

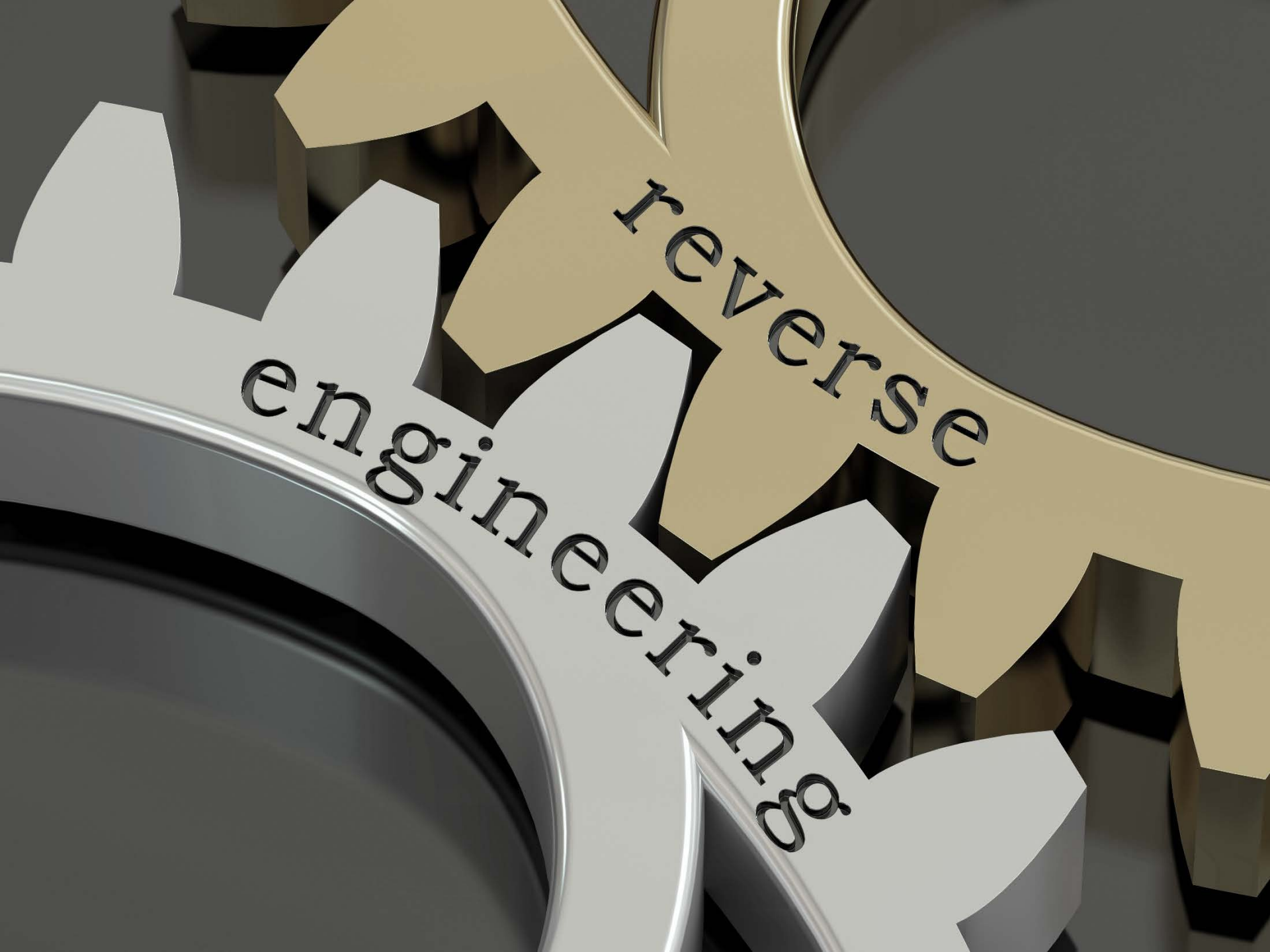


# The Magic is in the Message!

The Good, The Bad and The Ugly  
Of Data Visualization in Practice







reverse  
engineering

# My wish for you



You are less lonely

You feel validated

You are inspired

You are empowered

You are an informed customer

You get the most bang for your buck

# A disclaimer

I can't do a good job at this without showing some specific examples, so someone's feelings might get hurt.

No doubt, there are cases where seeing these visualizations in their original context would help in their interpretation

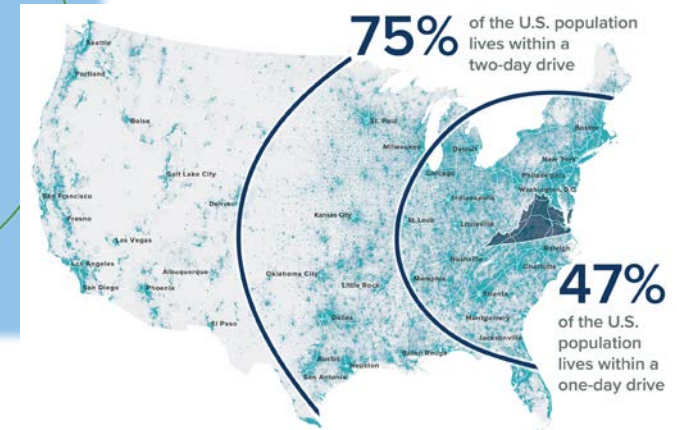




# Once upon a time

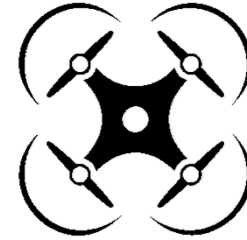
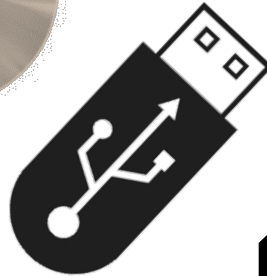
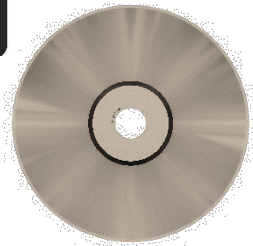
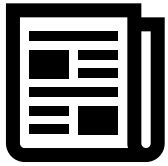


# And all throughout the land...





# The Channels have changed



We're Business  
Friendly!

And we have Talent!

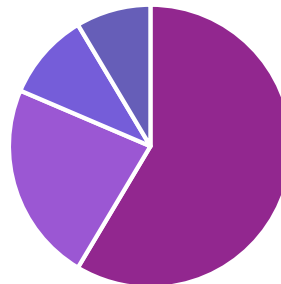
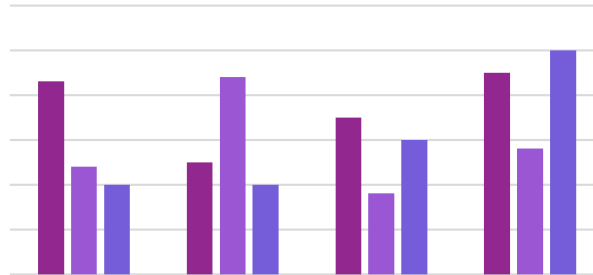
# The Visual Language Evolved

## Words

unemployment  
decrease  
taxes  
increase  
workforce  
population  
cost  
best  
highest  
students  
wages  
graduates

- Lorem ipsum
- Lorem ipsum
- Lorem ipsum

## Charts



## Icons



# Have the messages changed?



# Well, maybe a little



## THE WORLD'S 50 BEST CITIES FOR MILLENNIALS, 2017

**CEOWORLD Magazine**

1. AMSTERDAM, NETHERLANDS
2. BERLIN, GERMANY
3. MUNICH, GERMANY
4. LISBON, PORTUGAL
5. ANTWERP, BELGIUM
6. BARCELONA, SPAIN
7. LYON, FRANCE
8. COLOGNE, GERMANY
9. PARIS, FRANCE
10. VANCOUVER, CANADA
11. LILLE, FRANCE
12. ZURICH, SWITZERLAND
13. VALENCIA, SPAIN
14. THE HAGUE, NETHERLANDS
15. MONTREAL, CANADA
16. LONDON, UNITED KINGDOM
17. ROTTERDAM, NETHERLANDS
18. NANTES, FRANCE
19. PRAGUE, CZECH REPUBLIC
20. HELSINKI, FINLAND
21. MANCHESTER, UNITED KINGDOM
22. BORDEAUX, FRANCE
23. AUCKLAND, NEW ZEALAND
24. TORONTO, CANADA
25. BRISTOL, UNITED KINGDOM

26. OSLO, NORWAY
27. MARSEILLE, FRANCE
28. MADRID, SPAIN
29. VIENNA, AUSTRIA
30. GLASGOW, UNITED KINGDOM
31. BIRMINGHAM, UNITED KINGDOM
32. HAMBURG, GERMANY
33. DUBLIN, IRELAND
34. MONTPELIER, FRANCE
35. UTRECHT, NETHERLANDS
36. OTTAWA, CANADA
37. FRANKFURT, GERMANY
38. GRAZ, AUSTRIA
39. BRUSSELS, BELGIUM
40. PORTO, PORTUGAL
41. AUSTIN, TEXAS, UNITED STATES
42. GRONINGEN, NETHERLANDS
43. GENEVA, SWITZERLAND
44. EDINBURGH, UNITED KINGDOM
45. SAN FRANCISCO, UNITED STATES
46. ATHENS, GREECE
47. BANGKOK, THAILAND
48. SEVILLE, SPAIN
49. GRANADA, SPAIN
50. DENVER, COLORADO, US



**TOP 10 -**  
**ALL SMALL BUSINESS OWNERS**





# The Magic is in the Message





# Message

Weak

Strong

Strong

**BAD**

GOOD

Design

Weak

**UGLY**

**BAD**

# What's Good?



**Don't  
Copycat**



sustainable development goal



# Grab the First Mover Advantage





# Keep it Clean

Contact Us About GPI Search Select Language



DOING BUSINESS

COMMUNITIES

LIBRARY

INVESTORS

NEWS

EVENTS

TALENT

ACCESS

WEST COAST ADVANTAGE

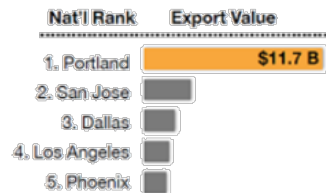
INDUSTRIES

GLOBAL

\$22.3 billion or 16th highest metro in U.S. with a share of metro economic output 13.8% or the 12th highest metro area, as reported by the Brookings Institution's *Metro Monitor*, 2016.

Greater Portland's strong export performance is driven by national strengths in five key sectors

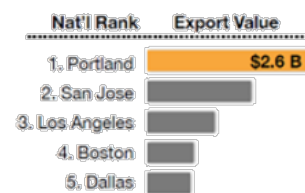
## Semiconductors



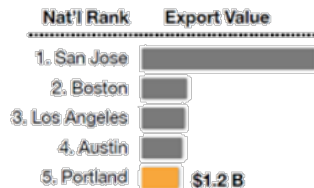
## Precision Instruments



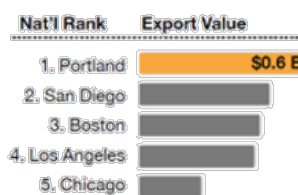
## Computer & Electronic Royalties



## Computer Equipment



## Audio/Visual Equipment



Source: Brookings, Export Monitor, 2015



To view an interactive map that highlights the extensive international investment in the region, [click here](#).

To view an Exports Fact Sheet from the Brookings Metropolitan Policy Program, [click here](#).

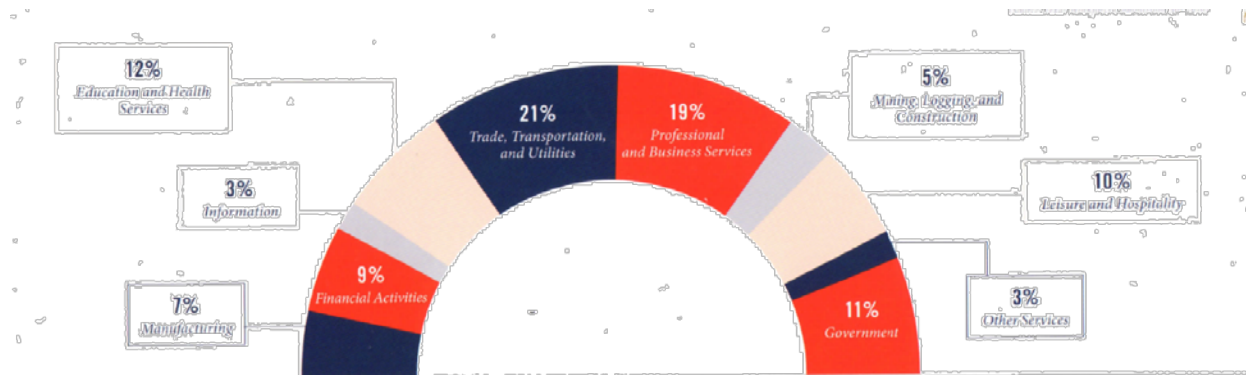


Coco Chanel

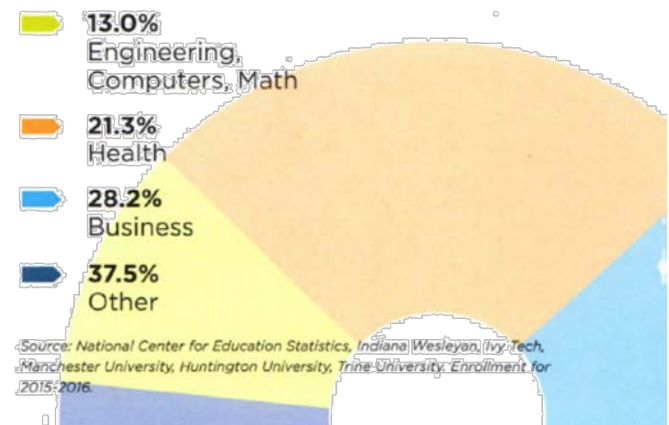
**“Before you leave the house, look in the mirror and remove one accessory.”**

randomquotesdaily.com

# Headlines shape the narrative



DEGREES AWARDED BY REGIONAL UNIVERSITIES



# Better – headline leads to data

## LOCAL DATA

Visit the [Charleston Regional Competitiveness Center](#) for additional economic, demographic, and workforce data.

34

NEW PEOPLE  
MOVE TO THE REGION EACH  
DAY

Source: U.S. Census Bureau

CHARLESTON | SC | USA

### Population & Demographics

Information on overall population,  
age, race, and household income

GET THE DATA

4<sup>x</sup>

CIVILIAN LABOR FORCE  
GREW 4X FASTER THAN THE  
U.S. AVERAGE FROM  
2010-2016

Source: U.S. Bureau of Labor Statistics

CHARLESTON | SC | USA

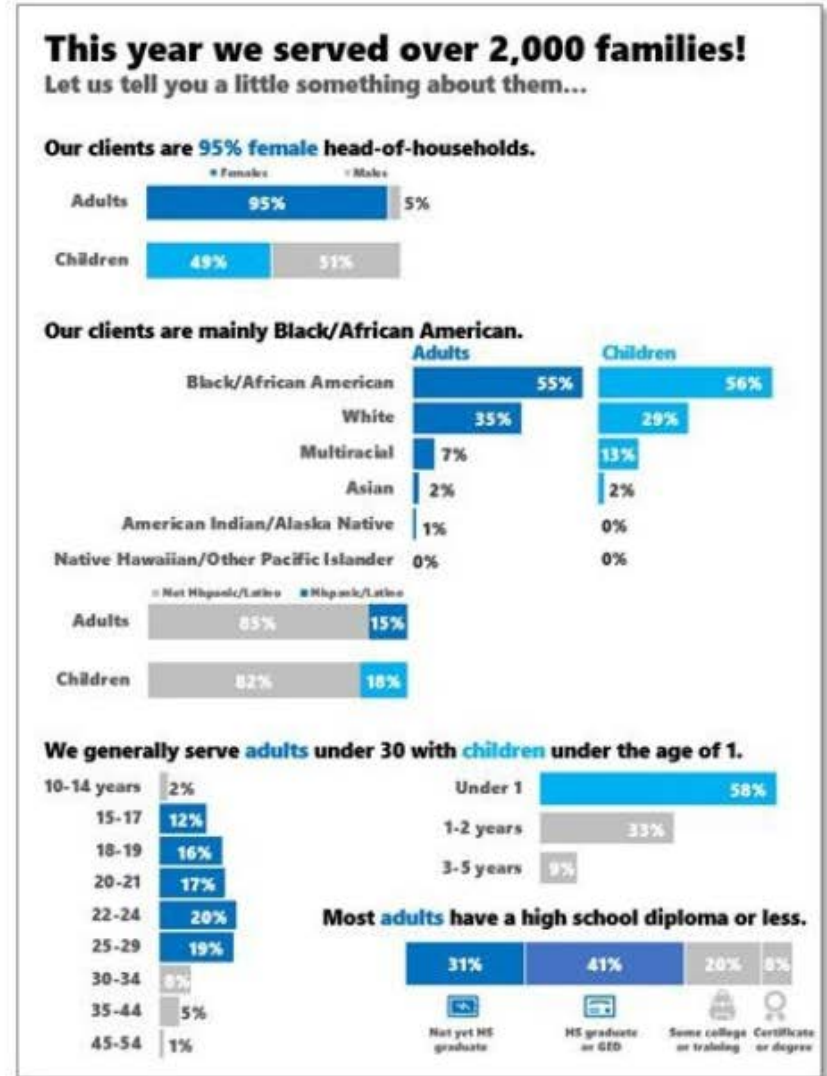
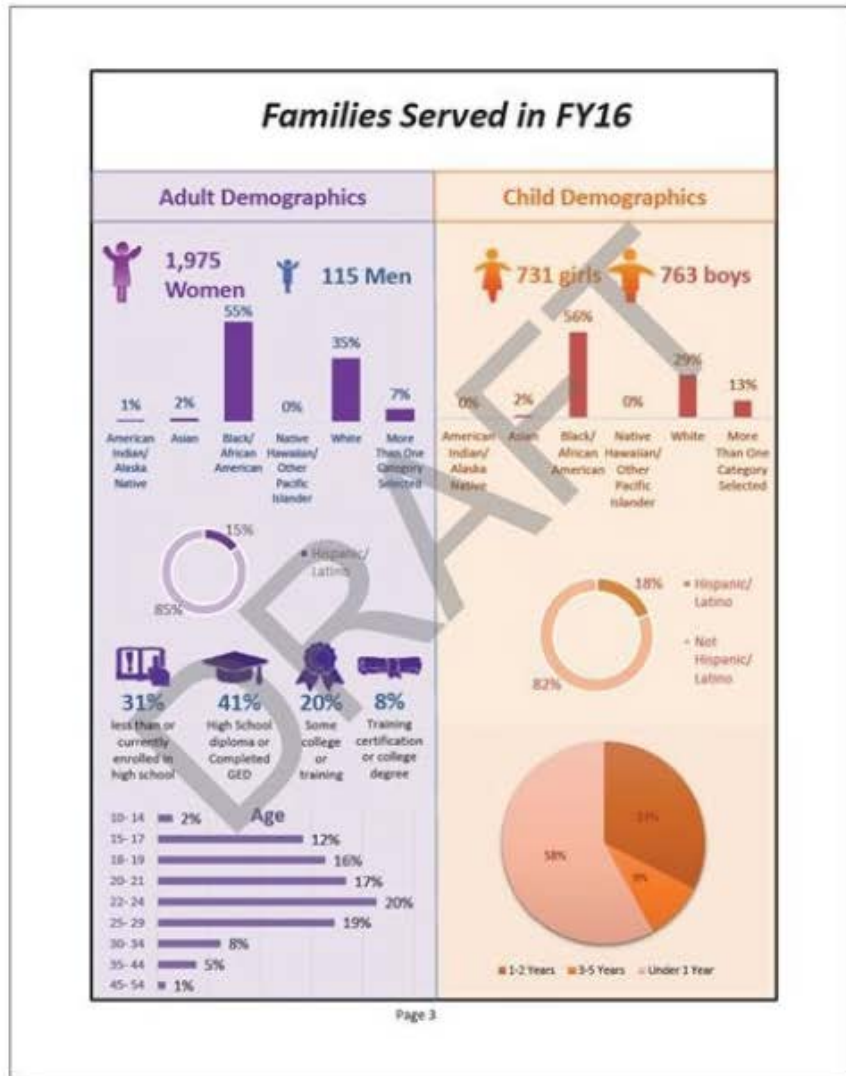
### Labor & Employment

Overall employment by occupations,  
labor pool data, civilian workforce

GET THE DATA

# Check out this makeover at Evergreen Data:

<http://stephanieevergreen.com/easy-simple-one-page-handout/>





# What's Bad?

---

Wasted



Wasted



Wasted



# Decoration is not visualization



Here's an article that talks about the problem of “data decoration”

<https://medium.com/visualizing-the-field/there-be-dragons-dataviz-in-the-industry-652e712394a0>

# Bad Message?

---



Or

# Wrong Audience ?

# Dashboards

Are for  
monitoring

**NOT** marketing



# economic development dashboard



All Images News Shopping Videos More

Settings Tools

a plata

innovation

county

gdp

dashboard 2030

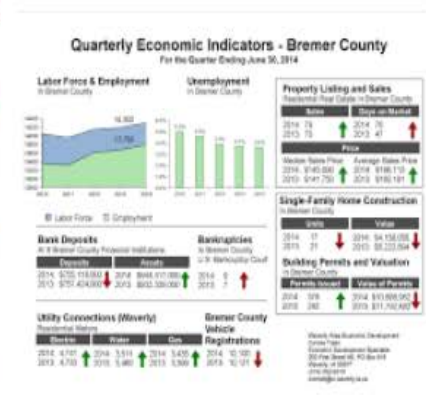
plata county

committee dashboards

climate

economic indicators

lexin





# Compared to ...?

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State averages



U.S. Averages



Centers of Industry



Emerging Competitors



The guy next door



# What's Ugly?

Wasted

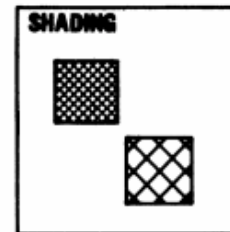
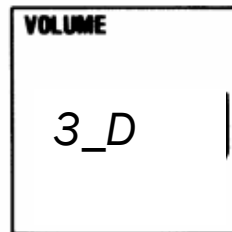
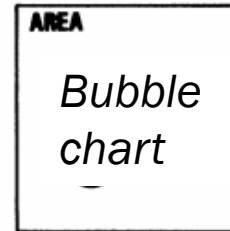
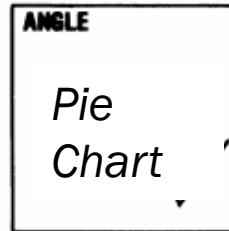
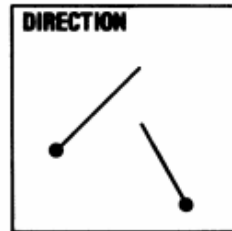
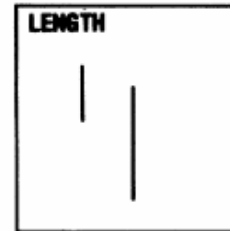
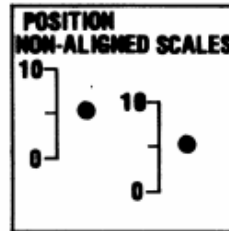
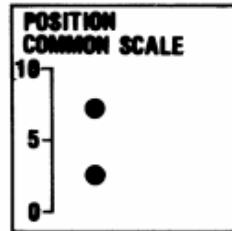


+



# For design, there is science

Easiest to understand

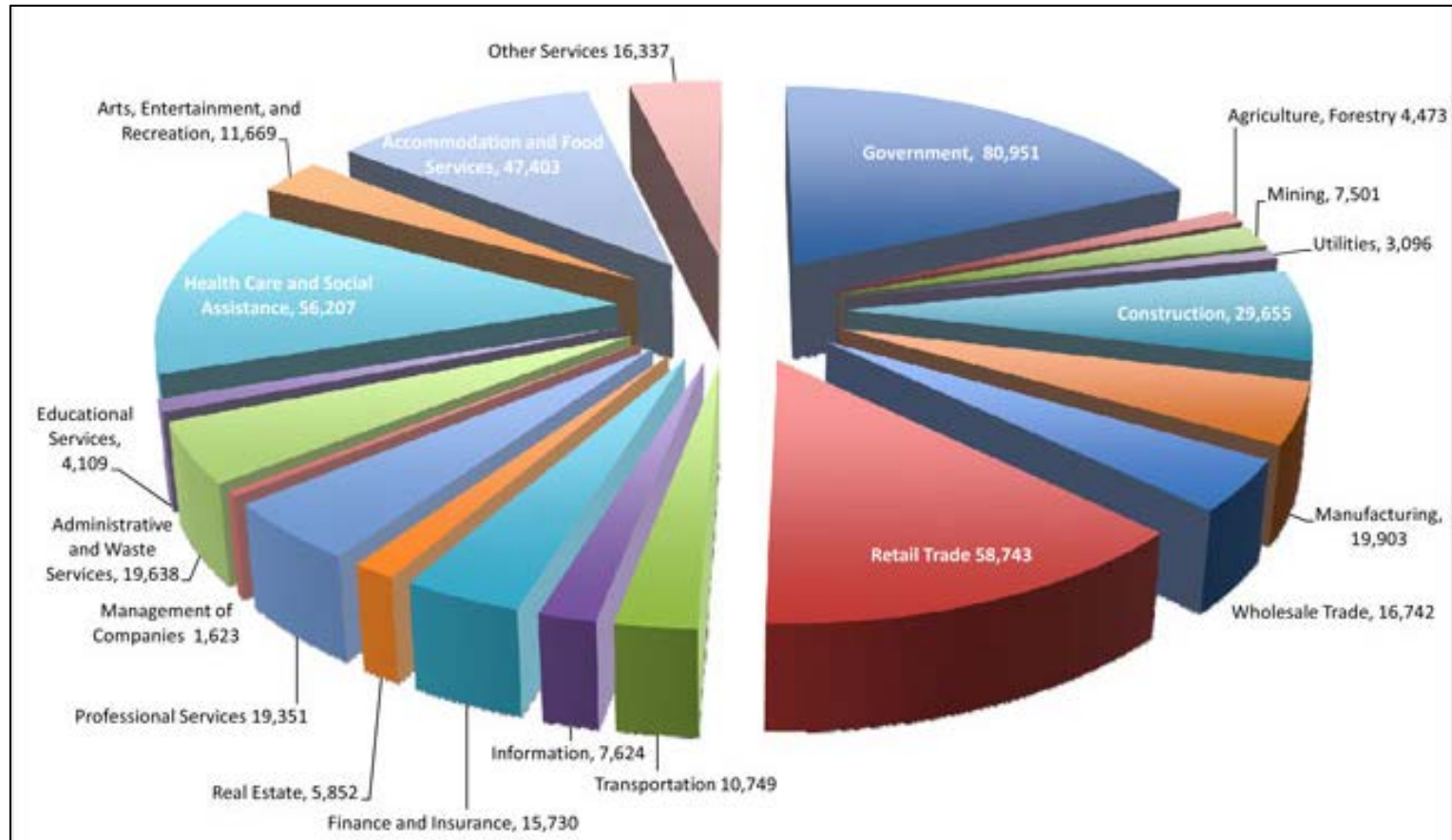


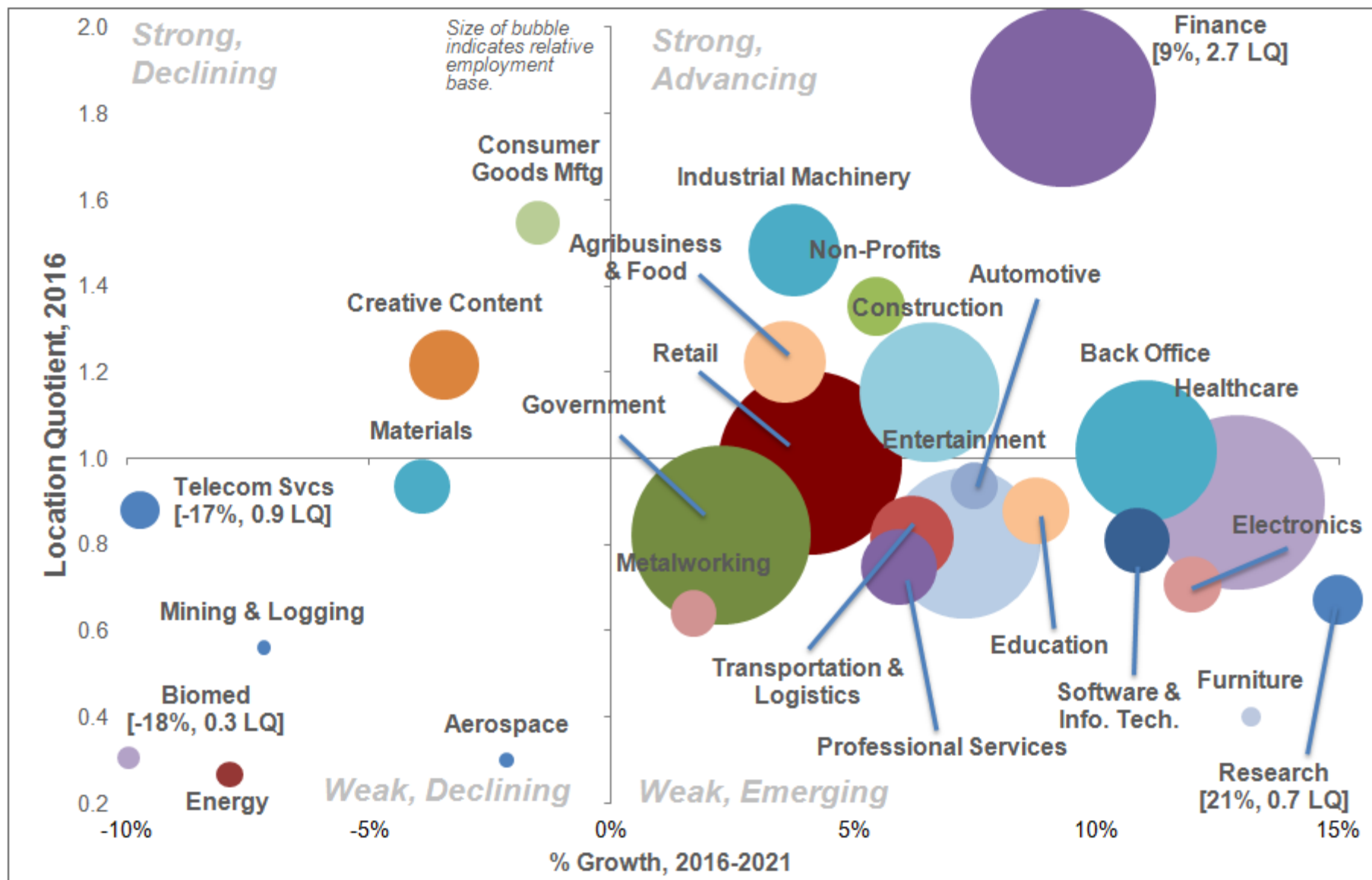
Hardest to understand

**COLOR SATURATION**

Source: based on the work of William Cleveland as shown here:  
<http://flowingdata.com/2010/03/20/graphical-perception-learn-the-fundamentals-first/> and here <https://priceconomics.com/how-william-cleveland-turned-data-visualization/>

# For Example

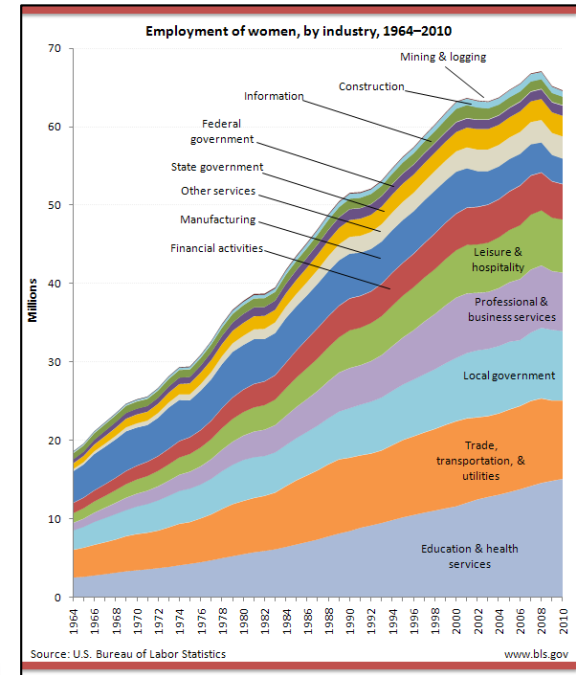
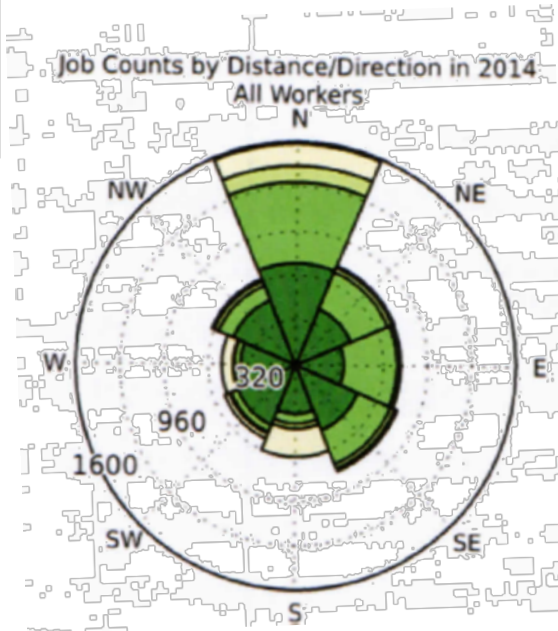
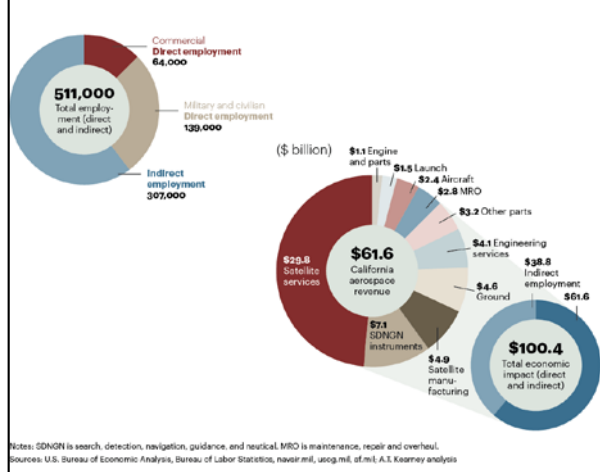






# More Challenges

Figure 2  
Aerospace's employment and revenue contributions to California's economy



# Damage



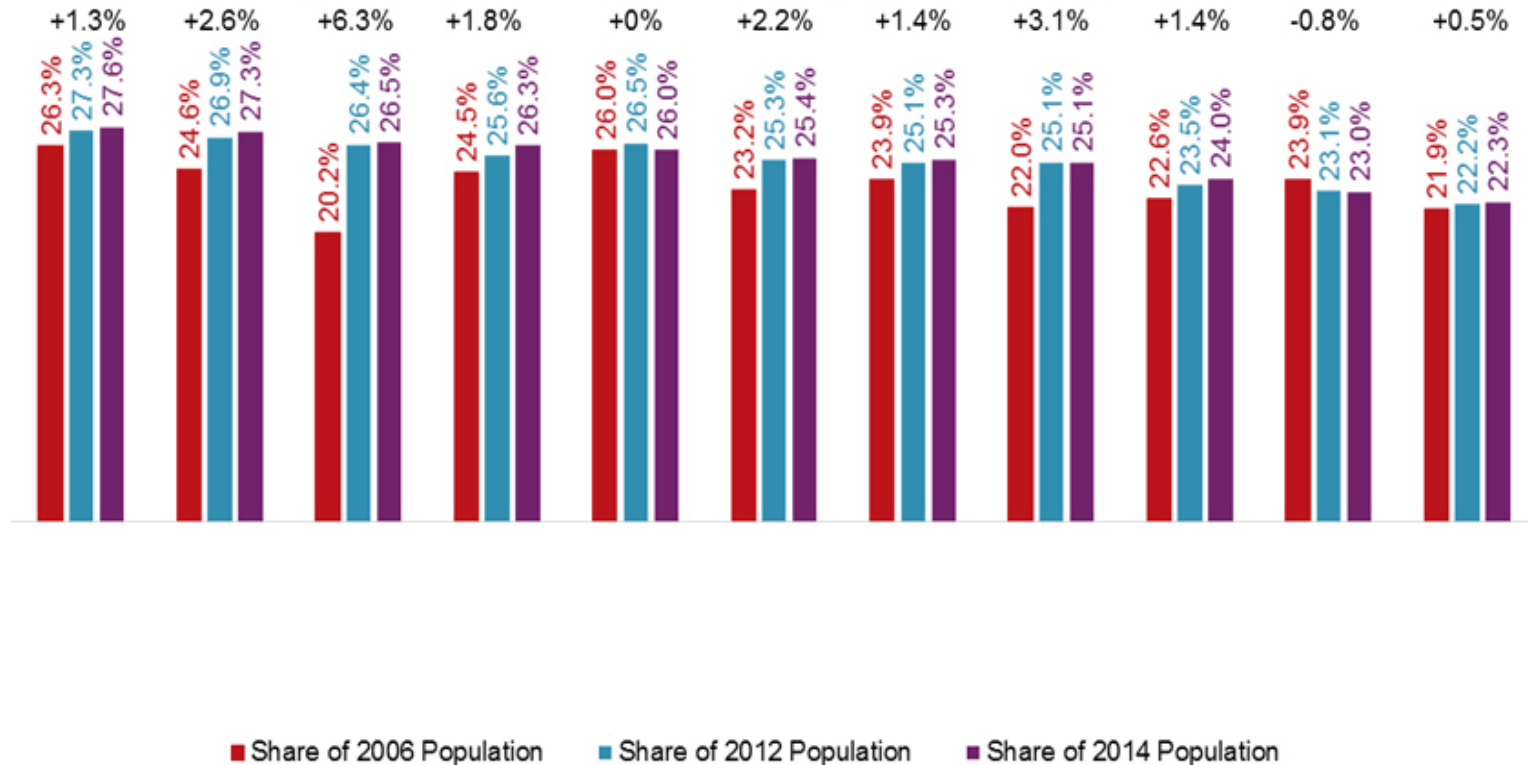
Are you purposely misleading me?

Do you not understand the data?

Are you going for the easy layup?

# Spot the Problem(s)

Millennial share of  
increasing fastest among 10 largest U.S. cities population

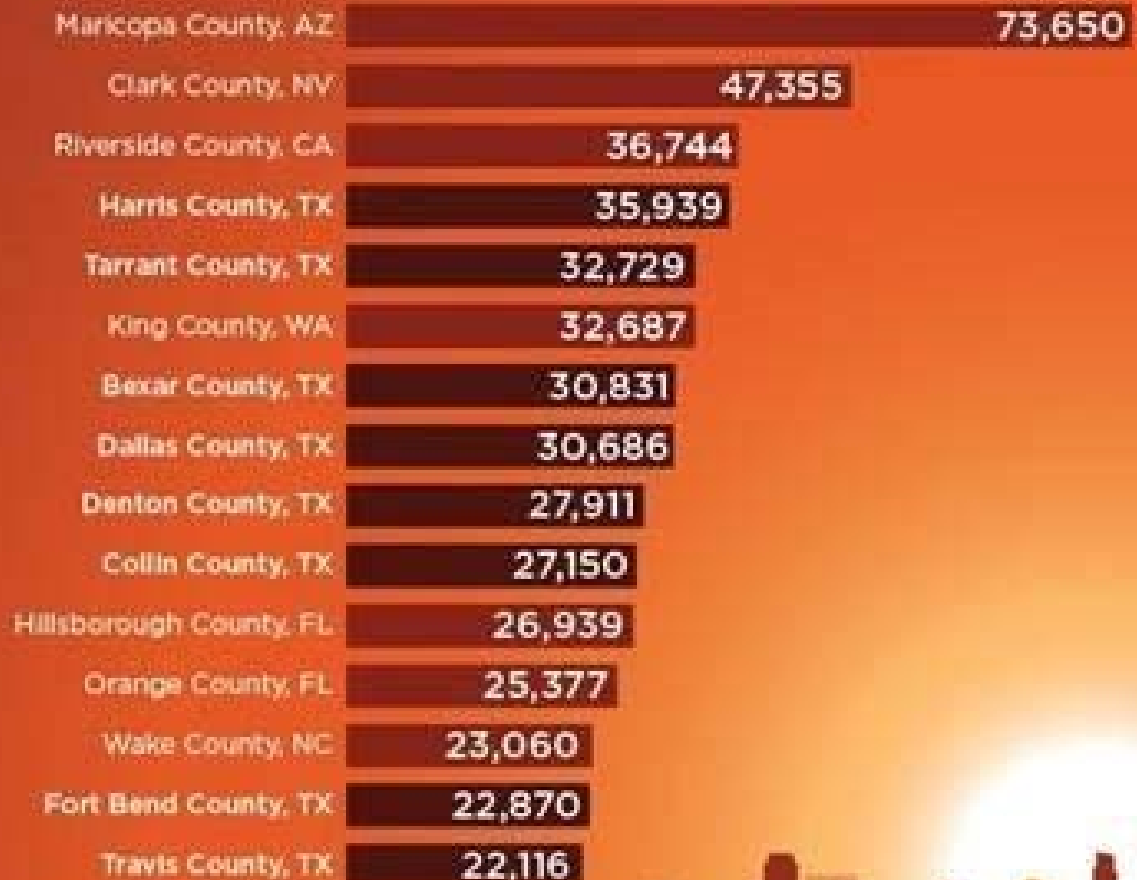


Does  
It?

# Texas Keeps Getting Bigger

Lone Star State Counties Lead U.S. in Population Gain

Numeric population change

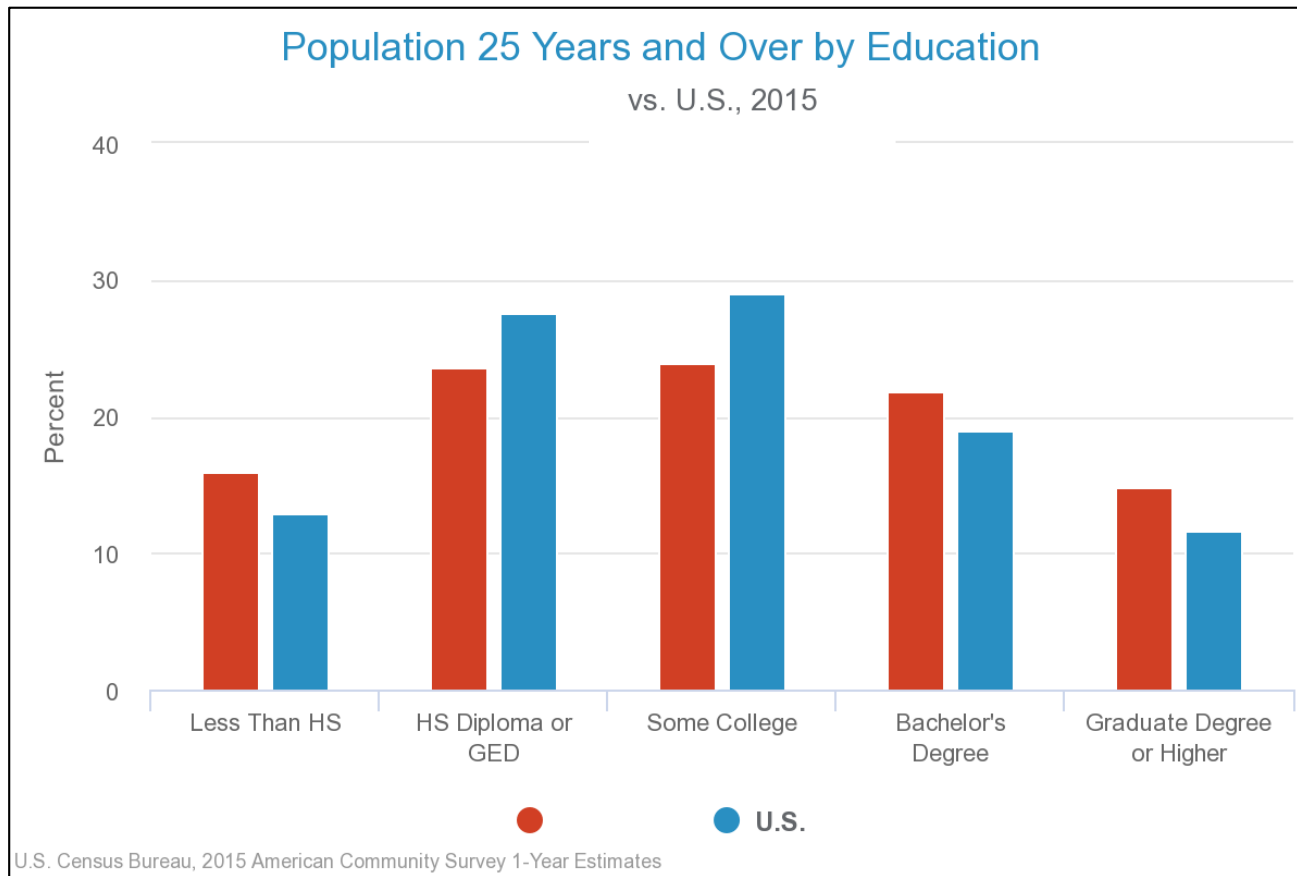


United States<sup>™</sup>  
**Census**  
Bureau

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU  
[census.gov](https://www.census.gov)

Source: Vintage 2017 Population Estimates,  
July 1, 2016, to July 1, 2017.  
[www.census.gov/programs-surveys/popest.html](https://www.census.gov/programs-surveys/popest.html)

# Why?

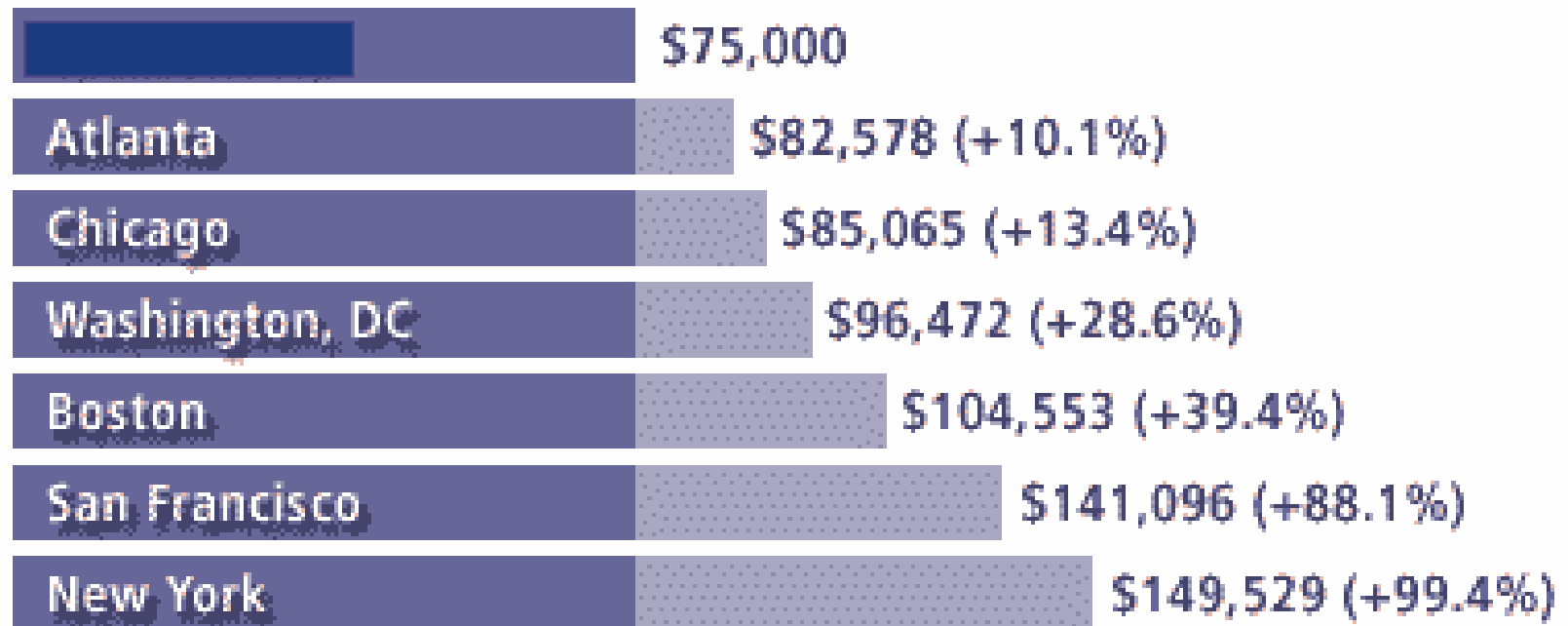




# The easy layup

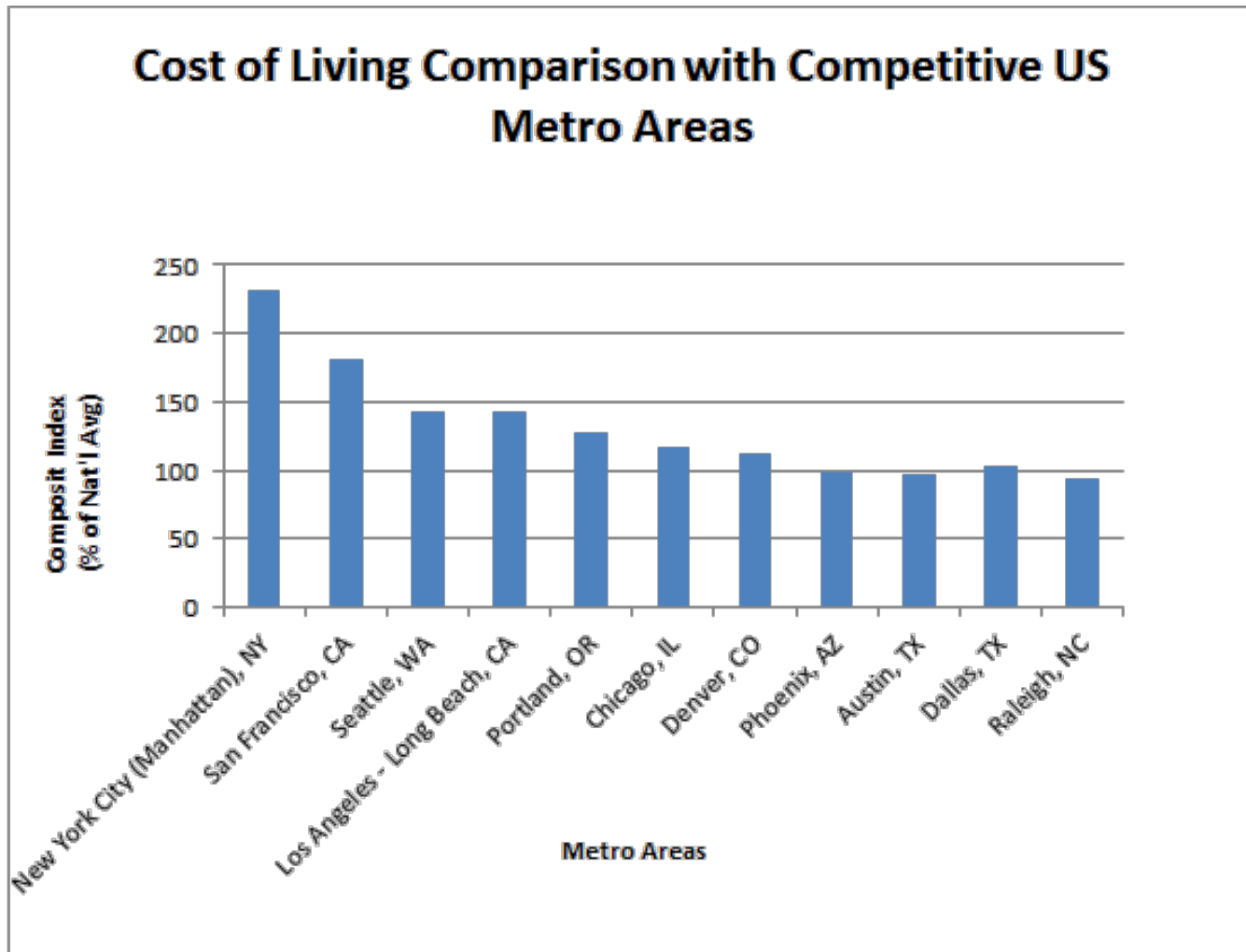
## Cost of Living Comparison for

## vs. Major U.S. Cities\*

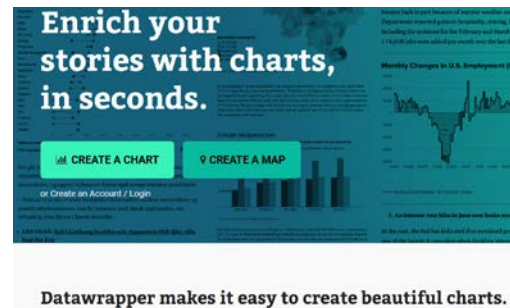


\*Data from salary.com

# A fair fight



# Inspiration and Education



# And the other kind of inspiration



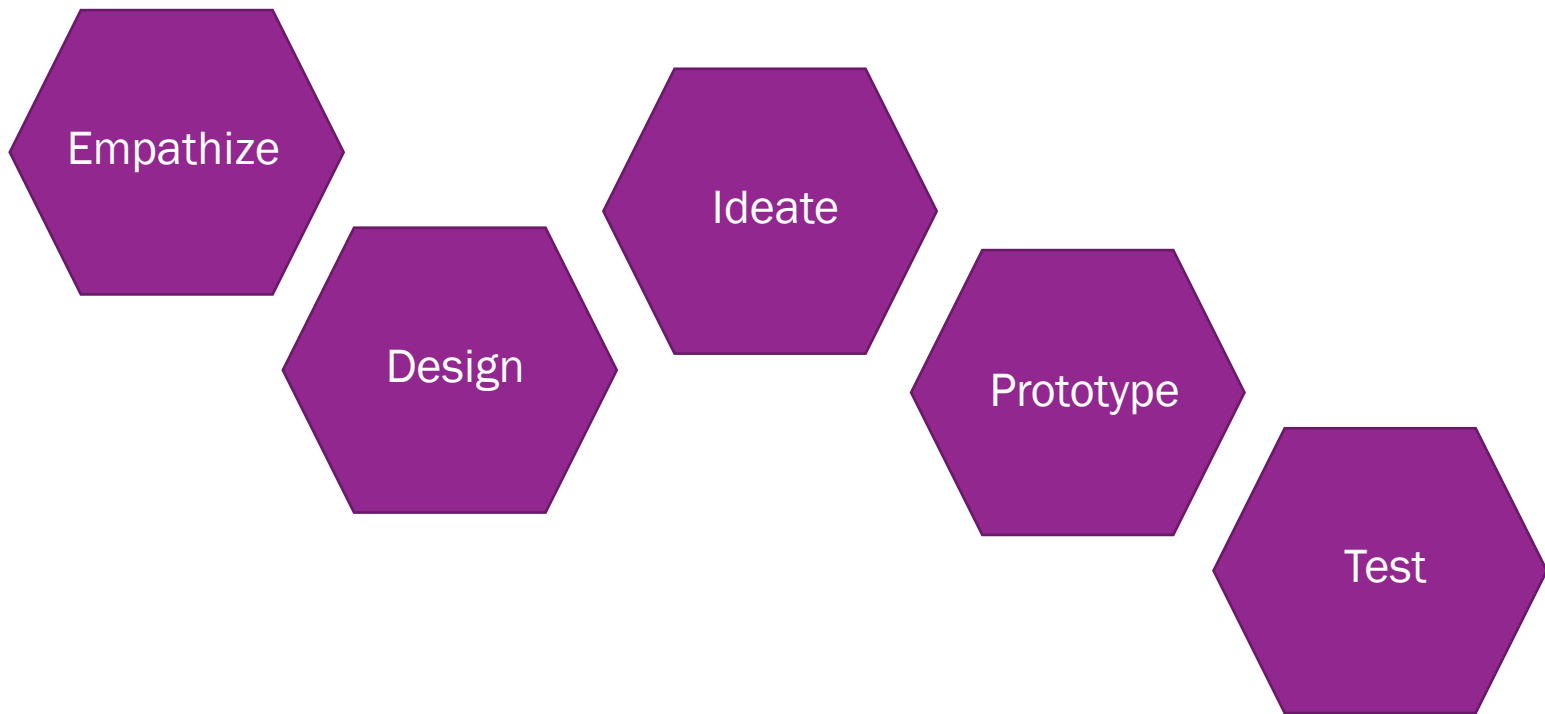
# One thing you can do NOW



List  
Management



# Stay flexible – stay in touch!



[Stanford, the d School](#)

Or check out:

<https://www.ideo.com/>

