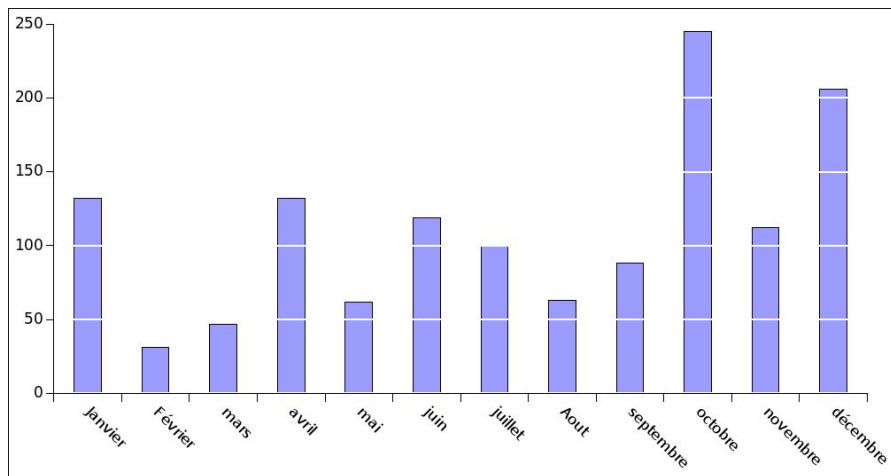
| Color Map

- ▼ not visually linear
 - ▽ band
 - ▽ constant color



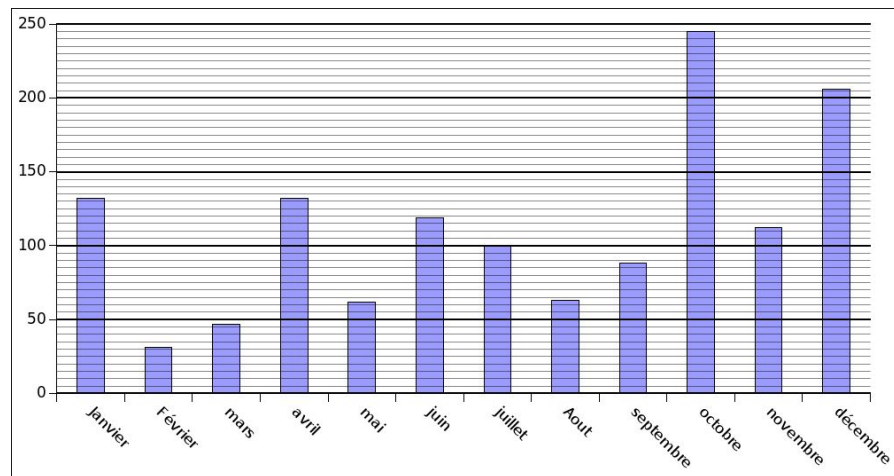
| Color Map

- ▼ not visually linear
- ▼ visually linear
- ▼ <http://peterkovesi.com/projects/colourmaps/>



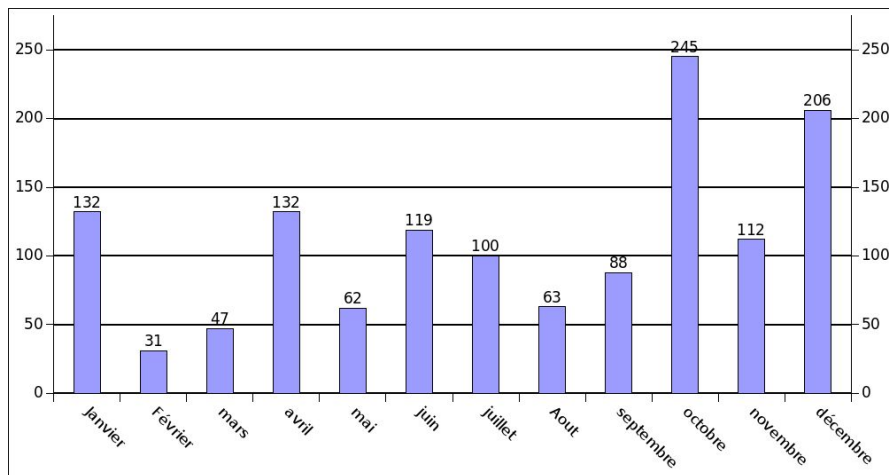
DRY

blank grid



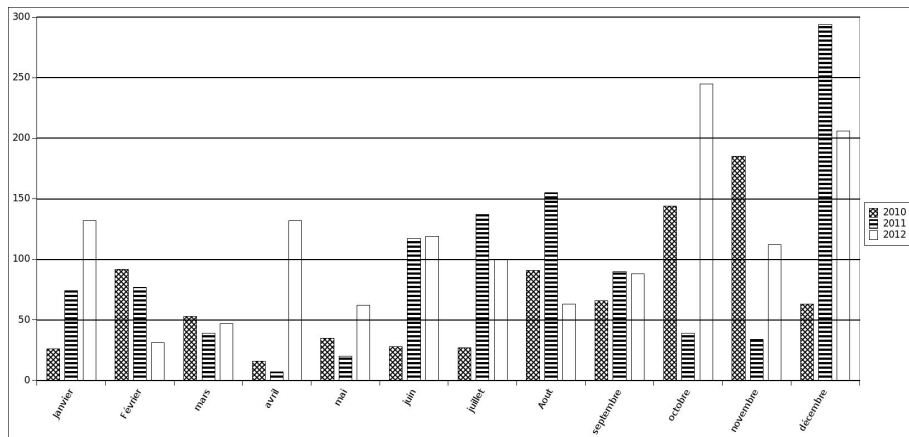
DRY

- ▼ blank grid
- ▼ light grid



DRY

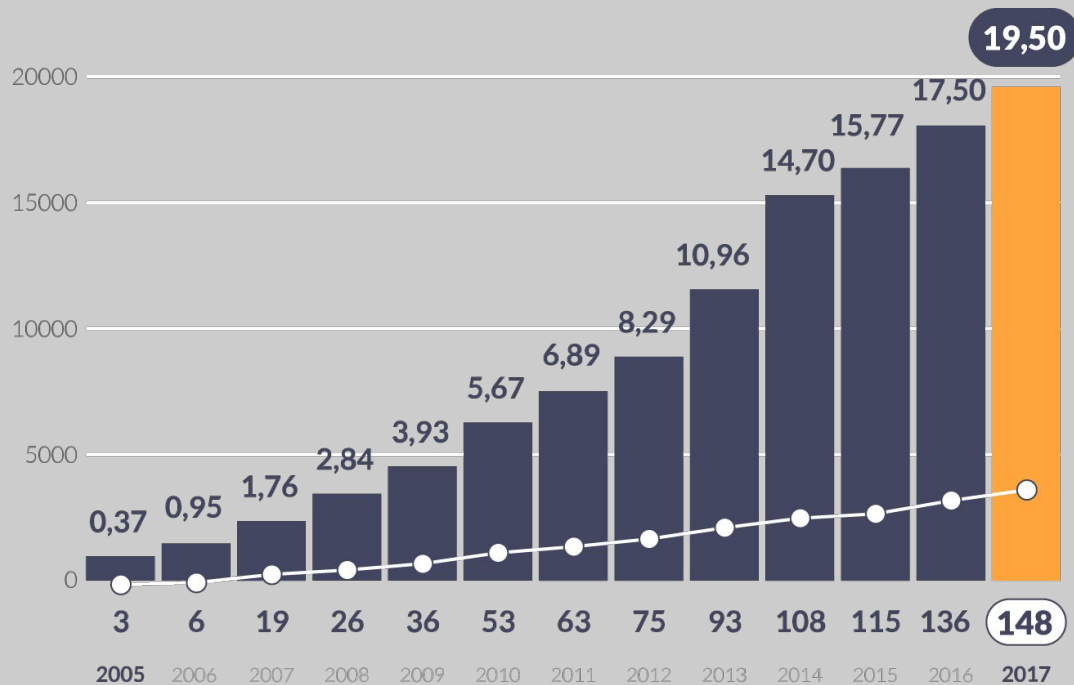
- ▼ blank grid
- ▼ light grid
- ▼ avoid redundant information

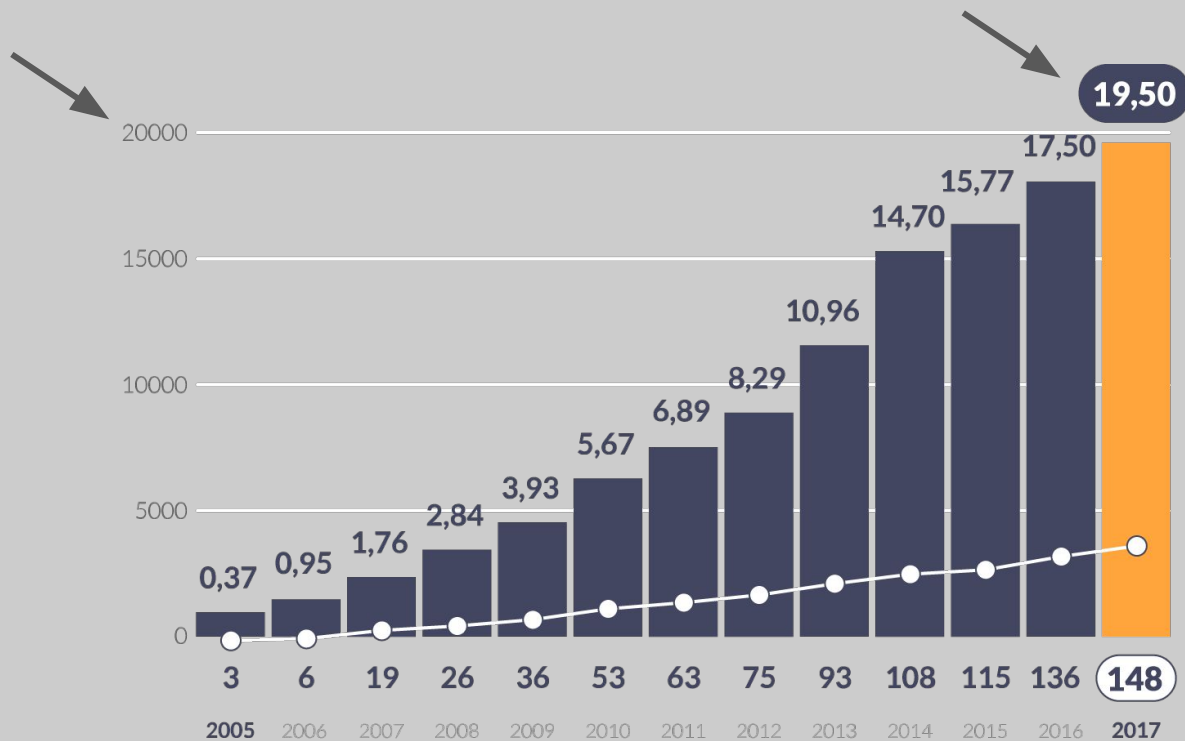


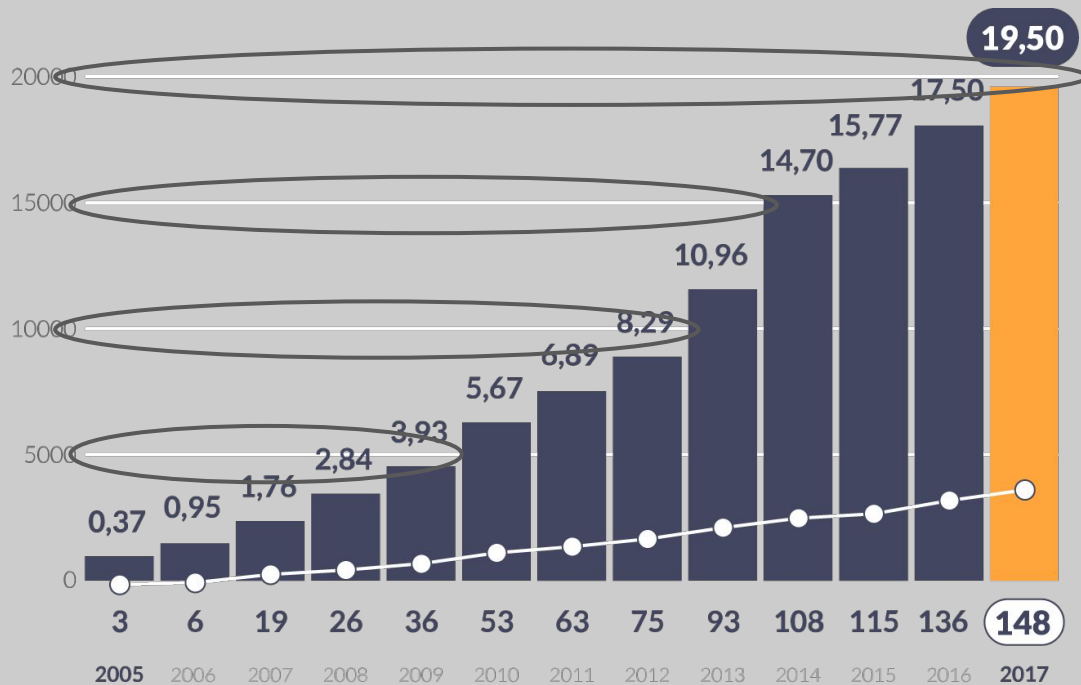
DRY

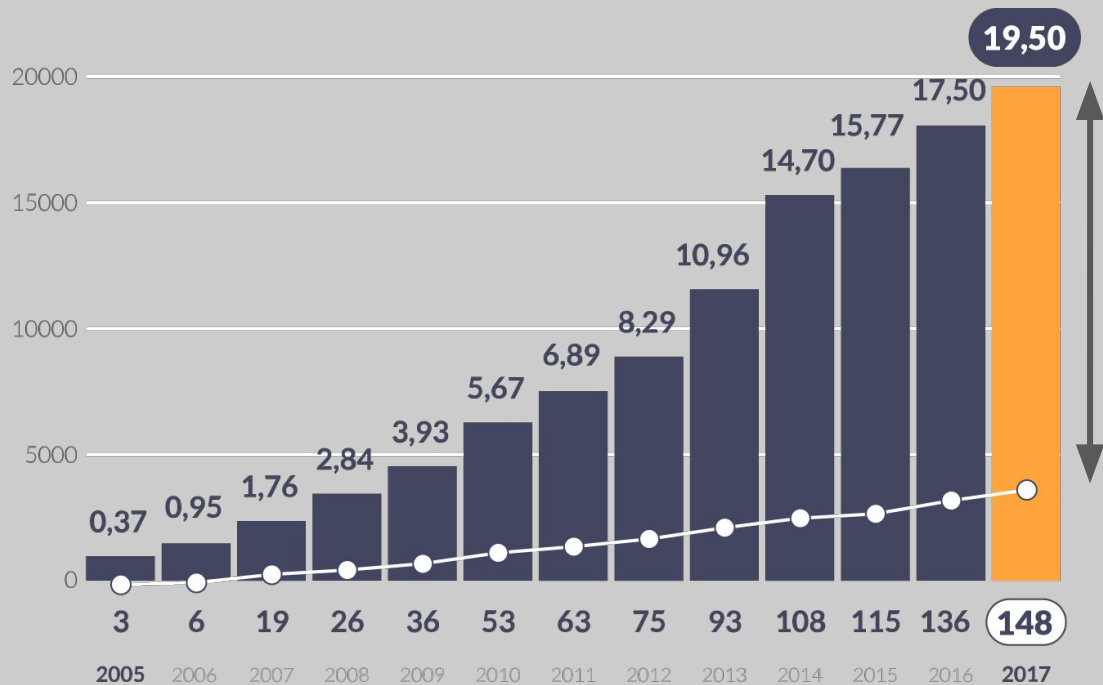
- ▼ blank grid
- ▼ light grid
- ▼ avoid redundant information
- ▼ every drop of ink should add information

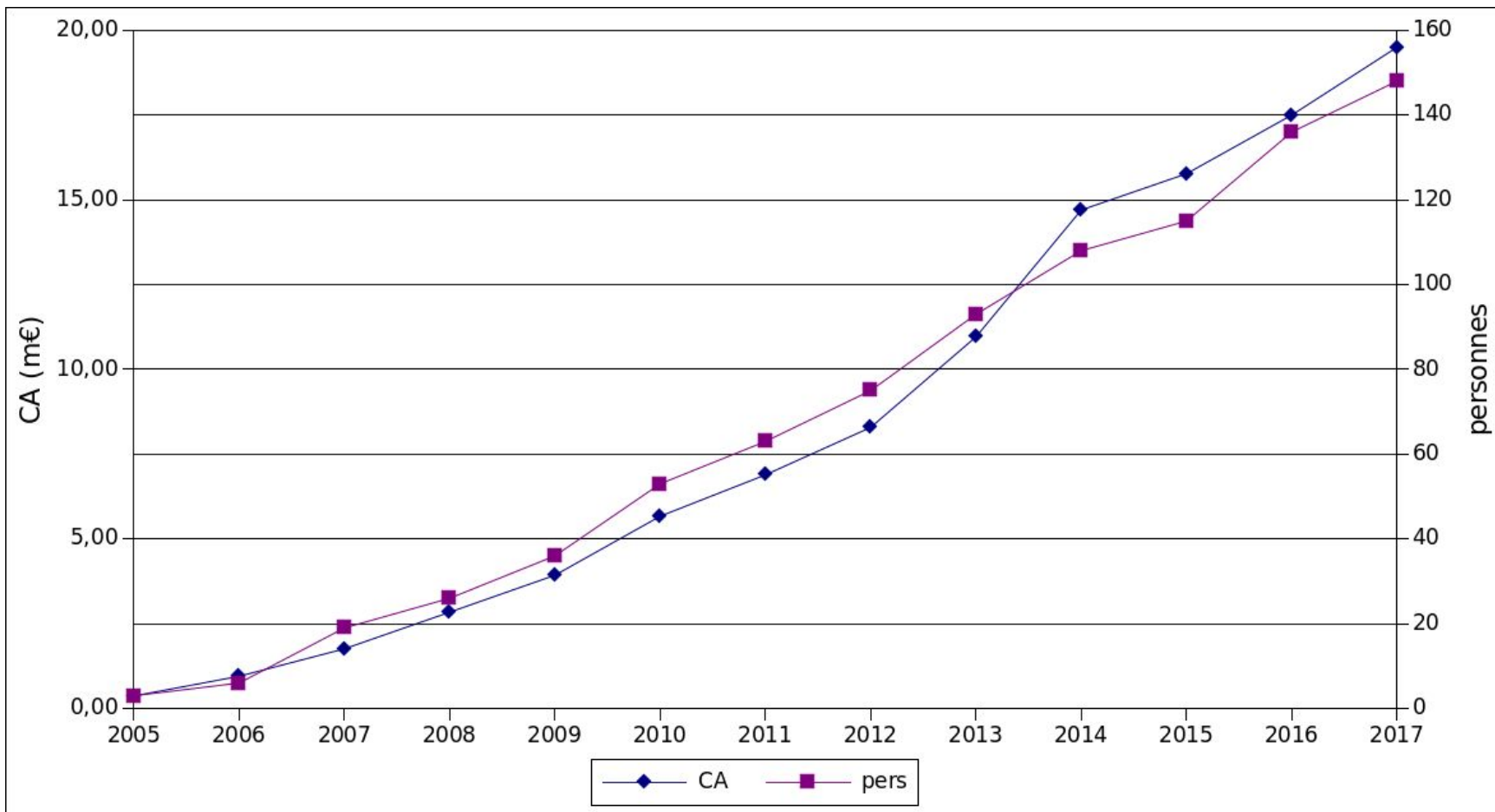
Find mistakes

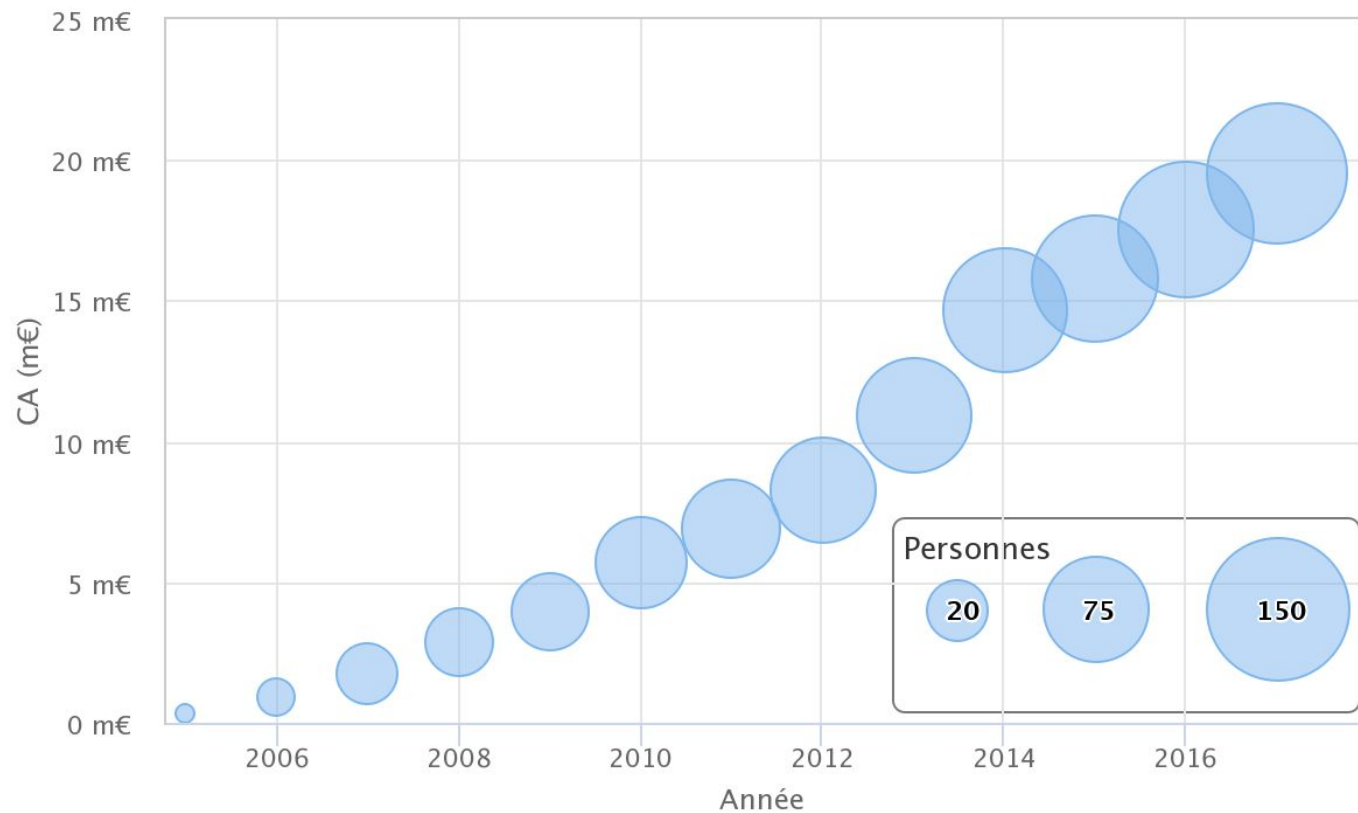


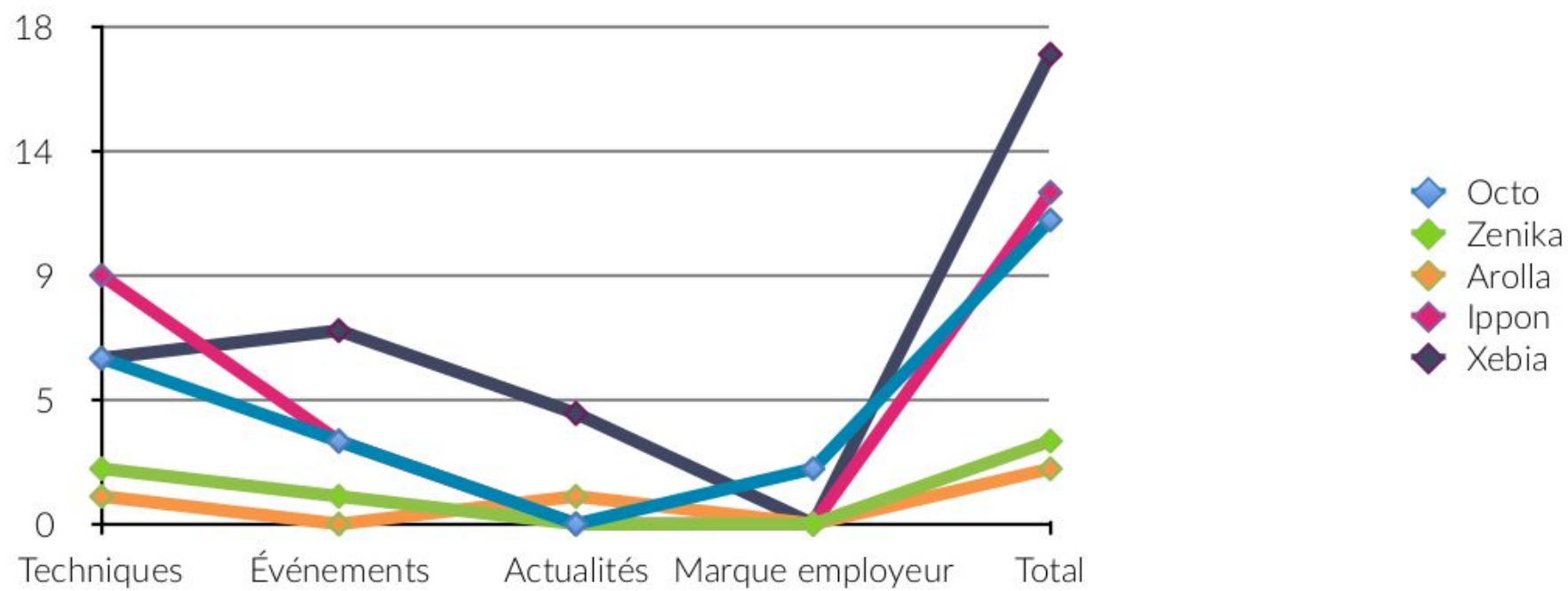


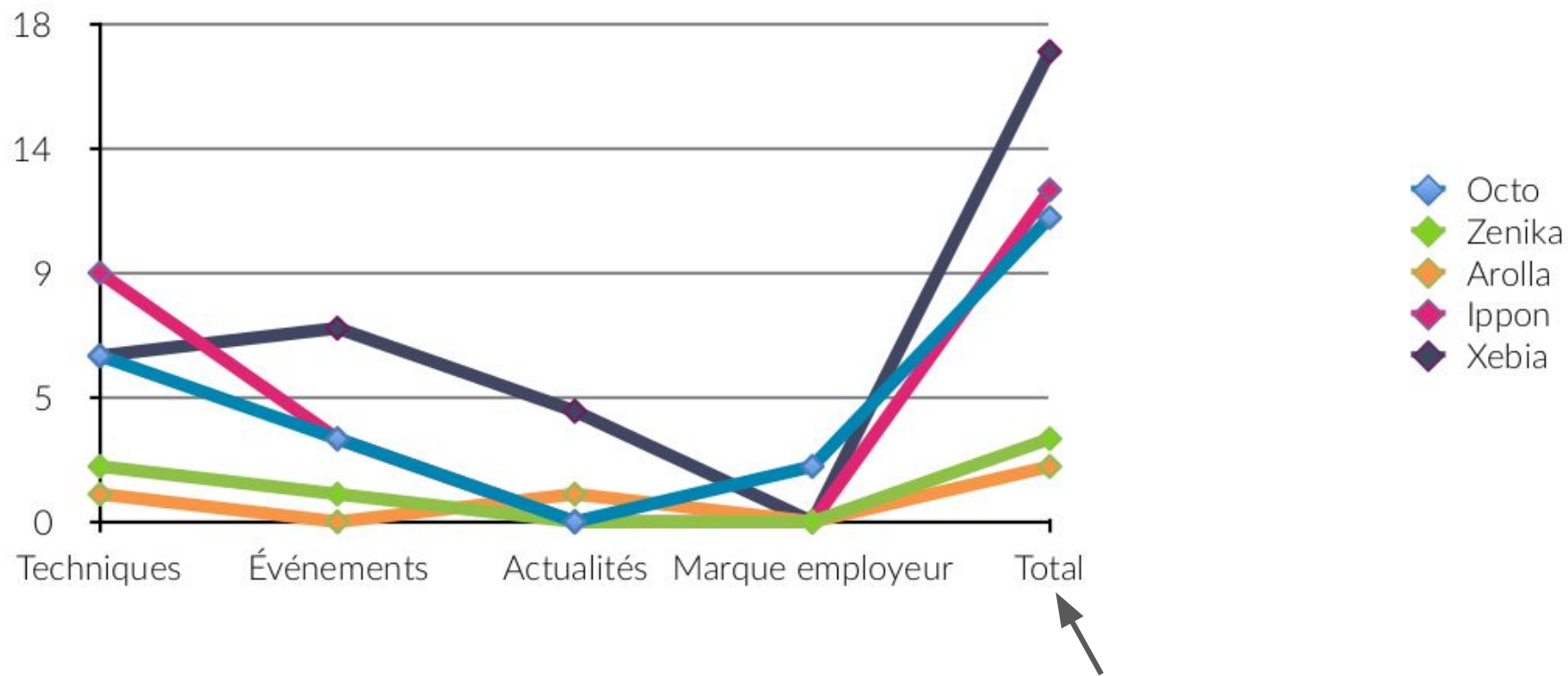


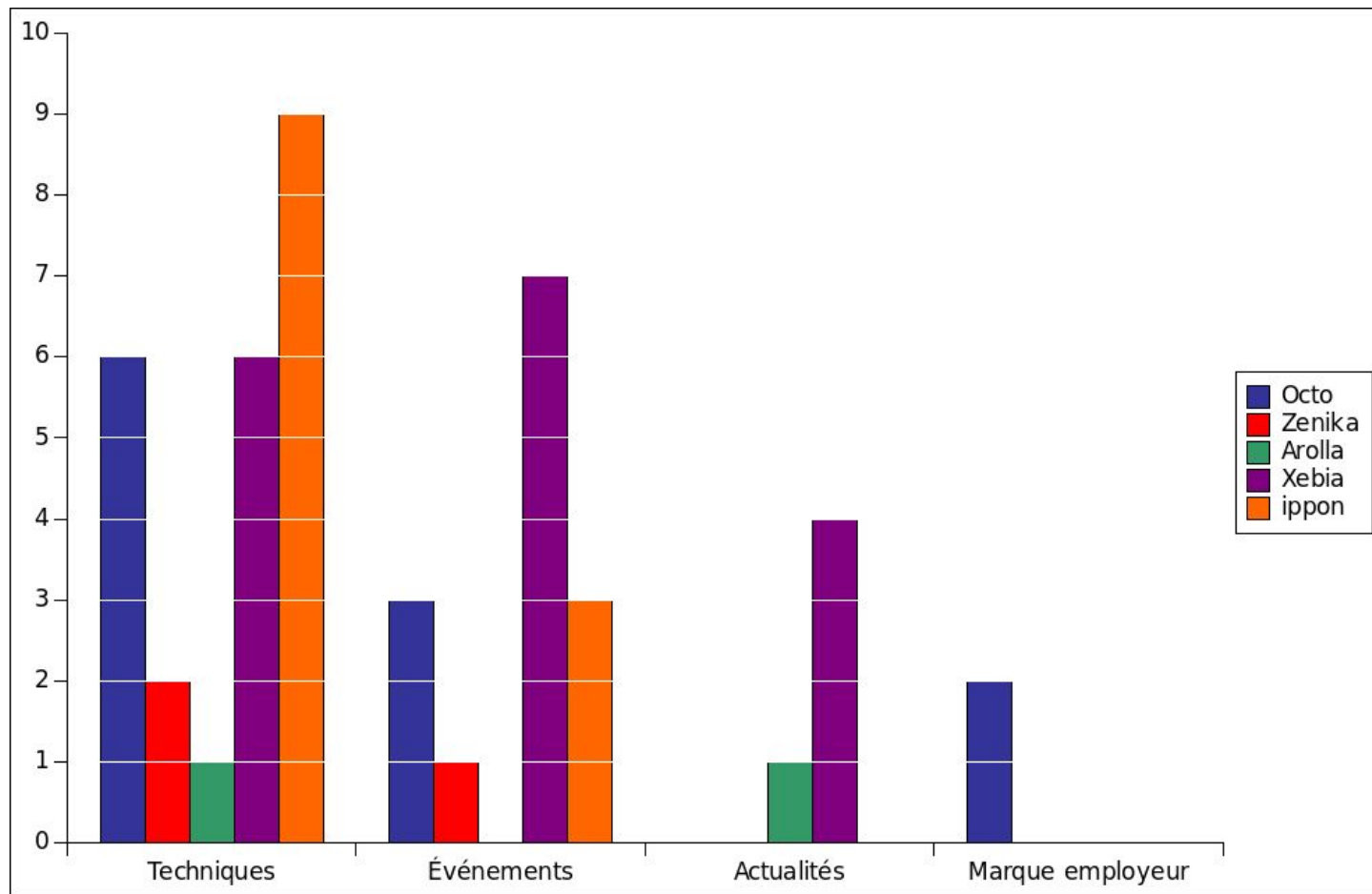






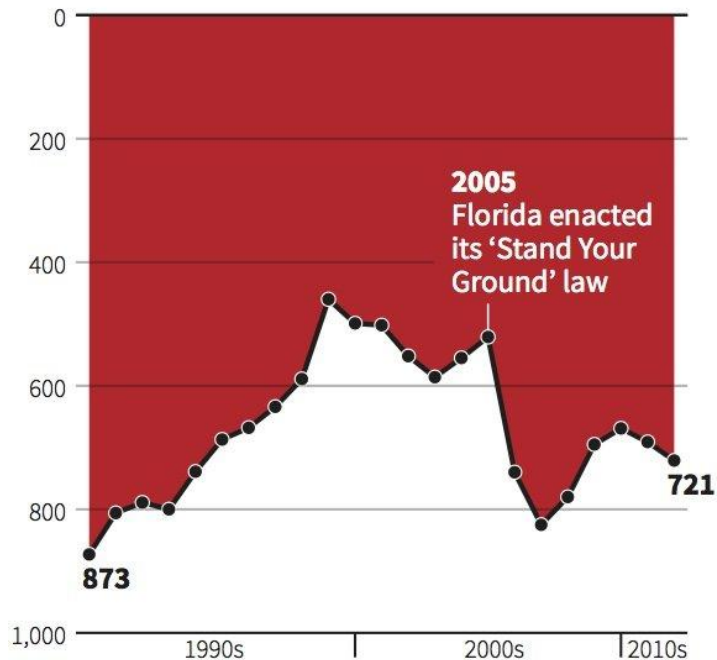






Gun deaths in Florida

Number of murders committed using firearms

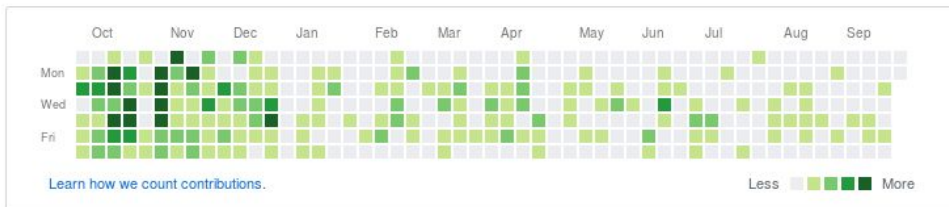


Source: Florida Department of Law Enforcement

Sources: *U.S. Census Bureau, Current Population Reports*; *U.S. Census Bureau, Census of the United States*; *U.S. Census Bureau, Census of the United States*; *U.S. Census Bureau, Census of the United States*.

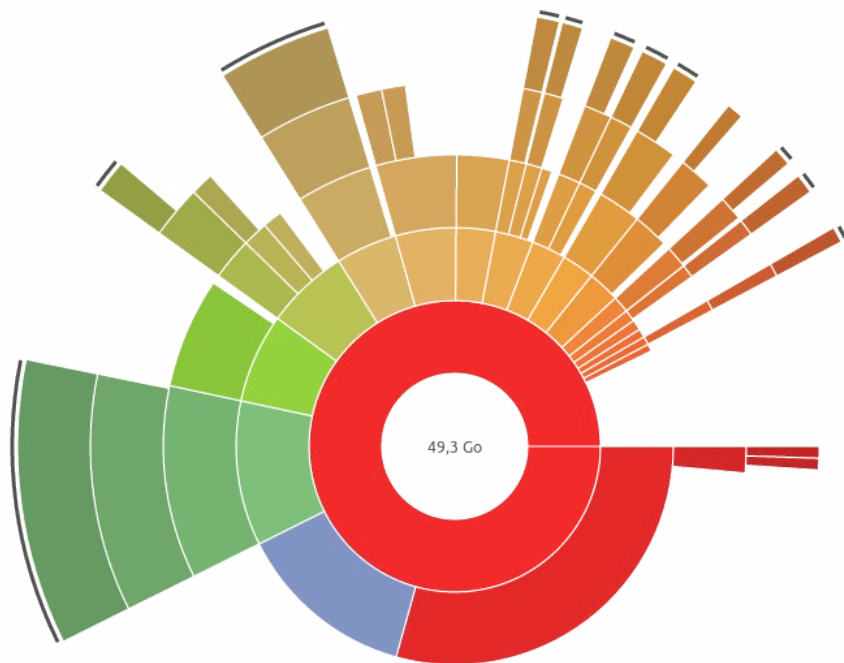
More DataViz

457 contributions in the last year



HeatMap

- ▼ 2 categorical dimension
- ▼ correlation
- ▼ order of magnitude
- ▼ inaccurate



Sunburst

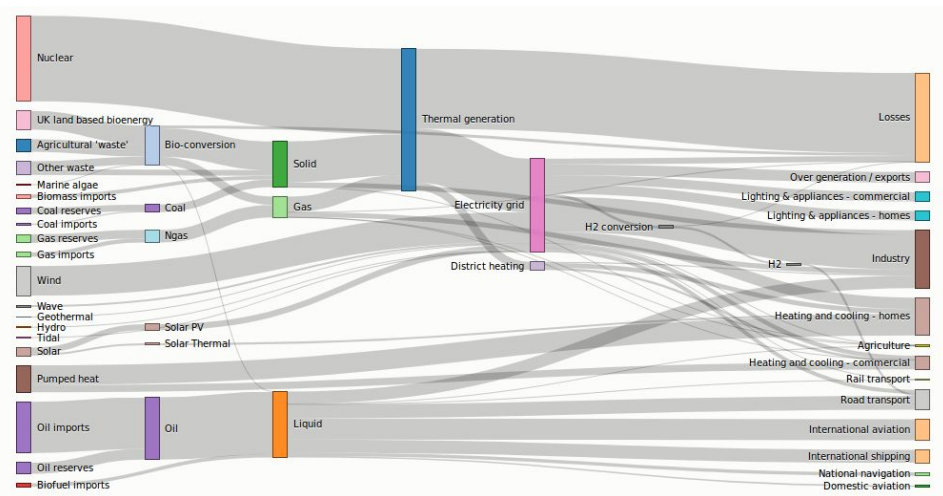
- ▼ composition
- ▼ hierarchy
- ▼ color highlight group

Top 1000 Companies by Revenue from INC.com
According to opendata.socrata.com



TreeMap

- ▼ composition
- ▼ hierarchy
- ▼ drill down



Parallel Sets

- ▼ flow
- ▼ composition
- ▼ see input output
- ▼ interactivity

Reference



viz



[By Charles Minard \(1781-1870\) \[Public domain\], via Wikimedia Commons](#)



[By John Snow \[Public domain\], via Wikimedia Commons](#)



<https://www.xkcd.com/1882/>



http://www.francetvinfo.fr/politique/marine-le-pen/carte-presidentielle-decouvrez-qui-arrive-en-tete-des-sondages-au-second-tour-dans-votre-region_2173156.html



<https://bost.ocks.org/mike/sankey/>



https://www.anychart.com/products/anychart/gallery/Tree_Map_Charts/Top_1000_Companies.php



inspiration



<https://medium.com/@kennelliott/39-studies-about-human-perception-in-30-minutes-4728f9e31a73>



The Visual Display of Quantitative Information (Edward R. Tufte)



Data Visualisation (Andy Kirk)



<https://mycarta.wordpress.com/2012/05/29/the-rainbow-is-dead-long-live-the-rainbow-series-outline/>



<http://www.datavizcatalogue.com>