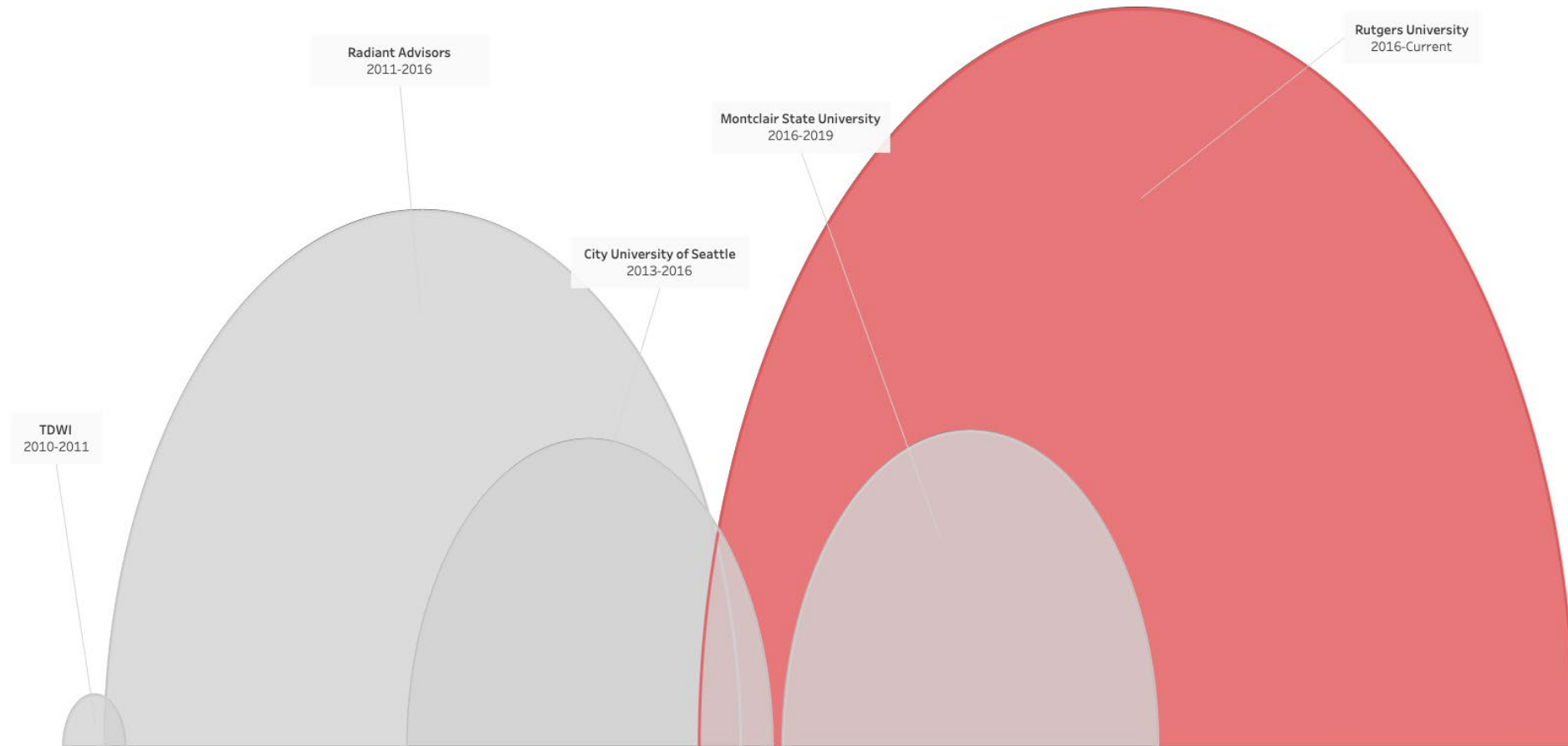


Digital Storytelling: Data Insights in Translation

Professor Lindy Ryan
Lindy.Ryan@rutgers.edu

A little about your storyteller.

A Visual Resume



Stories, Stories, Stories



What is data storytelling?



Carte Figurative des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813.

Dressée par M. MINARD, Inspecteur Général des Ponts et Chaussées en retraite. Paris, le 20 Novembre. 1869

Les nombres d'hommes présents sont représentés par les longueurs des zones colorées à raison d'un millimètre pour dix mille hommes; ils sont de plus écrits en lettres des zones. Le rouge désigne les hommes qui ont été en Russie; le noir ceux qui en sont sortis. — Les renseignements qui ont servi à dresser la carte ont été puisés dans les ouvrages de M. M. Chiers, de Ligny, de Fezardac, de Chambray et le journal inédit de Jacob, pharmacien de l'Armée depuis le 28 Octobre.

Pour mieux faire juger à l'œil la diminution de l'armée; j'ai supposé que les corps du Prince Jérôme et du Maréchal Davout qui avaient été détachés sur Minsk et Mielno et qui rejoignent Oczkow et Wlodek, avaient toujours marché avec l'armée.

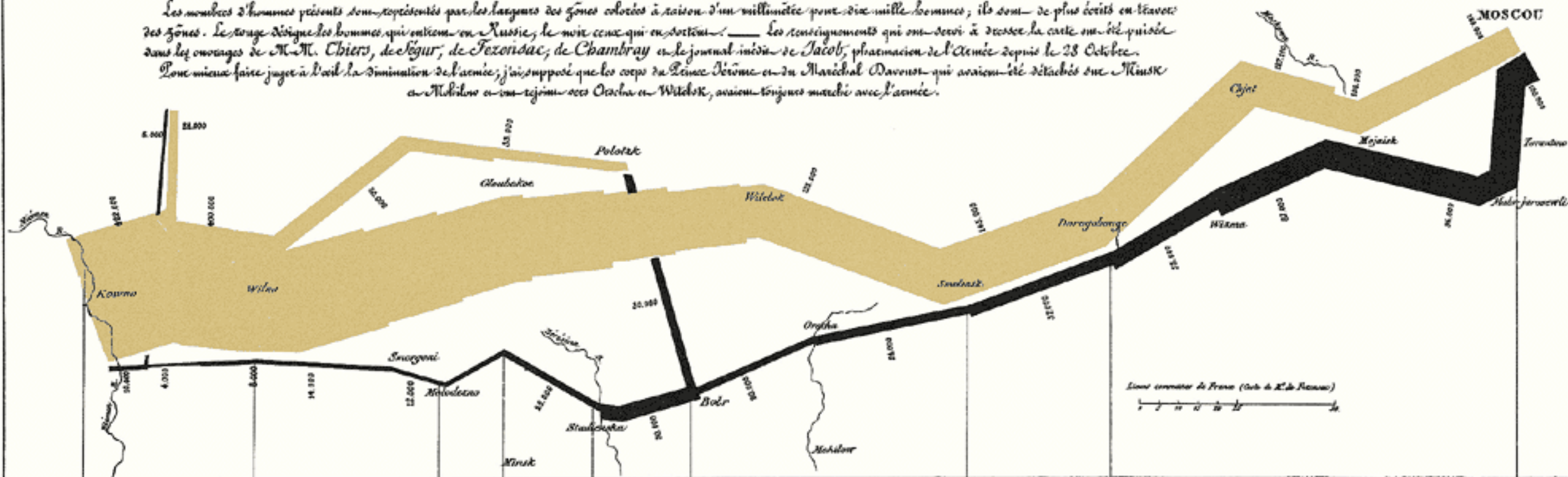
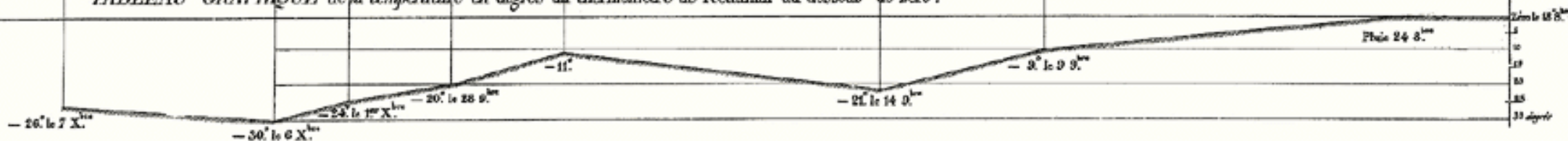


TABLEAU GRAPHIQUE de la température en degrés du thermomètre de Réaumur au dessous de zéro.

Les Cosaques passent au gélif le Niemen gélif.



Carte Figurative des pertes successives en hommes de l'armée qu'Annibal conduisit d'Espagne en Italie en traversant les Gaules (selon Polybe).

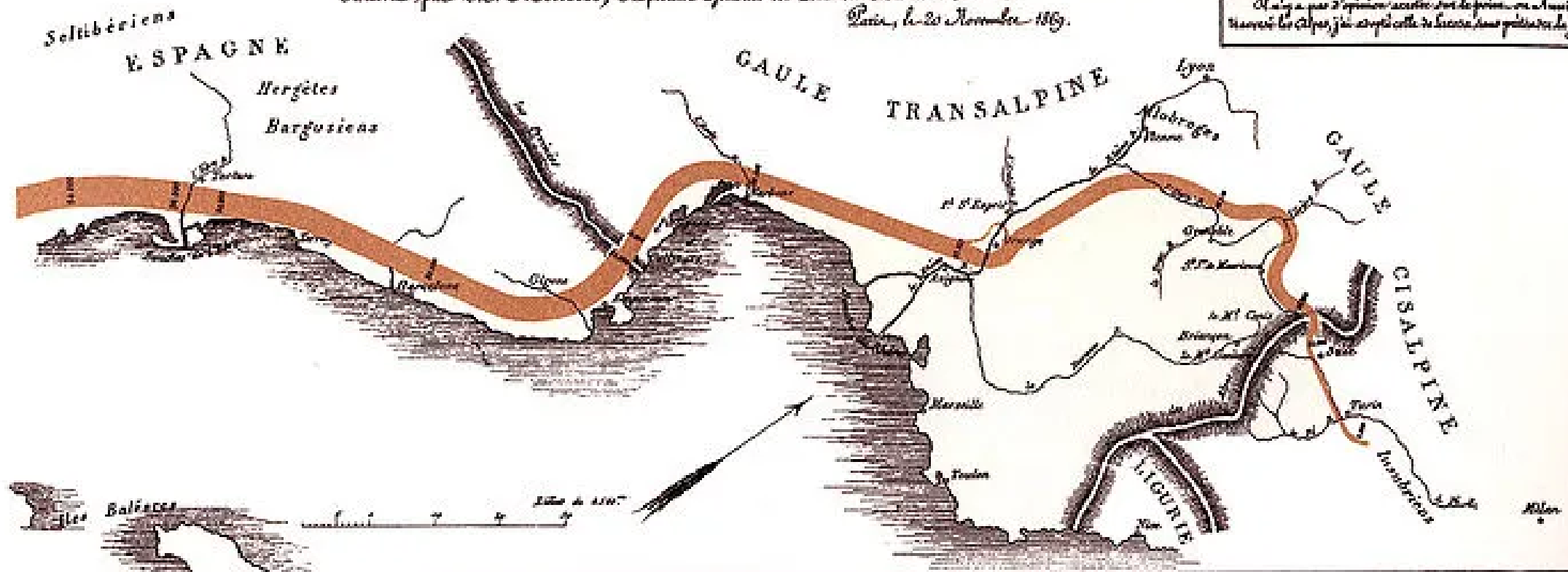
Provisé par M. Minoret, Inspecteur Général des Ponts et Chaussées en retraite.

Paris, le 20 Novembre 1863.

Lyons

Les membres d'honneur ont écrit à Amiral leur expression
pour la longue des jours s'éloient à raison d'un millionnaire
pour six mille hommes, ils ont de plus écrit en faveur des Français.

Il n'y a pas d'opinion accréditée sur la prime ou l'assiette à verser les Alpes, j'ai accepté celle de Lucien sans préjuger de son effet.





Data Storytelling is...

- A visualization (that's data viz)
- A collection of charts and graphs (again, data viz)
- A technical skill (nope, still data viz)
- A one size fits all approach that relies on best practices (nope, viz)
- A collection of facts (still data viz)
- The results of analysis (and nope)

Data **Storytelling**, THEN, is...

- A narrative approach to encode information in a way our brains inherently respond to
- Puts data into context
- Aims to inspire or influence
- Uses data as a foundation, but presents the insight
- Considers an audience's needs

How data stories activate the brain.

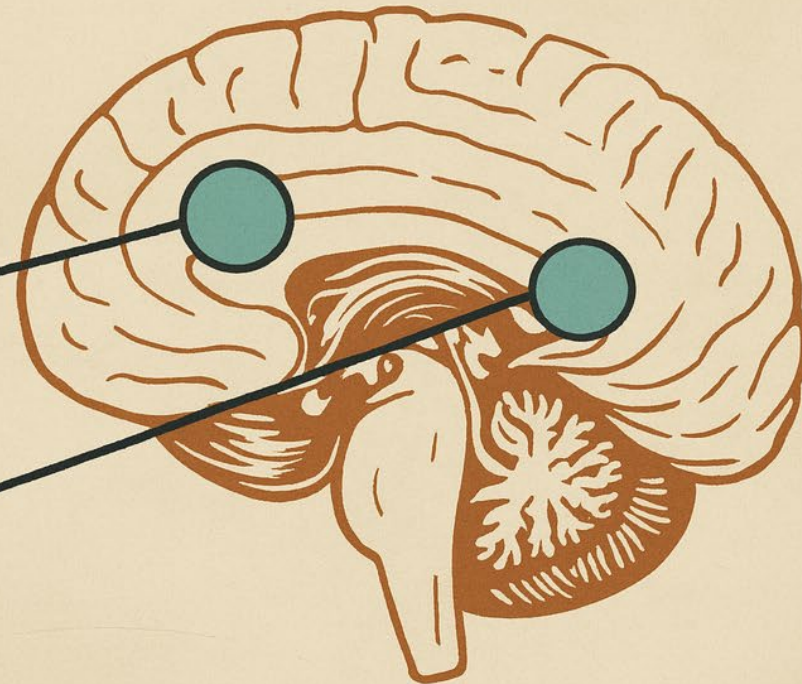
YOUR BRAIN ON DATA

WERNICKE'S AREA

LANGUAGE COMPREHENSION

BROCA'S AREA

LANGUAGE PROCESSING



YOUR BRAIN ON STORIES

VISUAL CORTEX

COLORS AND SHAPES

WERNICKE'S AREA

LANGUAGE COMPREHENSION

OLFACTORY CORTEX

SCENTS

AUDITORY CORTEX

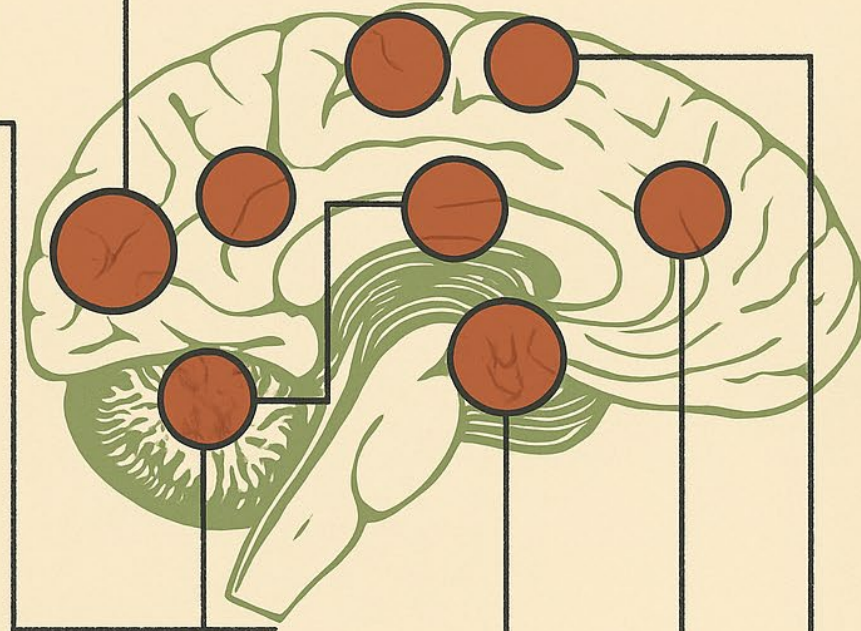
SOUNDS

BROCA'S AREA

LANGUAGE PROCESSING

SENSORY CORTEX & CEREBELLUM

LANGUAGE COMPREHENSING



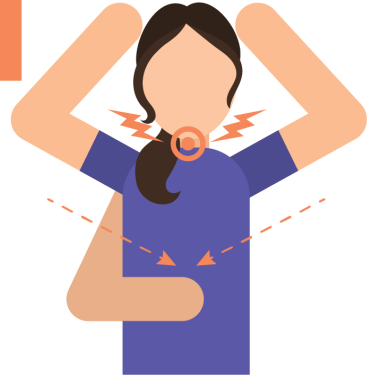


HOW TO DO THE HEIMLICH MANEUVER

Do the Heimlich if the choking person:

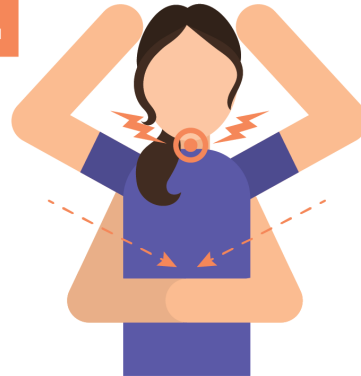
- Can't speak or cough
- Is conscious
- Is over 1 year old

1



Put the **thumb side** of your fist slightly above the person's bellybutton.

2



Hold your fist tight with your other hand.

3



Quickly thrust **upward and inward** into the person's belly.

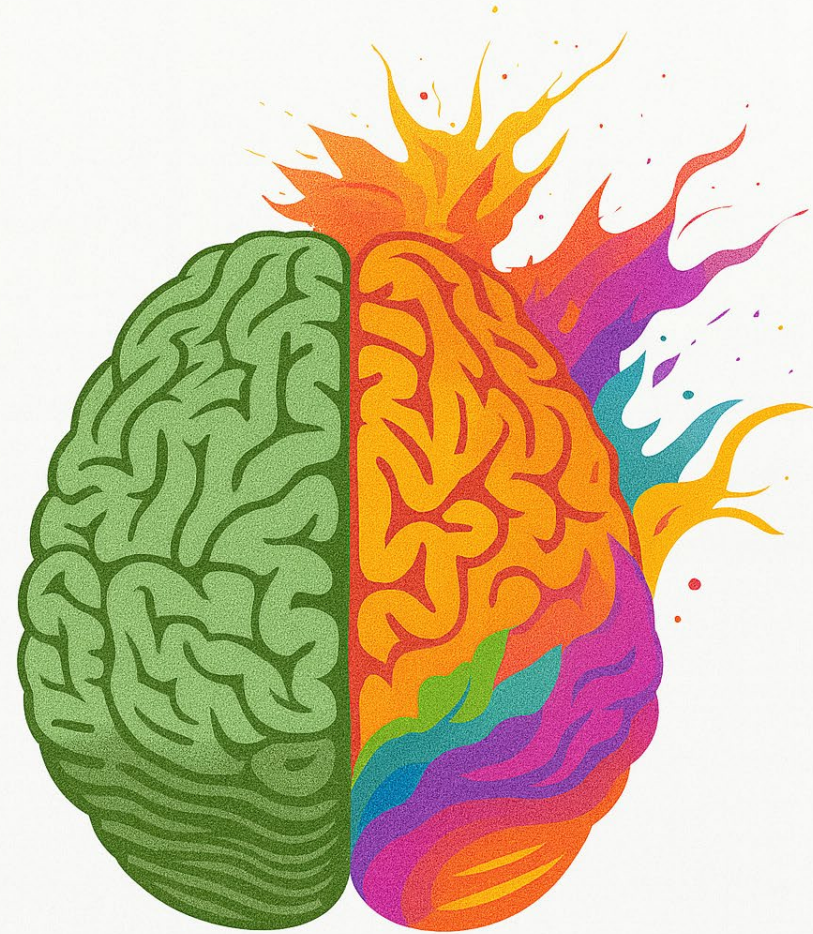
4



Repeat several times until the choking object comes loose.

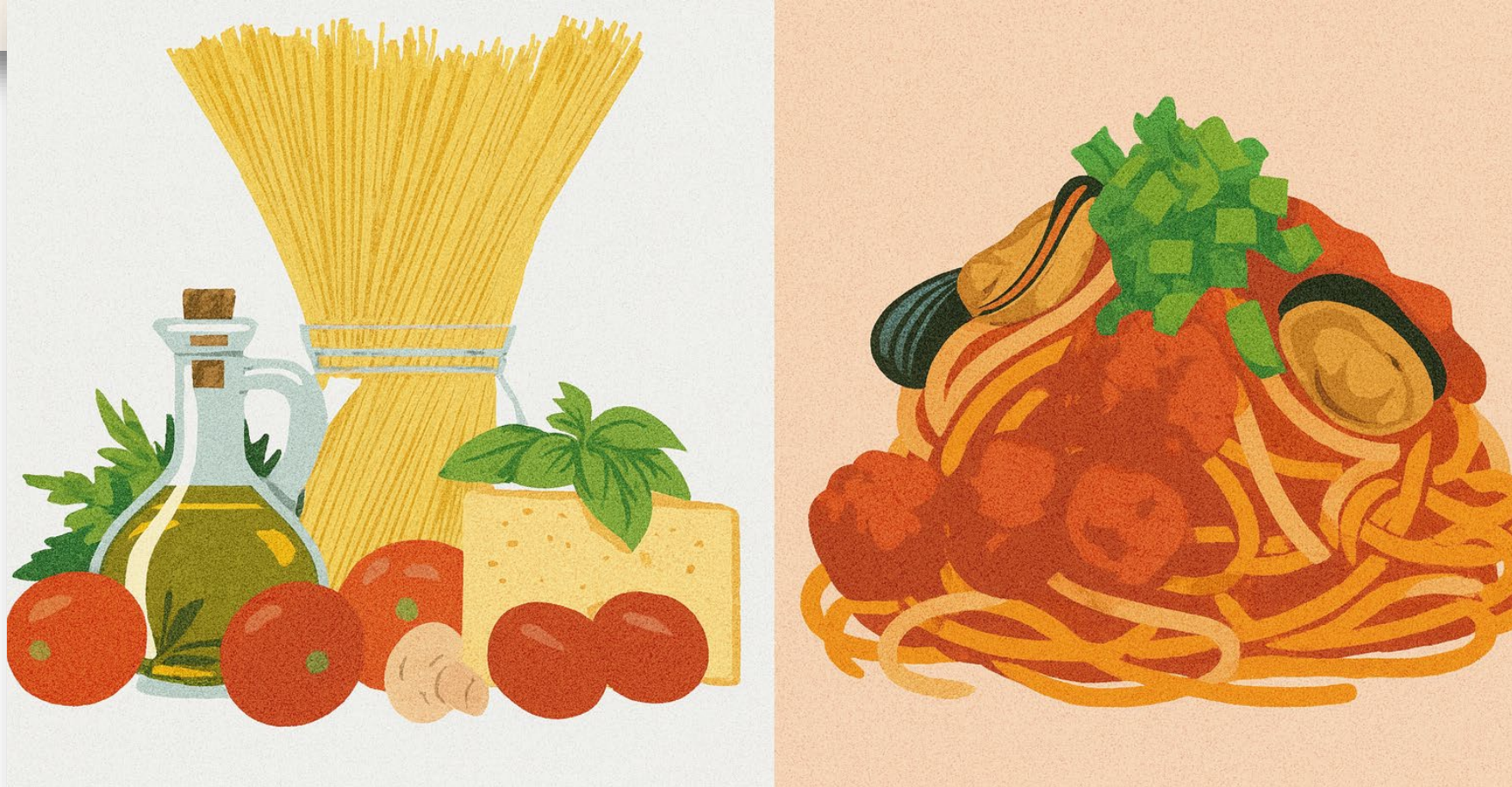


The human brain can remember approximately **10,000** visuals with an **83%** recollection rate.



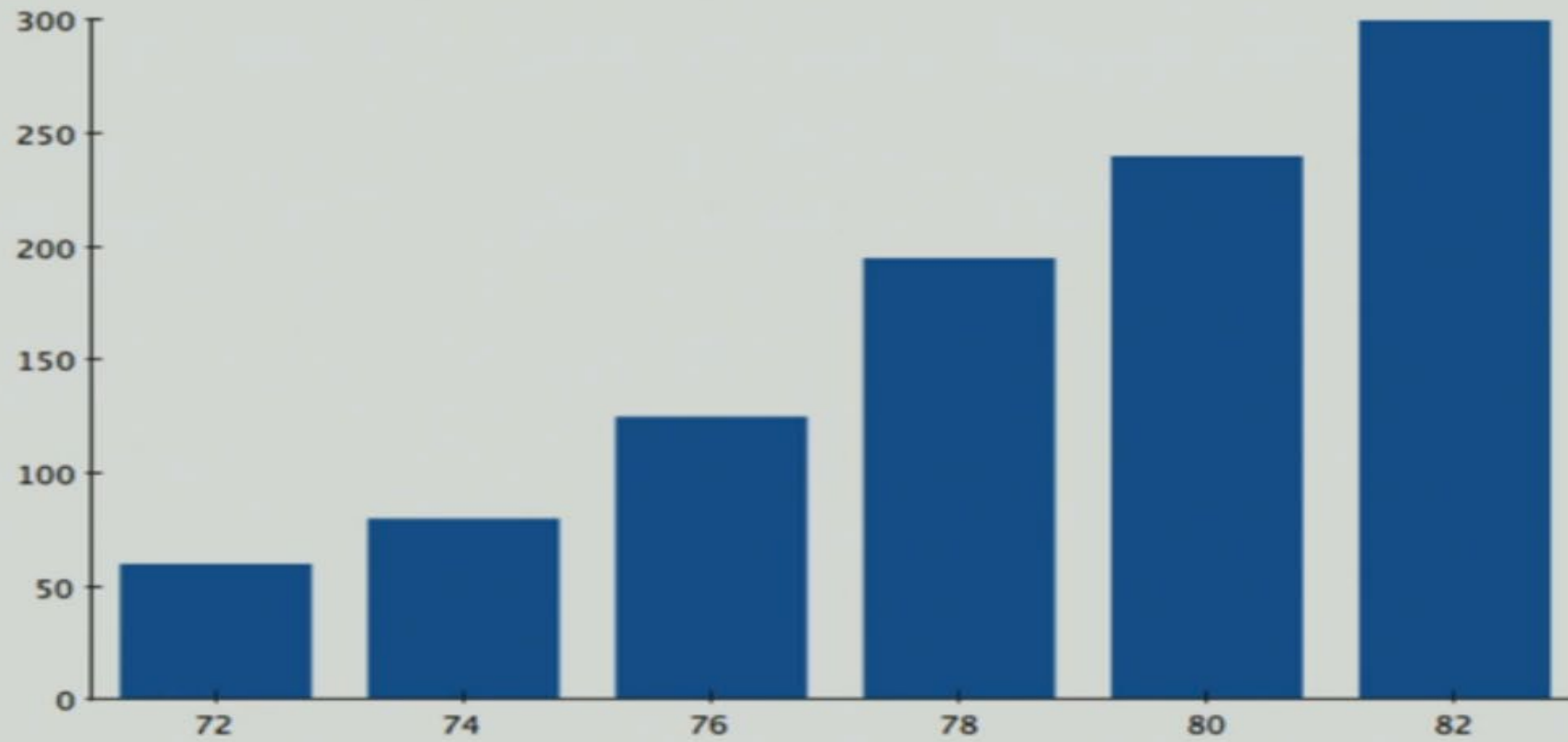
Data Storytelling is a translation process.

ANALYSIS PRESENTATION

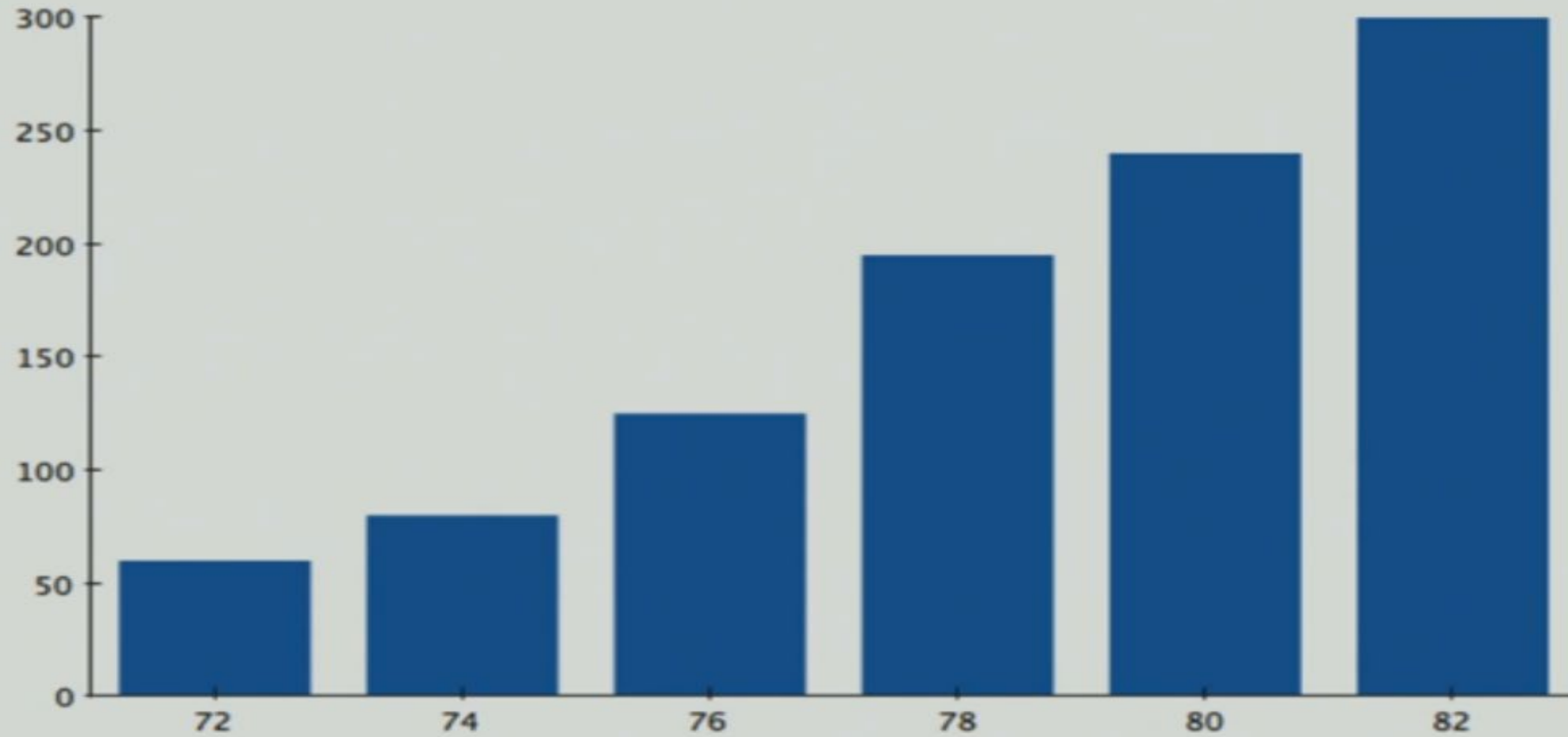


Telling data stories is about going **beyond the basics** to find the **story**.

Can be a bit more general and a bit less specific,
but **engaging and memorable**, and of course,
correct.

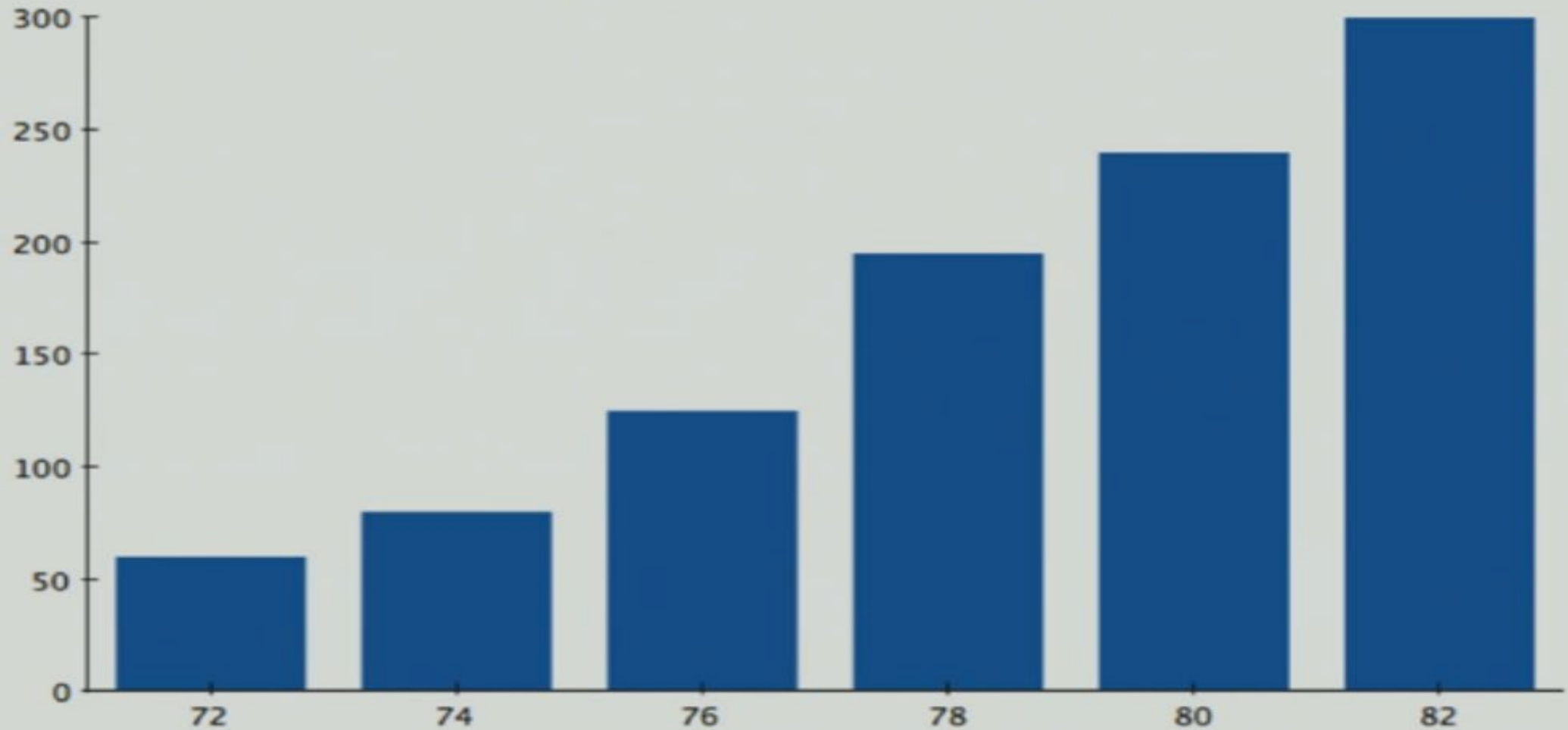


Total House and Senate campaign expenditures, in millions



Monstrous Costs

Total House and Senate campaign expenditures, in millions



MONSTROUS COSTS

Total House and Senate
campaign expenditures,
in millions

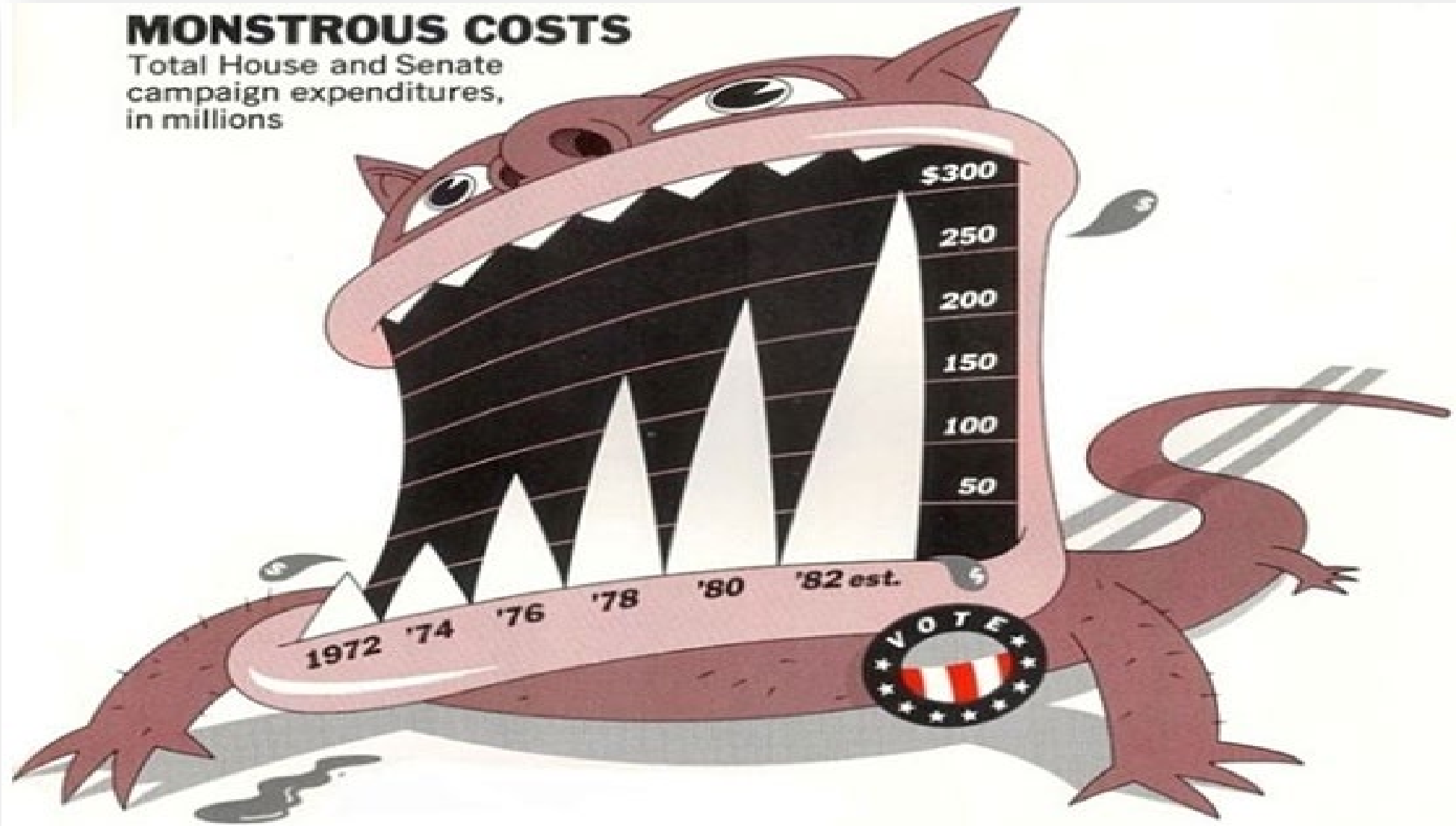


Figure 15. Enjoyment of Technologies Most Used in 2024 (percents)

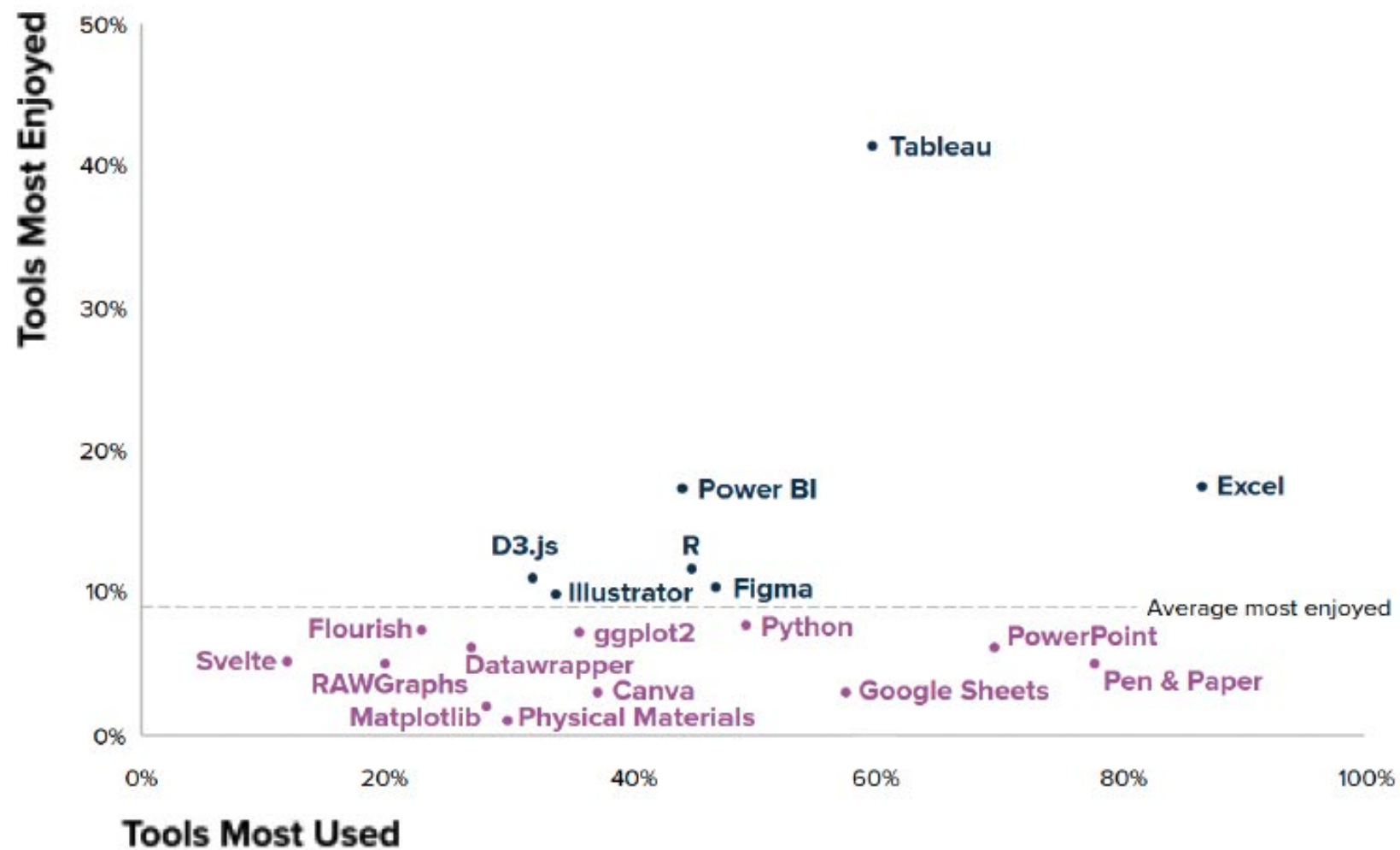
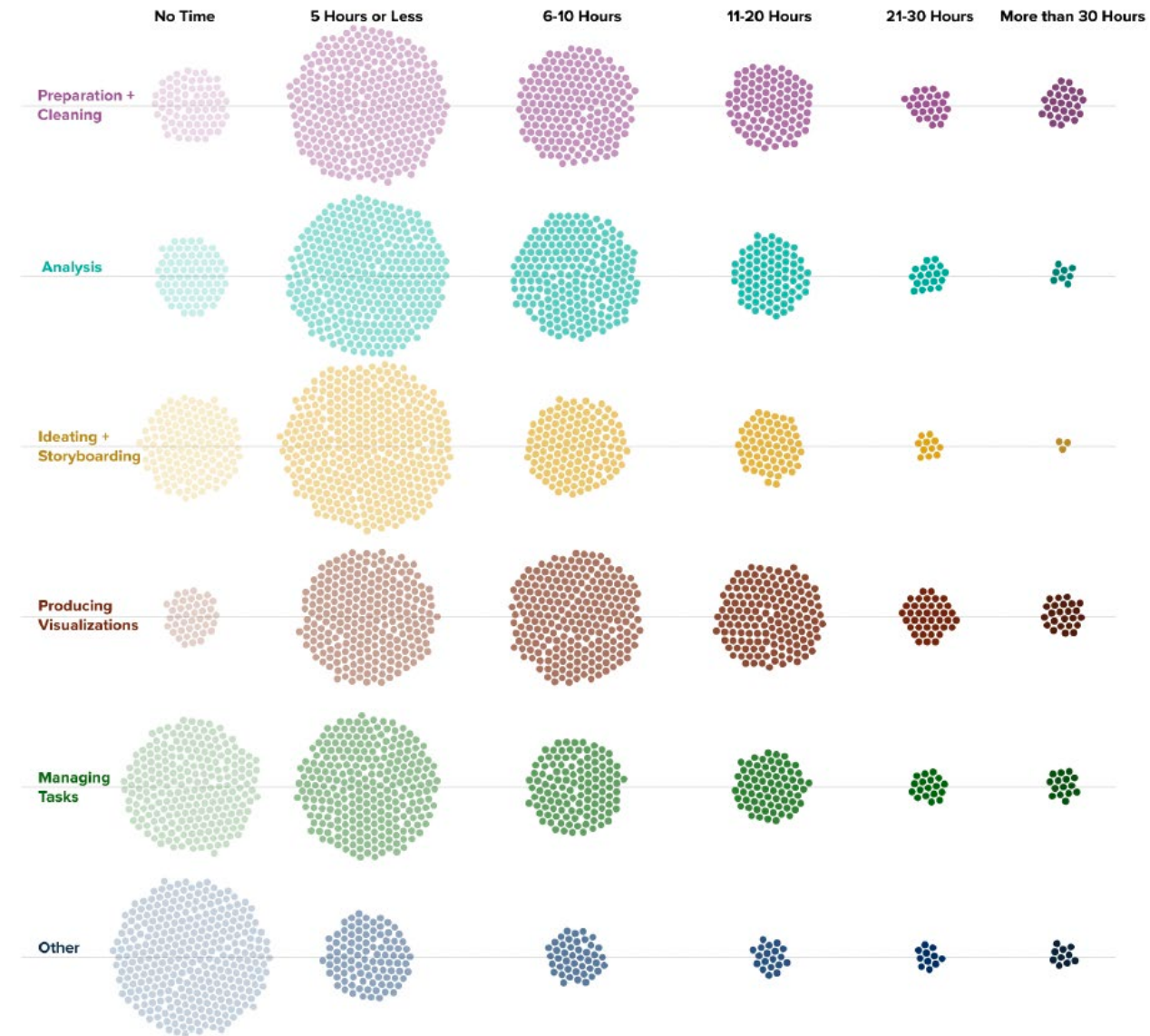
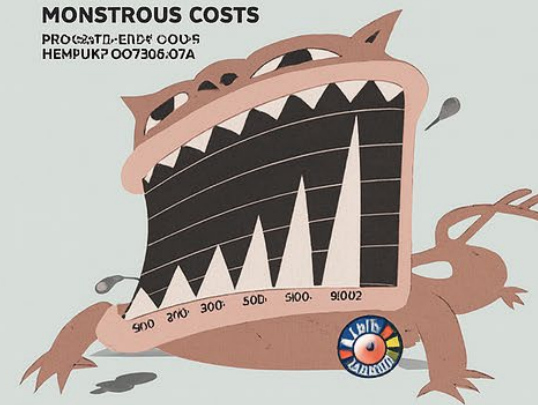
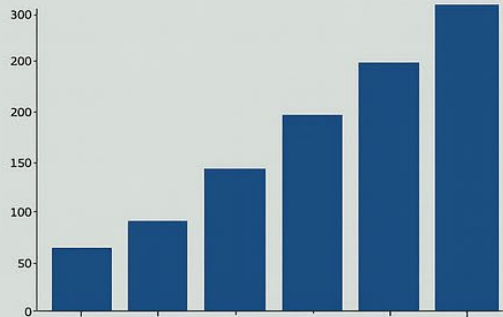


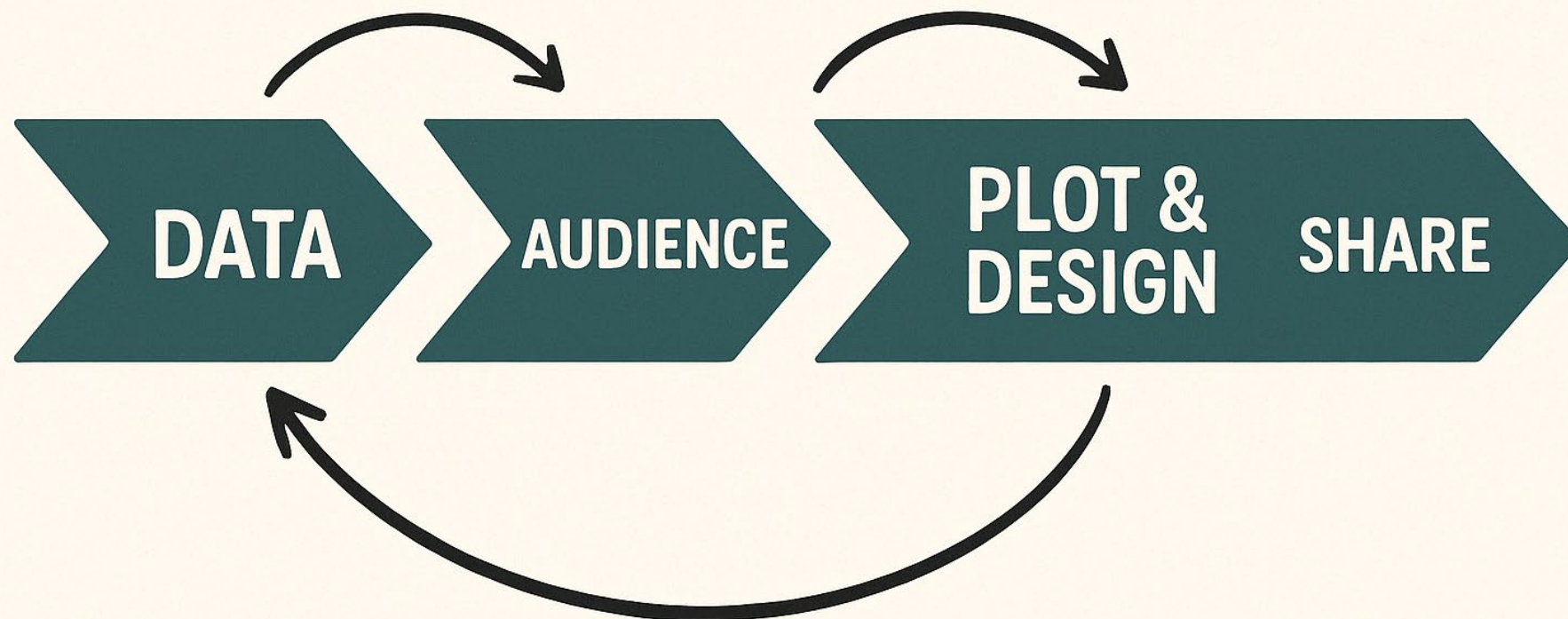
Figure 12. Hours Spent on Data and Visualization Tasks (counts)



ANALYSIS PRESENTATION



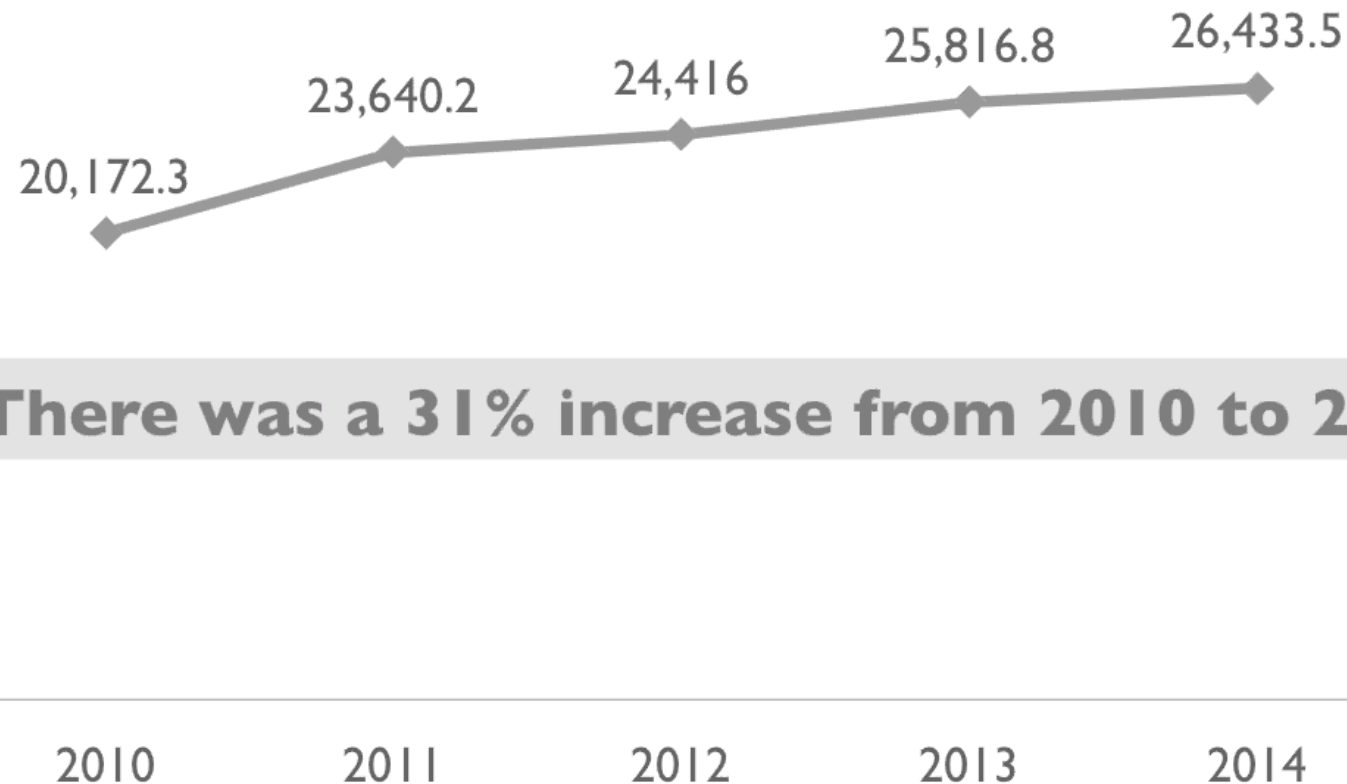
DATA STORYTELLING IS A TRANSLATION PROCESS



Five steps to become a better data storyteller.

Find Data That Supports Your Story

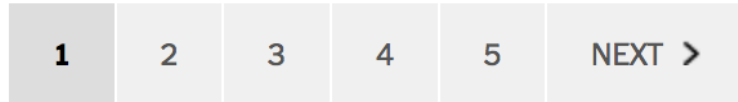
China's total import and export value from 2010 to 2014 (in billion Yuan)



There was a 31% increase from 2010 to 2014

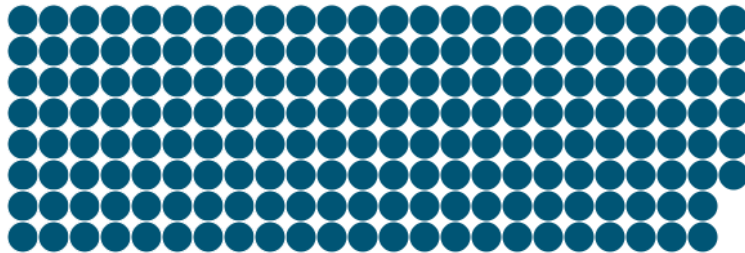
Layer Information for Understanding

The Tenure Pipeline at Harvard Business School

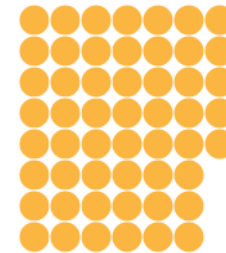


Harvard Business School says it wants to improve the gender balance among faculty members, but it is far from that goal without extensive hiring.

Men on faculty at Harvard Business School

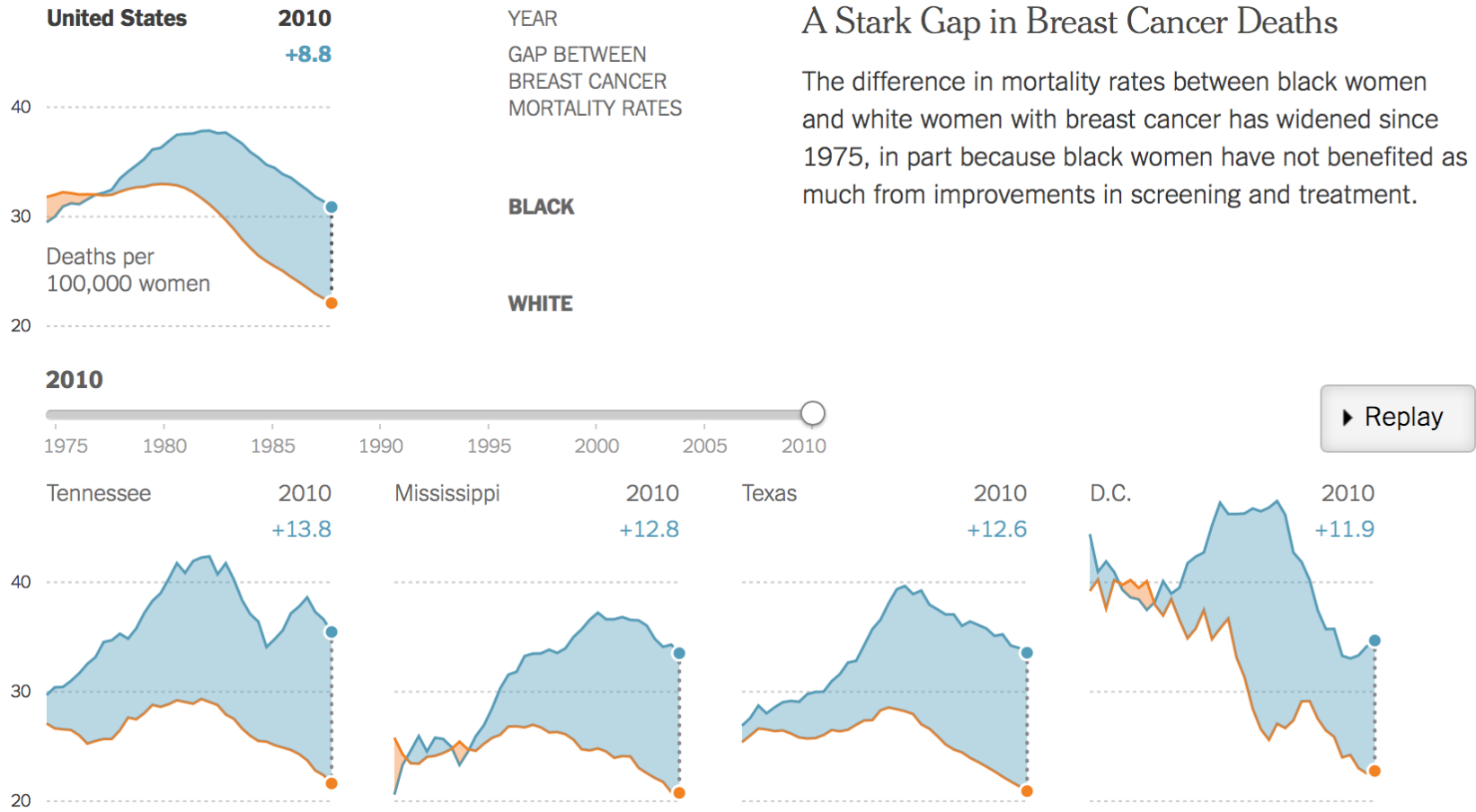


Women

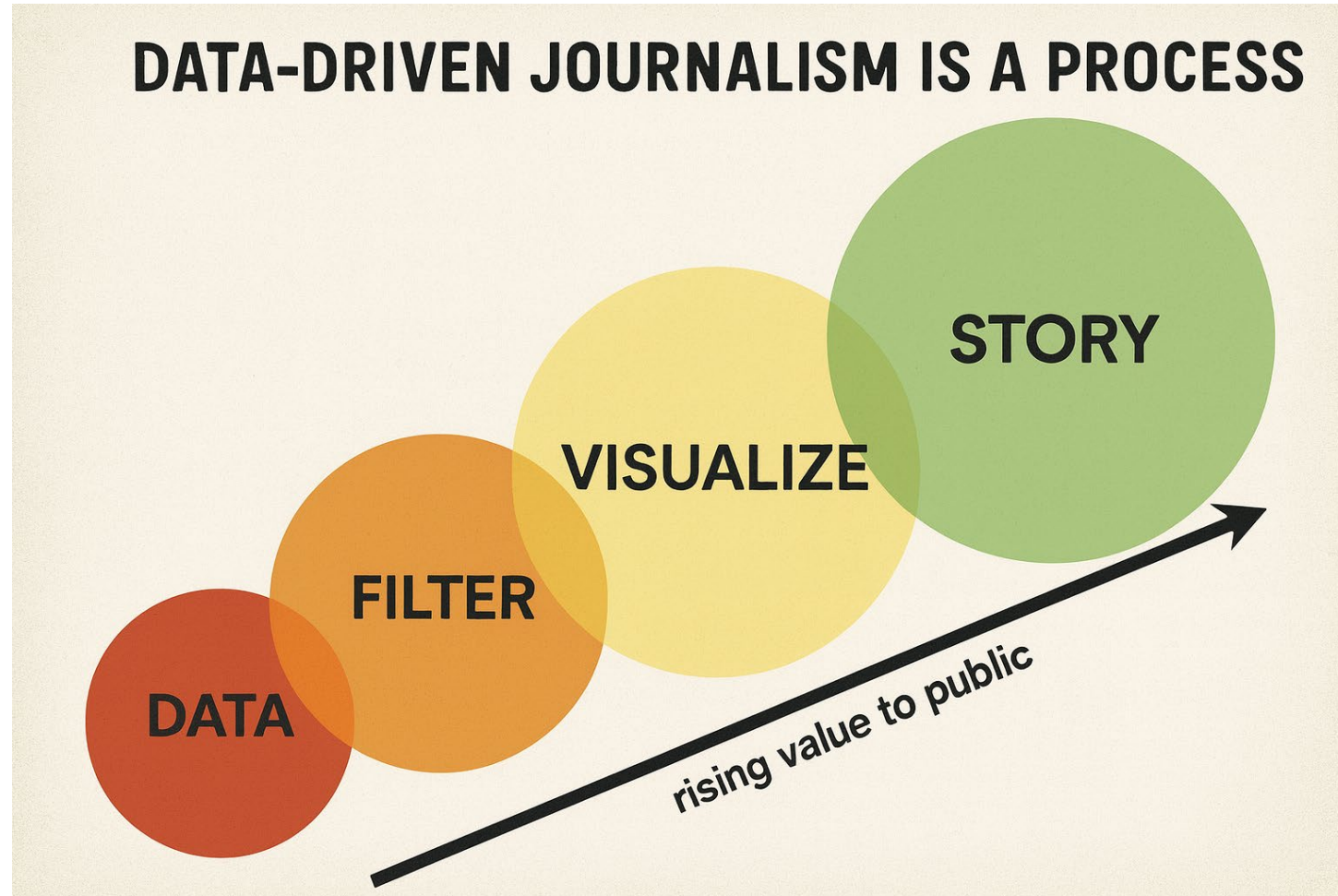


Sources: Harvard Business School; individual faculty members

Design to Reveal



Beware the False Reveal



Tell It Fast

2015
San Bernardino, Calif.



2015
Roanoke, Va.



2015
Lafayette, La.



2014
Marysville, Wash.



2015
Charleston, S.C.



2014
Fort Hood, Tex.



2012
Oakland, Calif.



How They Got Their Guns

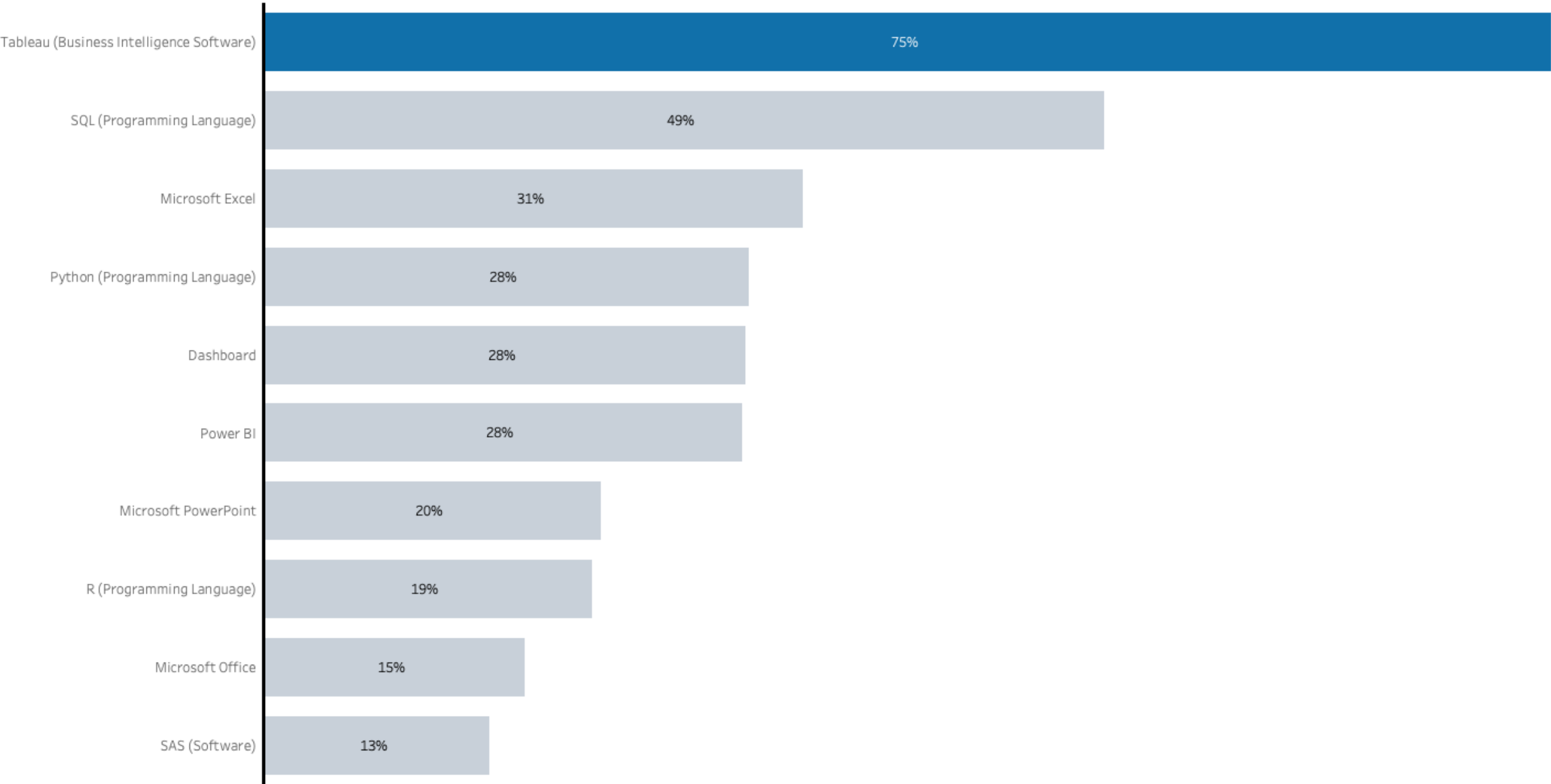
OCTOBER 3, 2015

Criminal histories and documented mental health problems did not prevent at least eight of the gunmen in 15 recent mass shootings from obtaining their weapons.

Practice your skills with the right tools for the job.

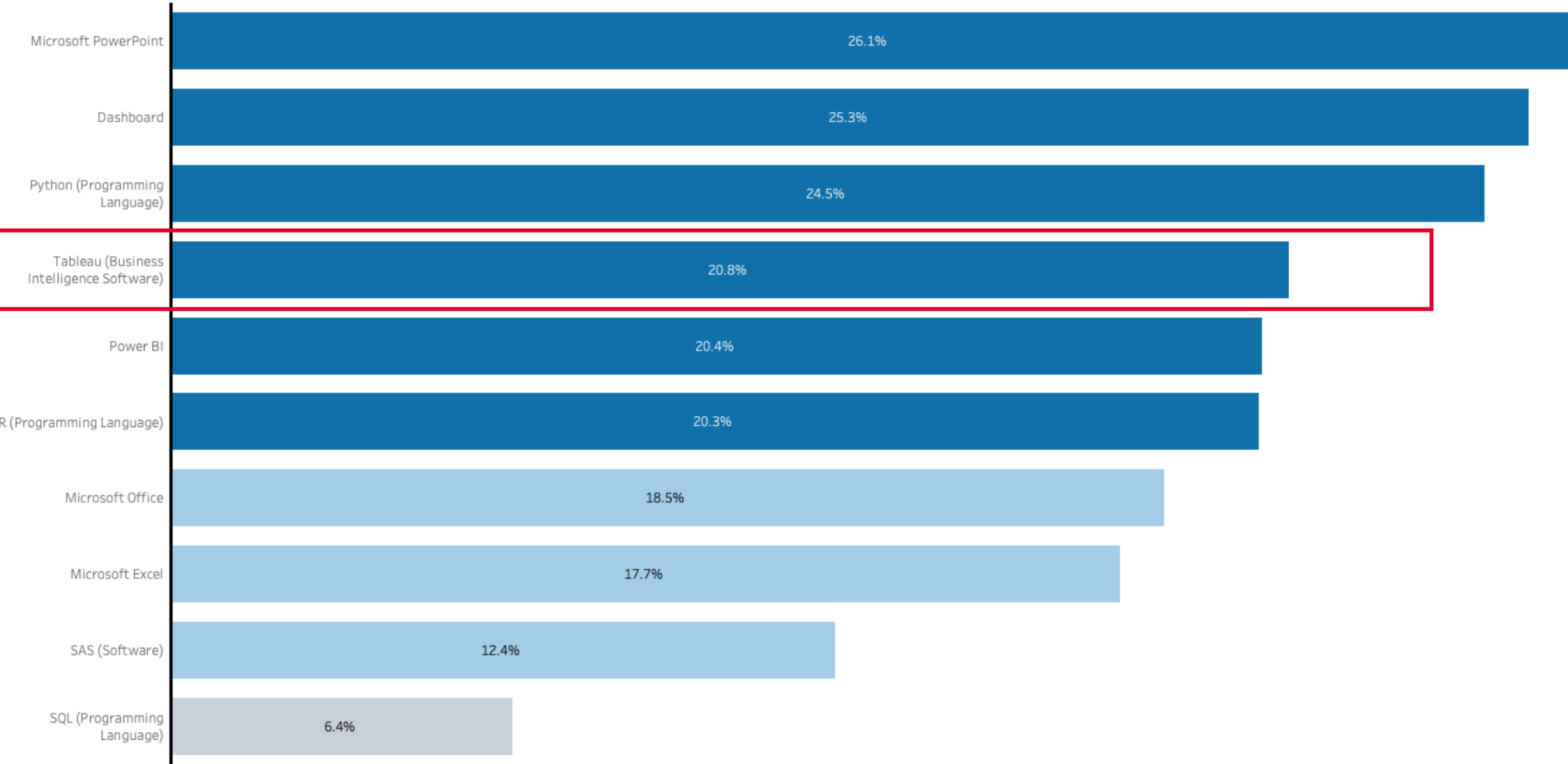
Tableau in the Job Market

From January 2021 through December 2024, 75% of all data visualization/visual analytics-related job postings specifically identified Tableau as a top Specialized Skill imperative of job candidates.



Projected Skill Growth Relative to Market

Tableau is listed amongst the Most Rapidly Growing Specialized Skills for analytics-related job candidates.



Sign up for Tableau Public (free):
<https://public.tableau.com/app/discover>

Training (free):
**[https://trailhead.salesforce.com/users/lindyryan/trailmixes/d
ata-storytelling-trailmix](https://trailhead.salesforce.com/users/lindyryan/trailmixes/data-storytelling-trailmix)**

Contact:
Lindy.Ryan@Rutgers.edu