



Data Storytelling

itsmecevi.github.io

widyaanalytic.com

Outline...

- Data Visualization vs Data Storytelling
- FGD Hans Rosling
- Konsep utama data storytelling (Edward Tufte's Rules)
- Best Practices
- Hands-On Tableau

Outline...

- Data Visualization-> Charts
- Data Storytelling-> Charts + Narrative + Context

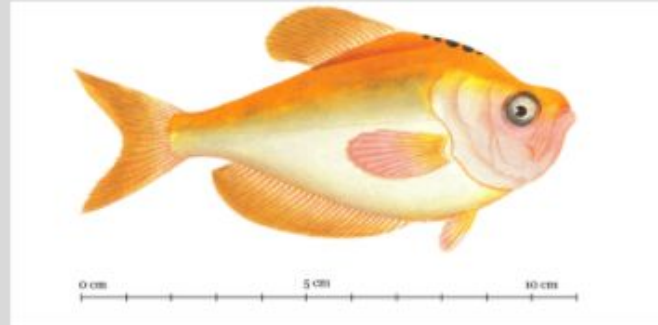
FGD Hans Rosling...

<https://www.youtube.com/watch?v=jbkSRLYSojo&t=59s>

Diskusi tentang kesimpulan (insight) dari video yang telah ditonton. Pada sesi ini membuktikan bahwa serumit dan sebesar apapun datanya, membuat narasi dari sebuah data akan mempermudah memahami data.

10 Tufte Rules...

1: Show Your Data



10 Tufte Rules...

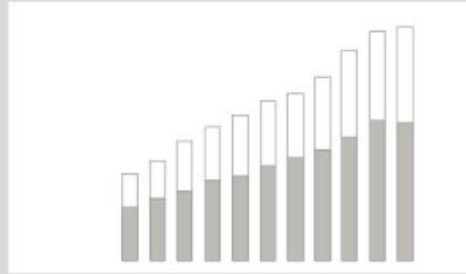
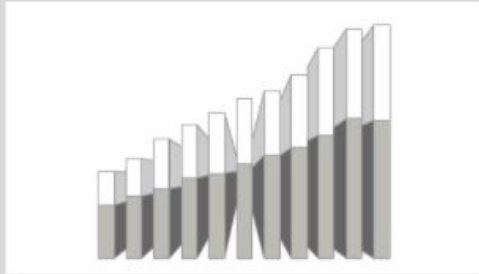
2: Use Graphics

MARSHALLING SIGNALS				
	PROCEED: WATCH SIGNALS	THIS WAY	PROCEED TO NEXT SIGNALMAN	MOVE AHEAD
STOP	START ENGINES	INSERT CHOCKS	FULL CHOCKS	SLOW DOWN

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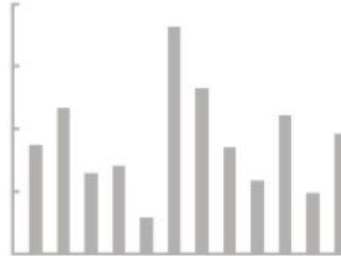
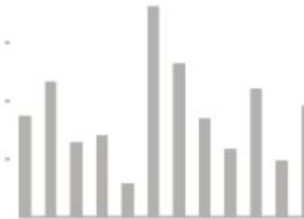
10 Tufte Rules...

3: Avoid Chartjunk



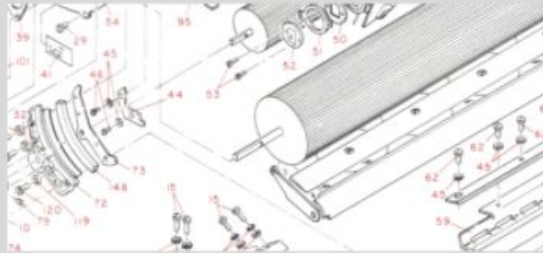
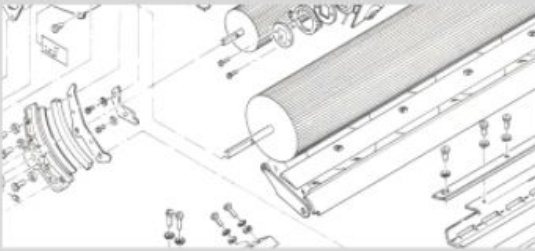
10 Tufte Rules...

4 : Utilize Data-ink



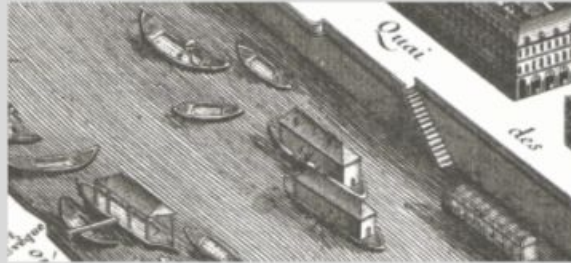
10 Tufte Rules...

5: Use Labels



10 Tufte Rules...

*6: Utilize
Micro/Macro*



10 Tufte Rules...

7: *Separate Layers*



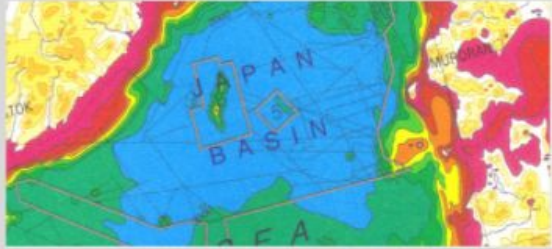
10 Tufte Rules...

8: Use Multiples



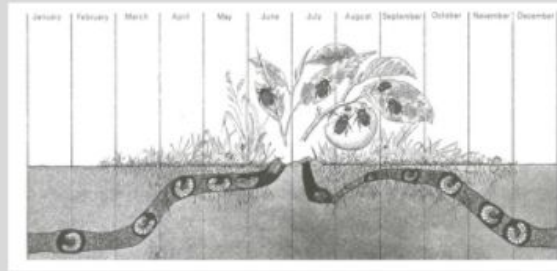
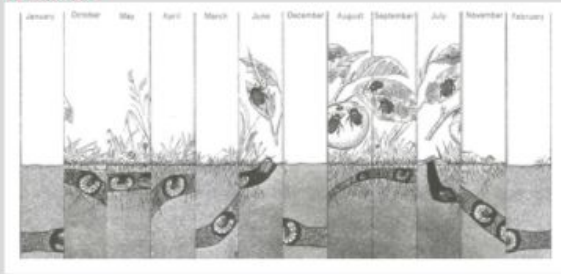
10 Tufte Rules...

9: Utilize Color



10 Tufte Rules...

10: Understand Narrative



Best Practices...

1. Change over time
2. Drill Down
3. Zoom Out
4. Contrast
5. Intersections
6. Factors
7. Outliers

Best Practices...

1. Change over time



Change Over Time

What it does: Uses a chronology to illustrate a trend.

Discussions it starts: Why did this happen, or why does it keep happening? What can we do prevent or make this happen?

Example:

<https://public.tableau.com/de-de/gallery/arsenal-injury-crisis>

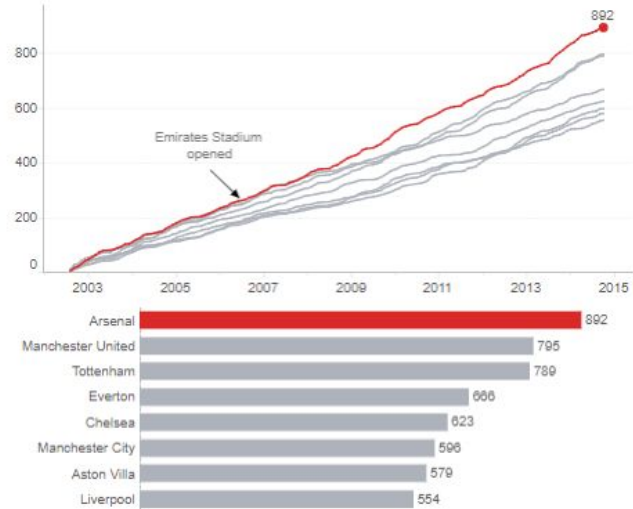
Arsenal's Injury Crisis

Players have suffered nearly 900 injuries in 12 years and Arsene Wenger has admitted he does not understand why

* Study only includes teams that have been in the EPL every year since the 2002-03 season through 12 October 2014

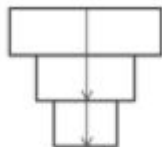
Arsenal have been accumulating injuries at a staggering rate	Season after season Arsenal dominate the injury table	Meanwhile, Arsenal's rivals suffer much fewer injuries	Arsenal have had 440 hamstring, knee, foot & ankle injuries	Perhaps the pitch at Emirates Stadium is to blame	Arsenal have had 4 players with 10 or more injuries
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Cumulative injuries suffered since July 2002



Best Practices...

2. Drill Down



Drill Down

What it does: Sets context so that your audience better understands what's going on in a particular category.

Discussions it starts: Why is this person, place or thing different? How does the performance of this person, place, or thing compare?

Example:

<https://public.tableau.com/de-de/gallery/visualizing-simpsons>

The Simpsons Vizipedia

Longest Running Series of All-Time

However, Ratings Are in a Steady Decline

A Detailed Look At The Ratings

The Most Watched Episodes

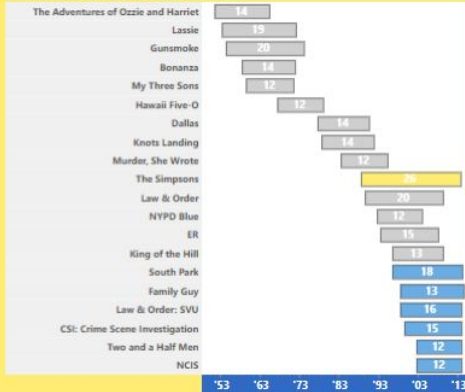
Who Is The Main Character?

Guest Appearances

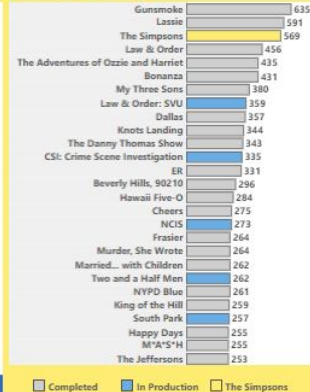
Top Guest Characters

The Simpsons have had the longest running length of any prime time, scripted television series totaling a remarkable 26 seasons. However, they still rank third in total episodes behind Gunsmoke and Lassie.

Primetime Series Running Length



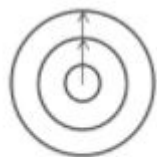
Episodes Per Series



Completed In Production The Simpsons

Best Practices...

3. Zoom Out



Zoom Out

What it does: Describes how something your audience cares about relates to the bigger picture.

Discussion it starts: How does something you care about compare to the bigger picture? What effect does one area have on the bigger picture?

Example:

<https://public.tableau.com/de-de/gallery/vancouver-cyclists>

Vancouver Cyclists	I once visited an emergency department...	Vancouver embraces bike lanes	Are cyclists wearing helmets?	Are cyclists following the rules of the roads?	Stop means G
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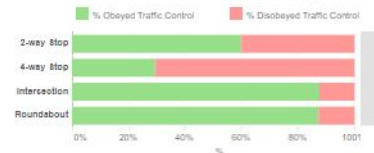
I observed 4 intersections with various traffic controls like 2-way stop signs, 4-way stop signs, traffic light intersections and roundabouts. I chose ones that had high volumes of crashes involving cyclists from 2009 to 2013.

The size of the circles over each intersection reflects the percentage of rules disobeyed for the specific traffic control. For example, failing to stop at a stop sign would be deemed disobeying.



36%

of cyclists disobeyed a traffic control but it varied greatly depending on the type of traffic control.



Cyclists were more inclined to disobey traffic controls if they were on side streets compared to major intersections with lots of vehicle traffic. Disobeying didn't correlate to higher numbers of crashes involving cyclists.



Best Practices...

4. Contrast



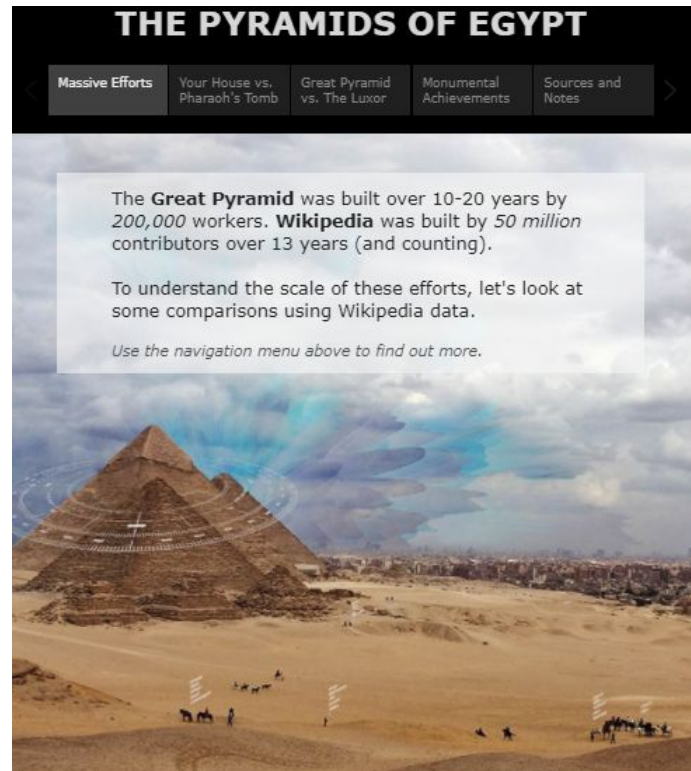
Contrast

What it does: Shows how two or more subjects differ.

Discussions it starts: Why are these items different? How can we make A perform like B? Which area should we focus on and which area is doing fine?

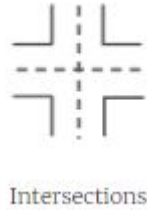
Example:

<https://public.tableau.com/de-de/gallery/pyramids-egypt>

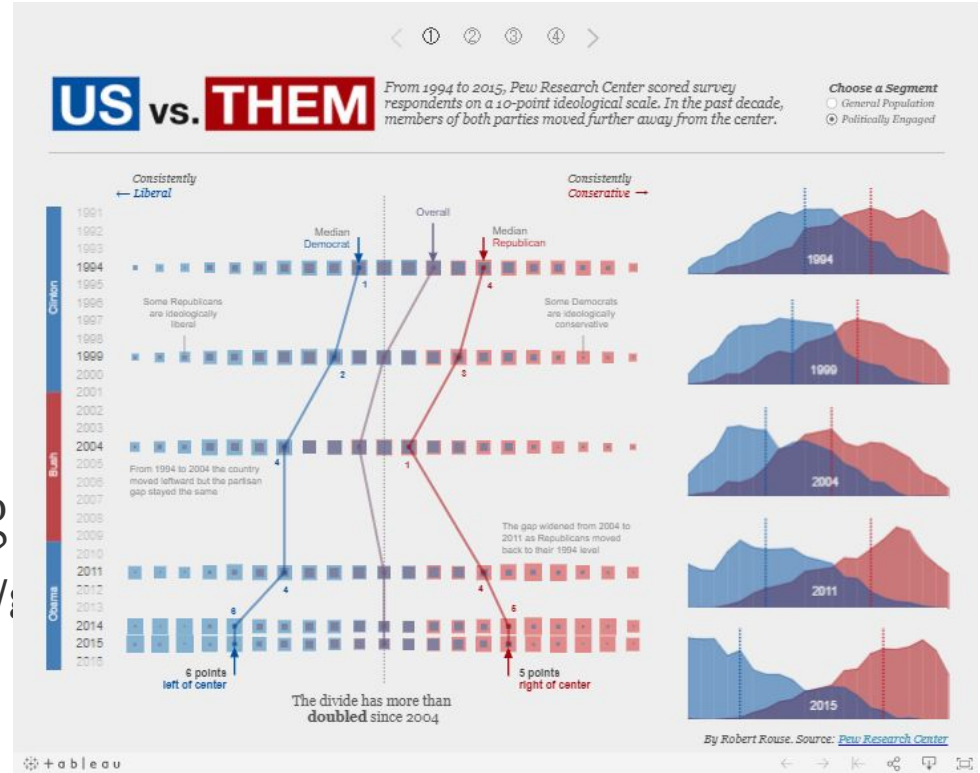


Best Practices...

5. Intersections

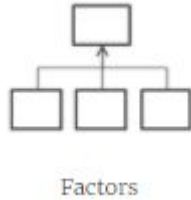


What it does: Highlights important shifts when one category overtakes another.
Discussions it starts: What causes these shifts? Are these shifts good or bad? How do these shifts affect other aspects of our plan?
Example: <https://public.tableau.com/en-us/gallery/political-polarization-us>



Best Practices...

6. Factors

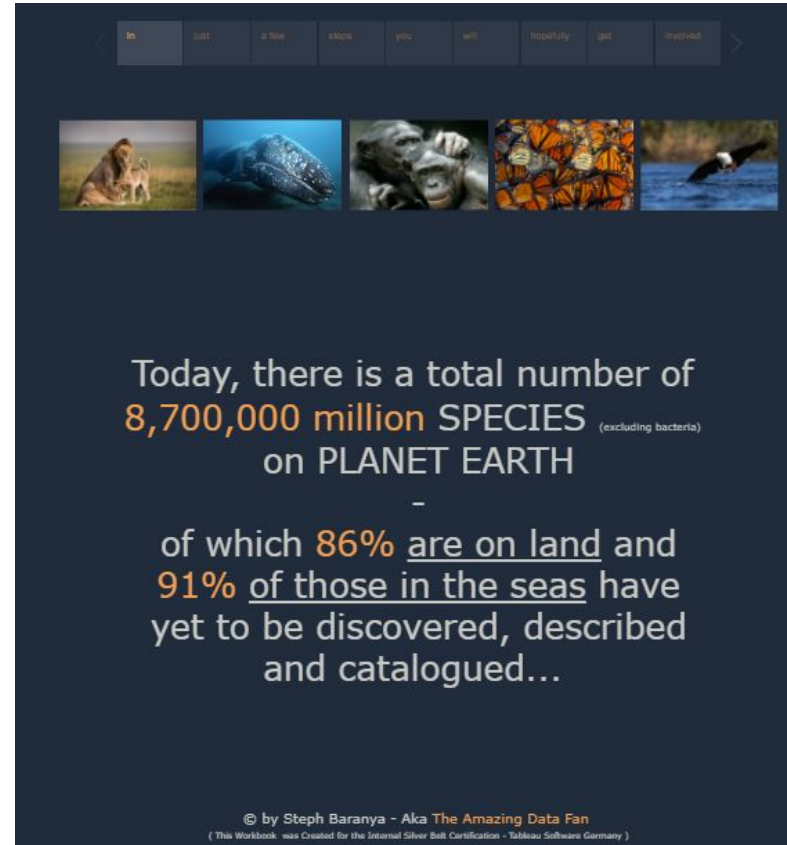


What it does: Explains a subject by dividing it into types or categories.

Discussions it starts: Is there a particular category we should focus on more? How much do these items affect the metric we care about?

Example:

https://public.tableau.com/profile/steph.baranya#!/vizhome/PlanetEarth____/Injustafewstepsyouwillhopefullygetinvolved



Best Practices...

7. Outliers

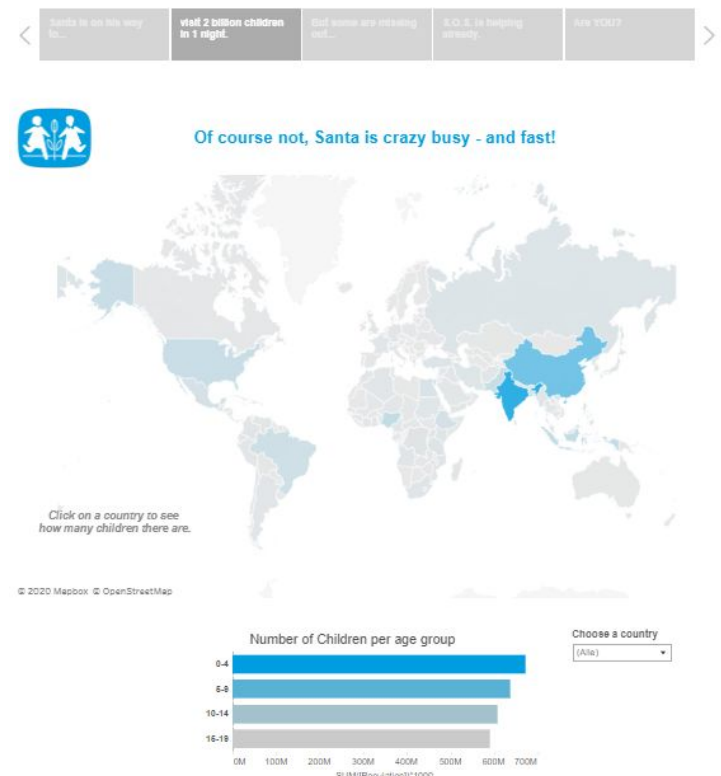


Outliers

What it does: Shows anomalies or where things are exceptionally different.

Discussions it starts: Why is this item different?

Example: https://public.tableau.com/profile/steph.baranya#!/vizhome/AdultVersion_final/SOSChildrensVillagesX-MasCampaignSantaGetInvolvedDonate



Thanks
Q&A

Referensi

<https://trello.com/b/fCiyw9l4/references>