Data, design, and D3.js

A PRIMER ON MAKING CLEAR GRAPHICS

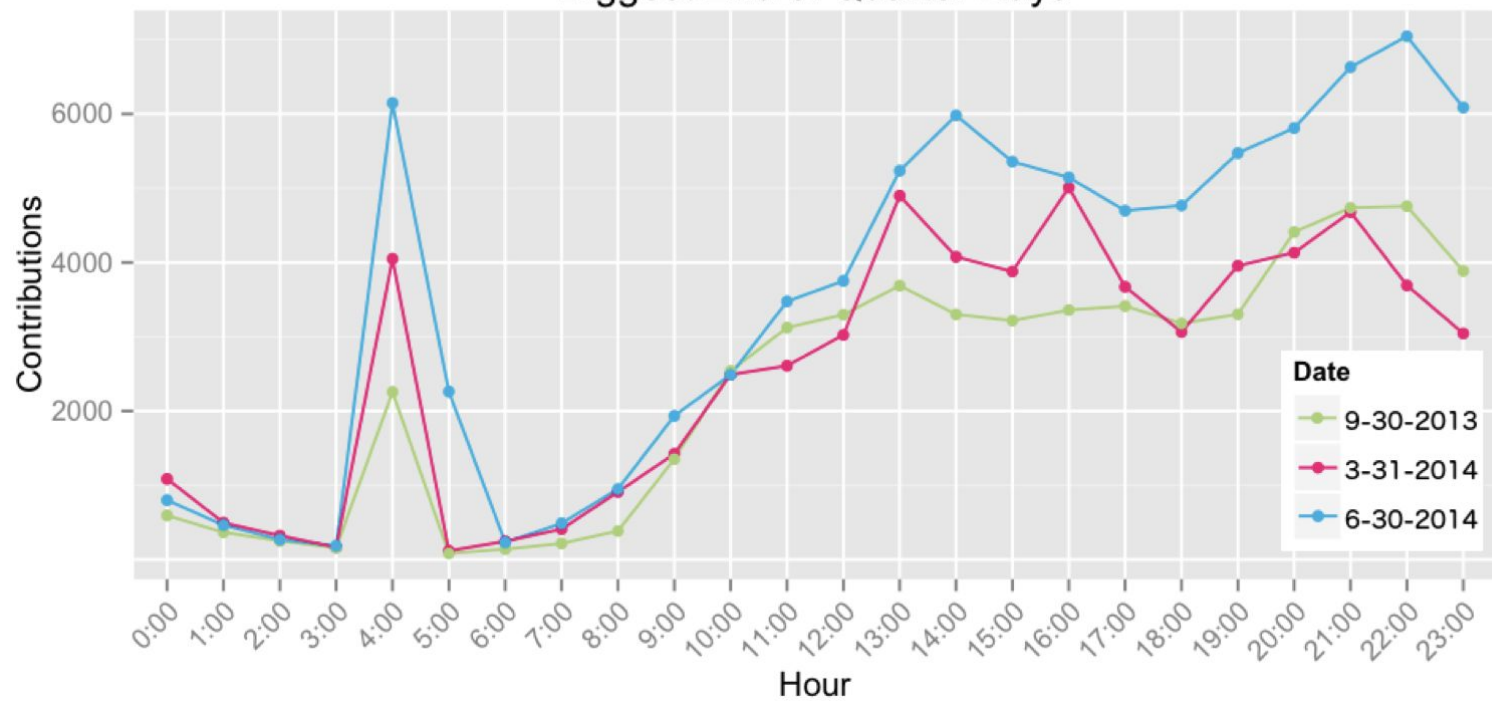# I'm Kim Niedermaier.

Let's talk 📊, 🍩, & 📈.

ActBlue

Nonprofit fundraising platform, founded in 2004
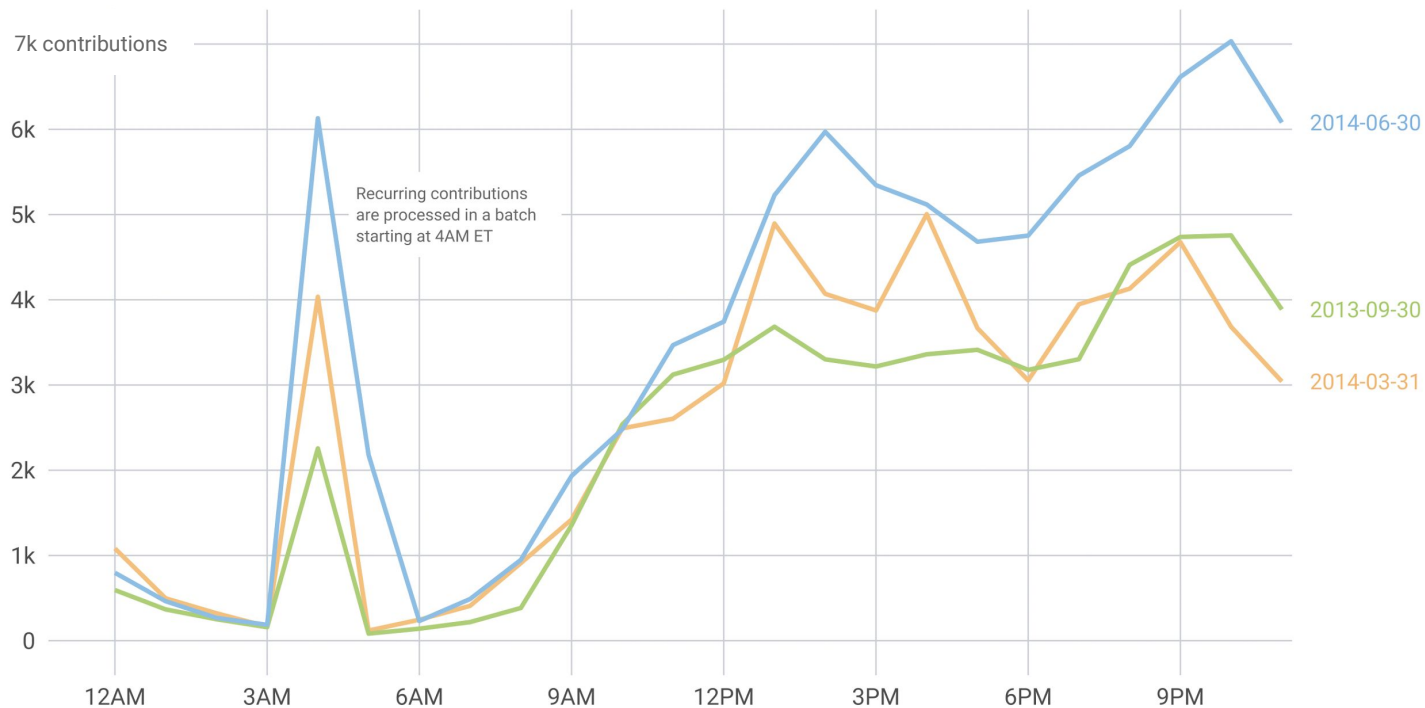
20k+ campaigns, organizations

Almost $2B raised

$36 average contribution size

Biggest End of Quarter Days

CONTRIBUTIONS BY HOUR ON THE BIGGEST END OF QUARTER DAYS

AS OF JULY 2014 FOR ACTBLUE

7k contributions

Recurring contributions
are processed in a batch
starting at 4AM ET

2014-06-30

2013-09-30

2014-03-31

6k

5k

4k

3k

2k

1k

0

12AM   3AM   6AM   9AM   12PM   3PM   6PM   9PM

Comparing scales

Hour

0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00

12AM 3AM 6AM 9AM 12PM 3PM 6PM 9PM

Comparing scales

7k contributions

6000 –

6k —

5k —

Contributions
4000 –
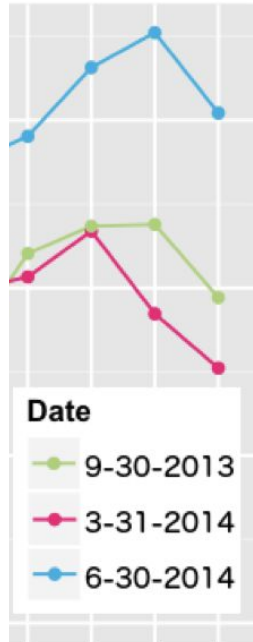
4k —
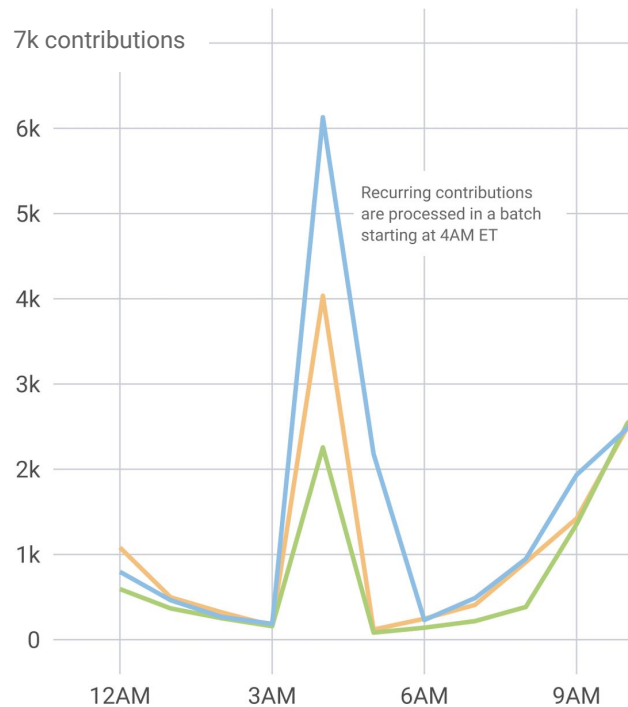
3k —

2000 –

2k —

1k —

0 —
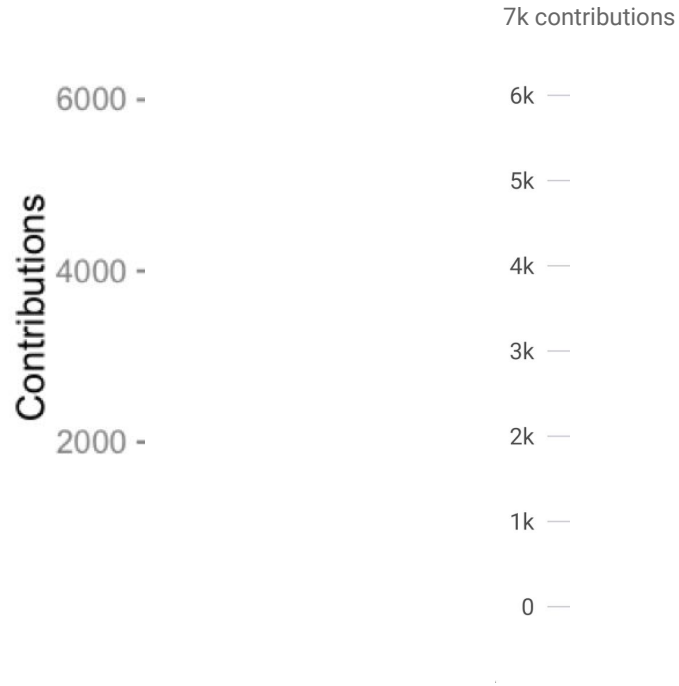
Editing title and subtitles

Biggest End of Quarter Days

CONTRIBUTIONS BY HOUR ON THE BIGGEST END OF QUARTER DAYS

AS OF JULY 2014 FOR ACTBLUE

Removing the legend

Date
- 9-30-2013
- 3-31-2014
- 6-30-2014

2014-06-30

2013-09-30

2014-03-31

Adding annotations

7k contributions

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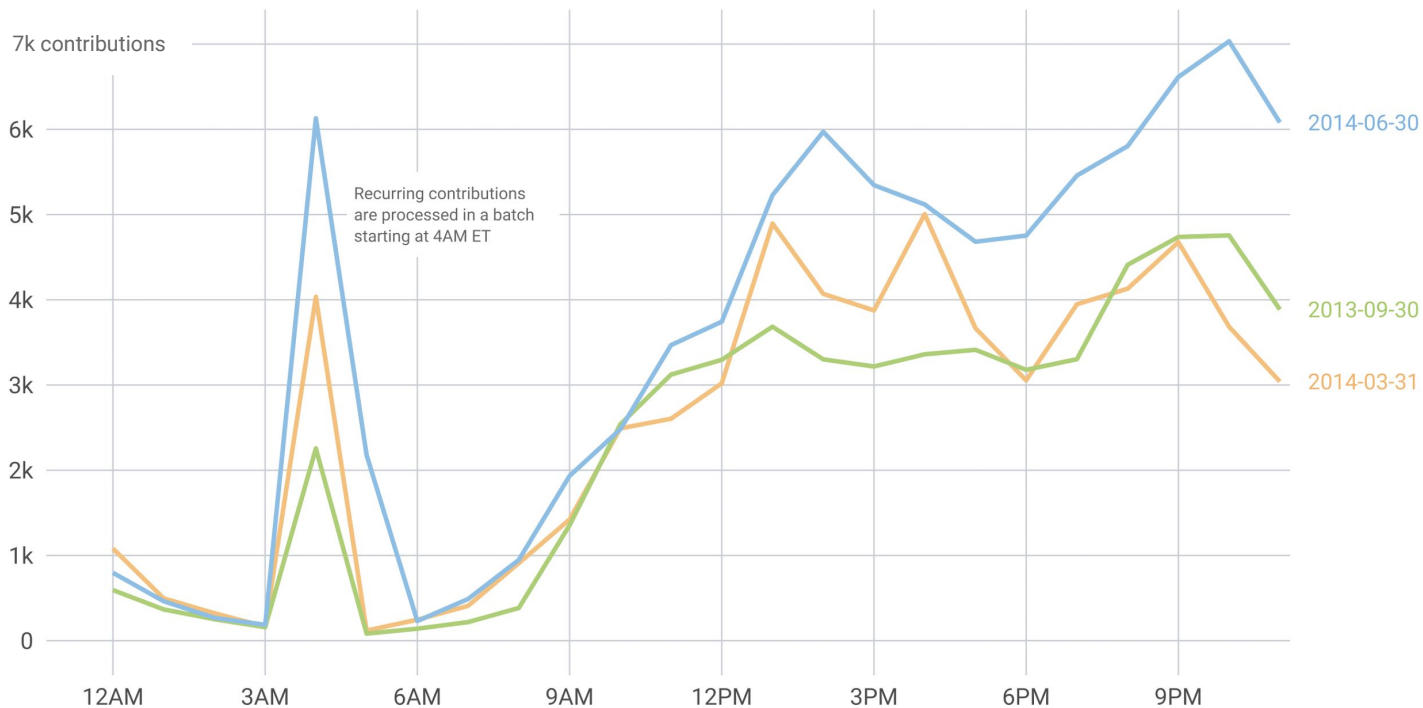
Aim for clarity

Provide context in titles and subtitles

Remove redundant elements (e.g. axis titles, legends, etc.)

Annotate critical points of data

Use conventional abbreviations for labels

Keep text horizontal

Increase density of meaningful information

Consider D3.js

What D3.js offers

Mix of low-level modules

Provides flexibility to compose visualizations
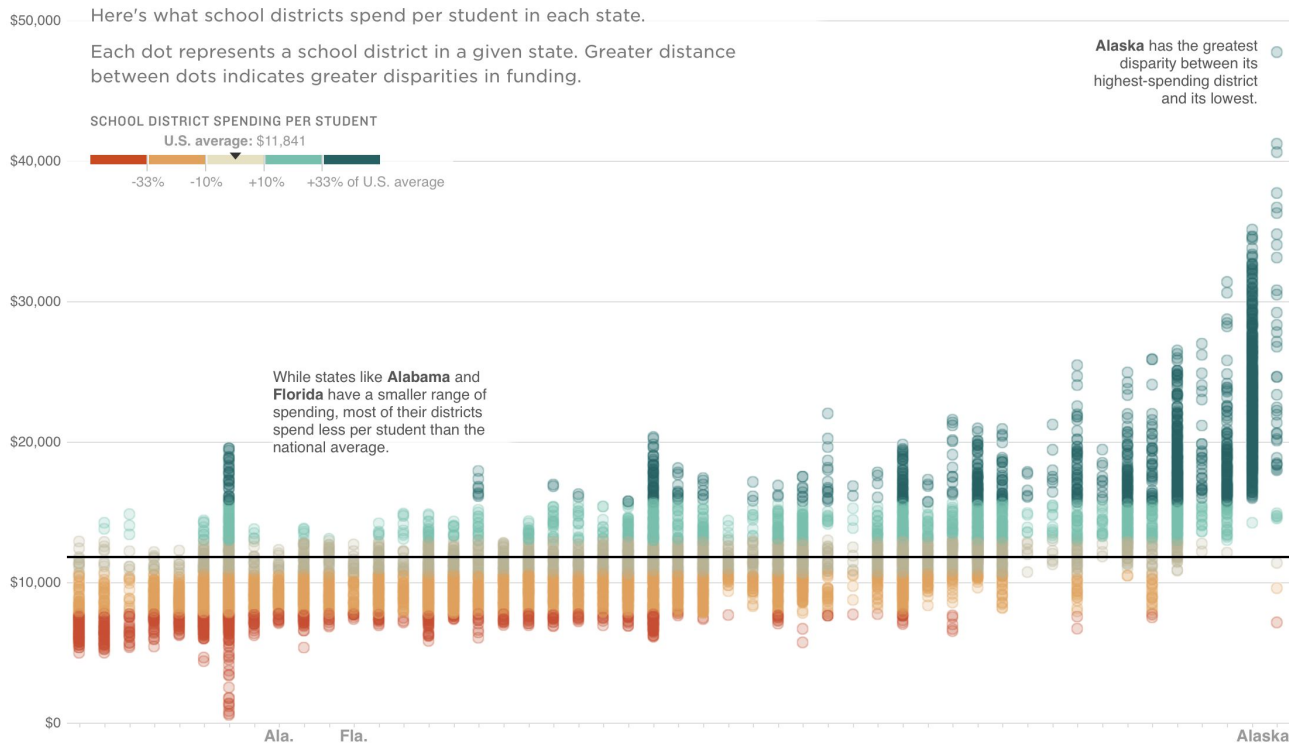
Everything is customizable and interchangeable

Straightforward debugging

If you know SVG, CSS, HTML, and some javascript: dive in!

Examples

NPR

Is There A Better Way To Pay For America's Schools?

May 1, 2016 · 7:00 AM ET

Here's what school districts spend per student in each state.

Each dot represents a school district in a given state. Greater distance between dots indicates greater disparities in funding.

SCHOOL DISTRICT SPENDING PER STUDENT
U.S. average: $11,841

-33%   -10%   +10%   +33% of U.S. average

Alaska has the greatest disparity between its highest-spending district and its lowest.

While states like **Alabama** and **Florida** have a smaller range of spending, most of their districts spend less per student than the national average.

$50,000
$40,000
$30,000
$20,000
$10,000
$0

Ala.   Fla.   Alaska

Notes

This Education Week analysis of federal and state data excludes extreme outliers as well as districts with fewer than 200 students. Hawaii and Washington, D.C., are excluded because each has only one school district.

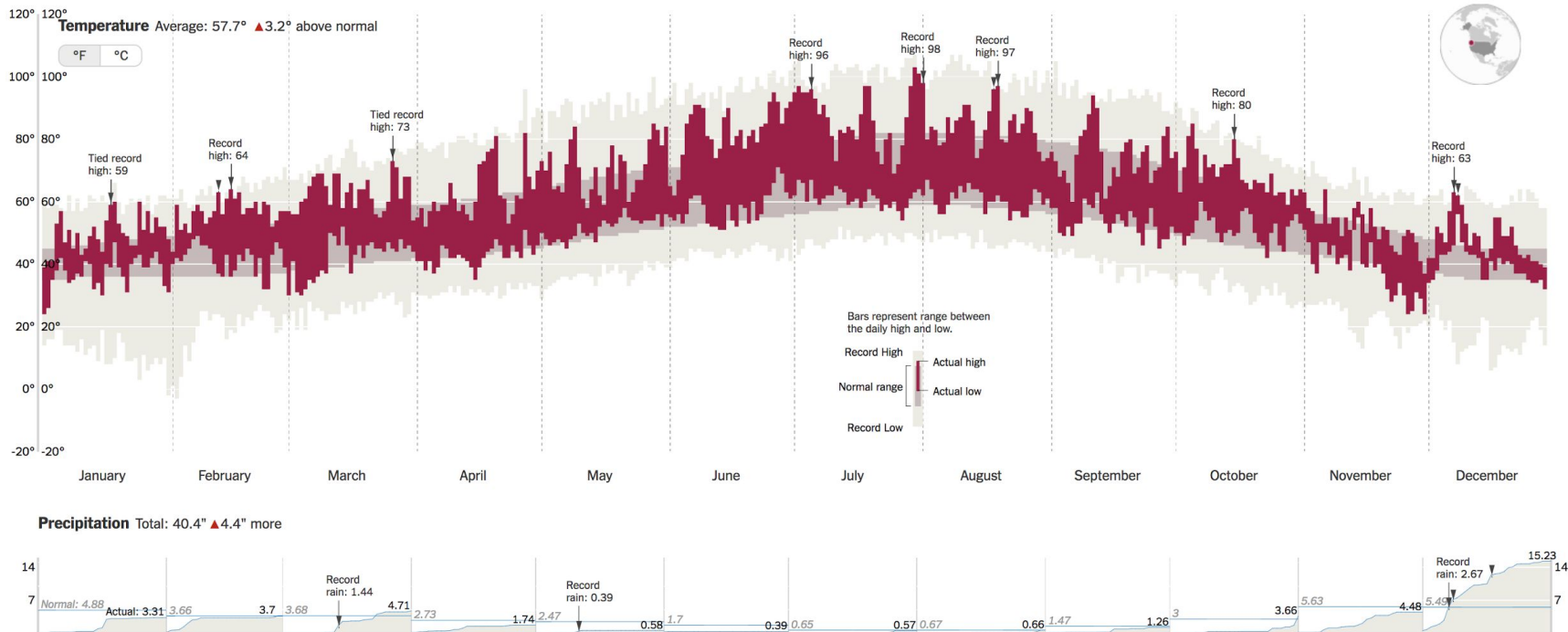*Source: Education Week analysis of federal and state data.*

Credit: Katie Park, Alyson Hurt and Lisa Charlotte Rost/NPR

https://www.npr.org/2016/05/01/476224759/is-there-a-better-way-to-pay-for-americas-schools

How Much Warmer Was Your City in 2015?

By **K.K. REBECCA LAI** FEB. 19, 2016

Scientists declared that 2015 was Earth's hottest year on record. In a database of 3,116 cities provided by AccuWeather, about 90 percent of them were warmer than normal. Enter your city in the field below to see how much warmer it was last year.

RELATED ARTICLE

◄ **Portland, Ore.** ►

Temperature Average: 57.7° ▲3.2° above normal

°F | °C

Record high: 96
Record high: 98
Record high: 97
Record high: 80
Record high: 63
Tied record high: 73
Record high: 64
Tied record high: 59

Bars represent range between the daily high and low.

Record High — Actual high
Normal range — Actual low
Record Low

January February March April May June July August September October November December

Precipitation Total: 40.4" ▲4.4" more

Normal: 4.88 Actual: 3.31 3.66 3.7 3.68 Record rain: 1.44 4.71 2.73 1.74 2.47 Record rain: 0.39 0.58 1.7 0.39 0.65 0.57 0.67 0.66 1.47 1.26 3 3.66 5.63 Record rain: 2.67 4.48 5.49 15.23

https://www.nytimes.com/interactive/2016/02/19/us/2015-year-in-weather-temperature-precipitation.html

FiveThirtyEight

APR. 16, 2015 AT 4:03 PM

Where Your State Gets Its Money

By Ben Casselman and Allison McCann

Filed under Taxes

https://fivethirtyeight.com/features/where-your-state-gets-its-money/

Where Do Your State's Taxes Come From?
2014 state tax revenues

Income taxes make up more than **50%** of tax revenue
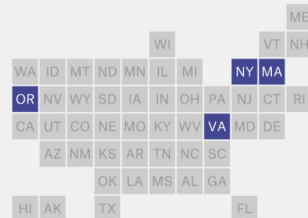
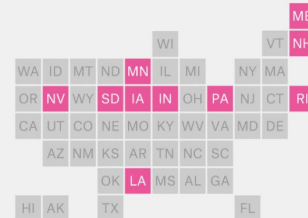**Sales taxes** make up more than **50%** of tax revenue

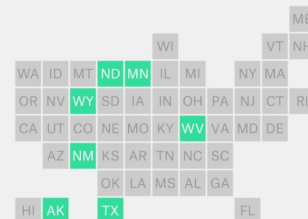**Property taxes** make up more than **10%** of tax revenue

Sin taxes make up more than **10%** of tax revenue

Corporate taxes make up more than **10%** of tax revenue

Severance taxes make up more than **10%** of tax revenue

FIVETHIRTYEIGHT   SOURCE: CENSUS BUREAU

Thank you

Slides and resources can be found at
kimniedermaier.com/talks/donut-js