



Painting the picture with the data we have (not the data we dream about)

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Data Driven Decision Making

“the practice of basing decisions on the analysis of data rather than purely intuition.”

- From “Data Science and its Relationship to Big Data and Data-Driven Decision Making,” Tom Fawcett and Foster Provost, 2013

Job Security!

“The ability to take data - to be able to understand it, to process it, to extract value from it, to visualize it, to communicate it – that’s going to be a hugely important skill in the next decades.”

– Hal Varian, Google’s chief economist

It's an Art

“Visual data analytics is a lot like painting a picture. The image might not look like much in the beginning as you play around with different brush strokes, colors and materials. But after time, and with a little experimentation, a picture starts to take shape and you're finally left with something that speaks louder than words.”

- Greaterman Nkomo, Account Executive, Visual Analytics, SAS.

United States of Data

The states of data can be described as having:

- DATA
- ALL data
- All RELEVANT data
- All relevant and ACTIONABLE data

Paralysis by Analysis

- It is usually not a problem of lack of data.
- It's the art of distinguishing between higher or lower data relevancy.
- It can be a challenge, especially if you or your staff are prone to suffer from paralysis by analysis.

I'm not worthy

- All data sources or fields or bits of data don't have the same value.
Less value = less attention (ideally)
- However...
higher information value \neq higher relevancy for decision making (not always anyway)

Lost & Found

We're in the Age of Big Data

- A term that describes data sets that are complex & ginormous
- Very easy to get lost in the data sets and the questions that could be asked

Do you have an aspirin?

The larger the # of data sets & the more complicated the data sets get, the more headaches decision makers have.

Complicated data sets



Headaches (ouch)



The Golden Ticket

Data Visualization!!

Brings value to noisy (& maybe obnoxious) data

AND

Can bring relevancy to already valuable data

What's Old is New

- Data visualization is not a spring chicken.
- For thousands of years we have had to communicate and present data.
- What's new?
 - Appetite for and interest in the intersection of art & science.
 - Difference between looking at data and truly seeing it.
 - Portraying data in a way that allows a process of discovery.
 - Seeing the story behind the data.

What's your data visualization style?

- You have a certain design style based on personal taste
- You just play around until something emerges that you instinctively like the look of
- You trust software defaults and don't go beyond that in terms of modifying the design
- You have limited software capabilities, so you don't know how to modify a design
- You just do as the boss tells you – “can you make me some fancy charts?”

<http://blog.visibleequity.com/painting-a-clearer-picture-insights-on-data-visualization/>

The Golden Ticket

1. Seek to develop a visual sixth sense
2. Strive for form and function (style vs substance)
3. Justify the selection of everything you do
4. Focus on accessibility
5. Never deceive the receiver

The Rest of the Story

| DATA | NARRATIVE |
|---|---|
| Proves your work is necessary | Provides context |
| Proves that you're creating the broader impact that you claim | Helps connect people to your mission and the people you serve |
| Provides information for improvement and refinement of your programs | Draws people in by making them feel they are a part of an important solution |

Let's Get Real

How do epidemiologists use data to tell a story?

A Local Example

Report: Overdose Deaths Among Youth Up in Calif., 34 Other States

A new report by Trust for America's Health finds that overdose deaths resulting from drug use have increased significantly among youths in California and other states. In California, the drug overdose rate among 12- to 25-year-olds more than doubled between 1999 and 2013. *HealthDay/U.S. News & World Report et al.*

What does this look like in
Riverside County?



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