

2025

frank.computer

Accessibility

In Data Visualization



hcii.cmu.edu, axle-lab.com, dig.cmu.edu



Frank Elavsky

Chapter 1: Accessibility and Disability, Concepts and Models

Chapter 1, Episode 1:

Why does accessibility matter?

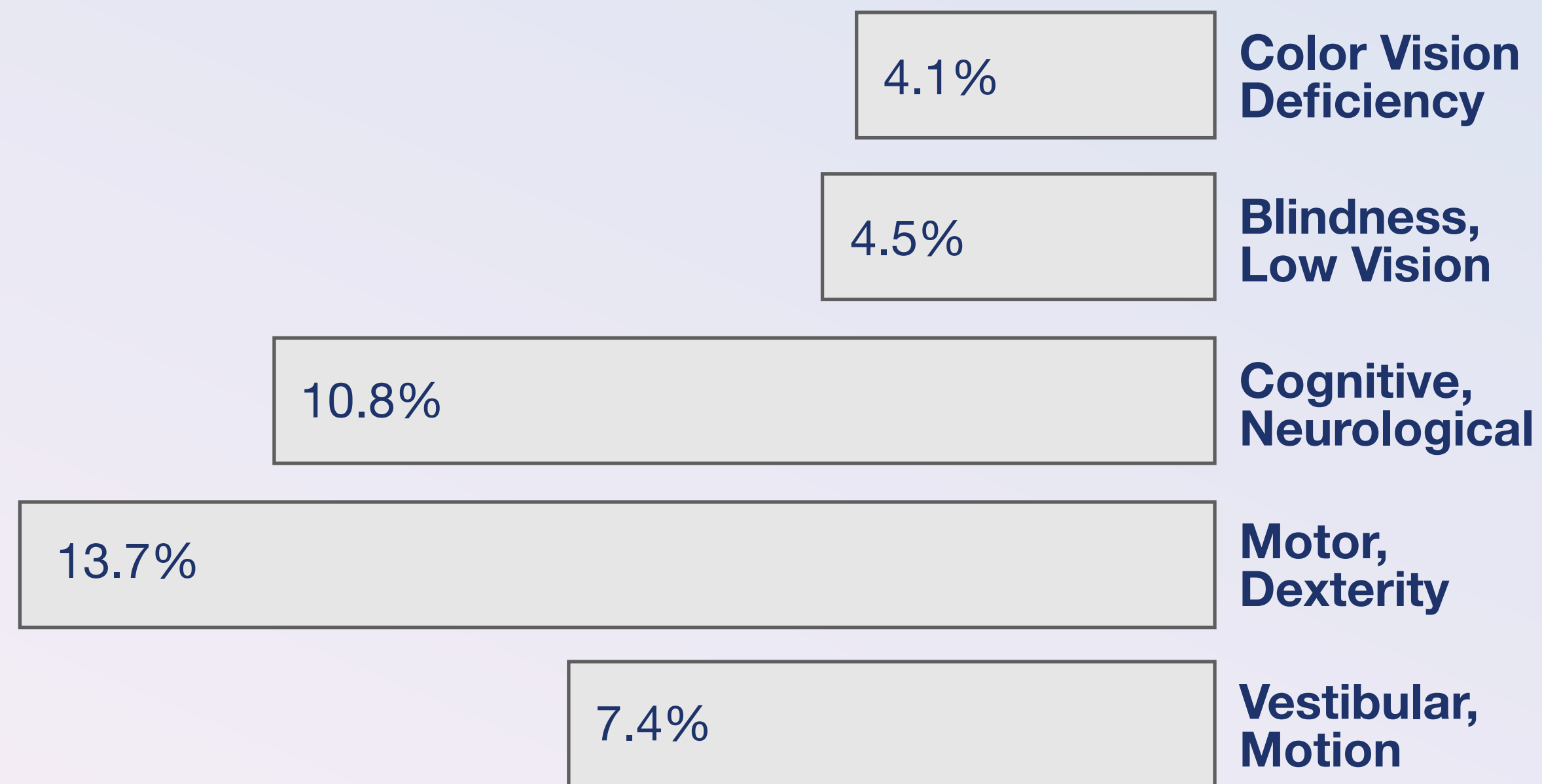
And who is responsible for it?

Access is a human right

Accessibility for people with disabilities is an internationally recognized human right.

It is the morally and ethically correct thing to do.

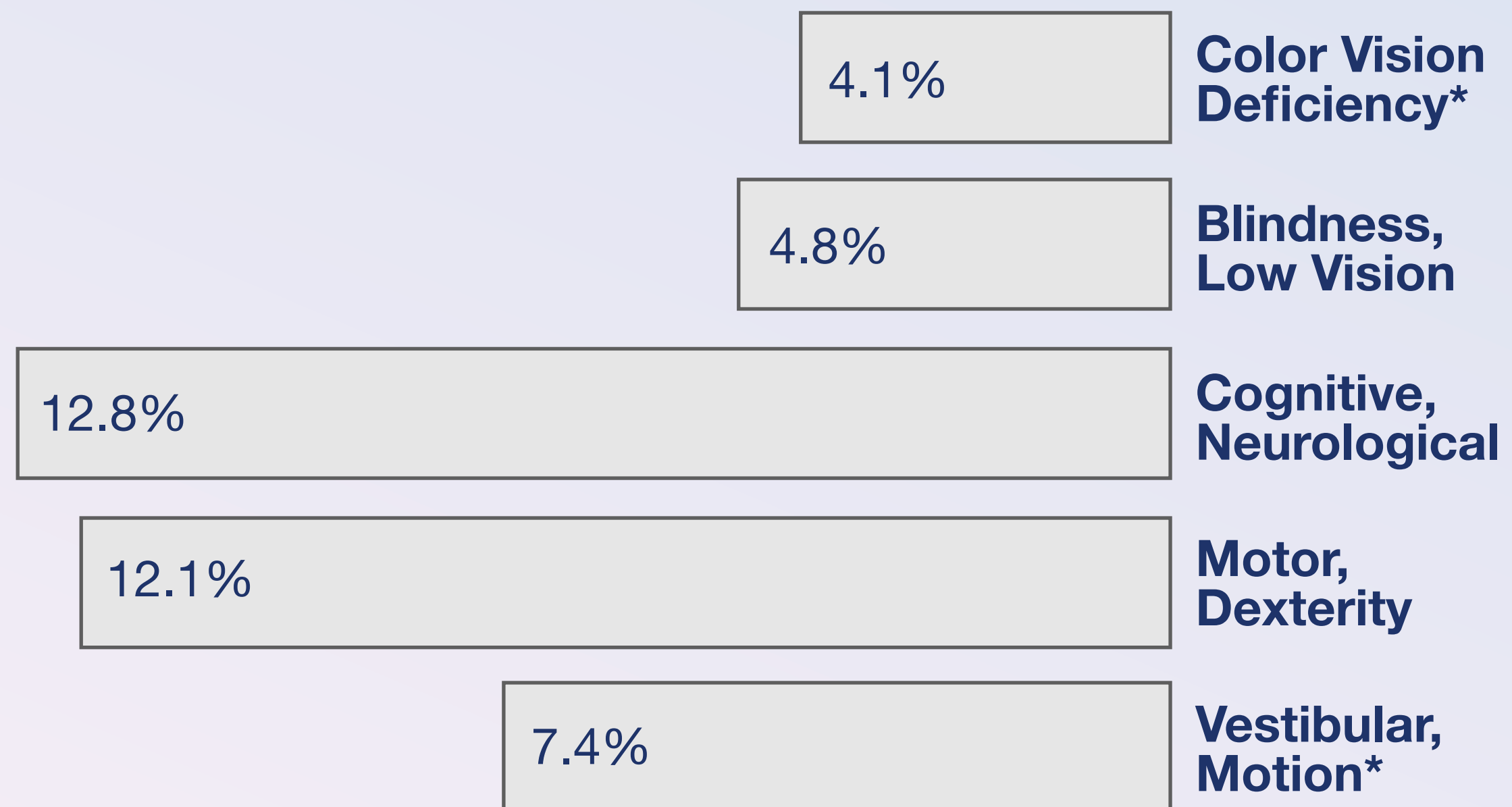




Source: Okoro et al. "Prevalence of Disabilities and Health Care Access by Disability Status and Type Among Adults"

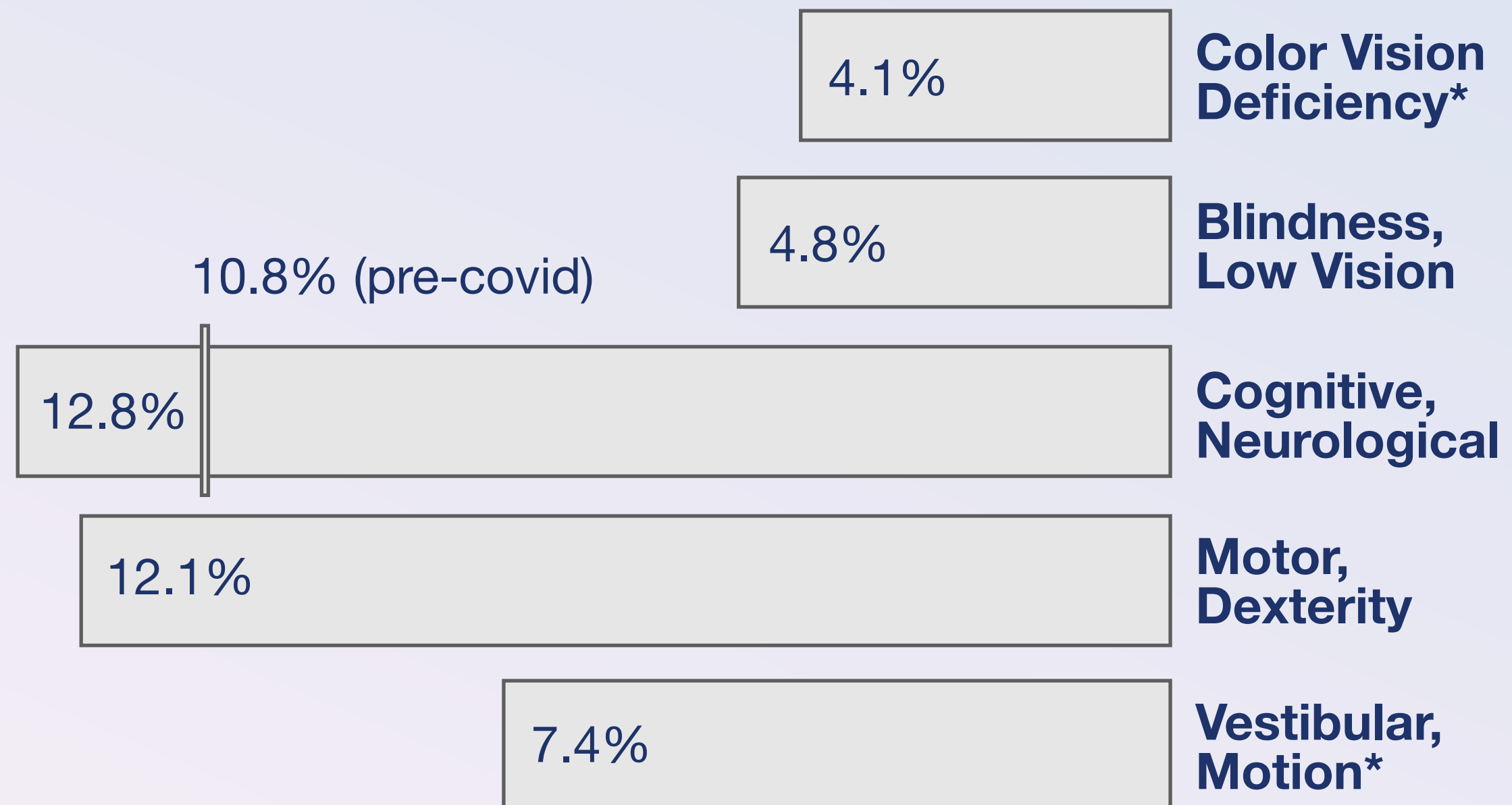
~26% of people living in the United States self-report living with a disability that affects their daily life (2017)

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Centers for Disease Control and Prevention. Disability and Health Data System (DHDS). 2023. Available from: <http://dhds.cdc.gov>
*No new data

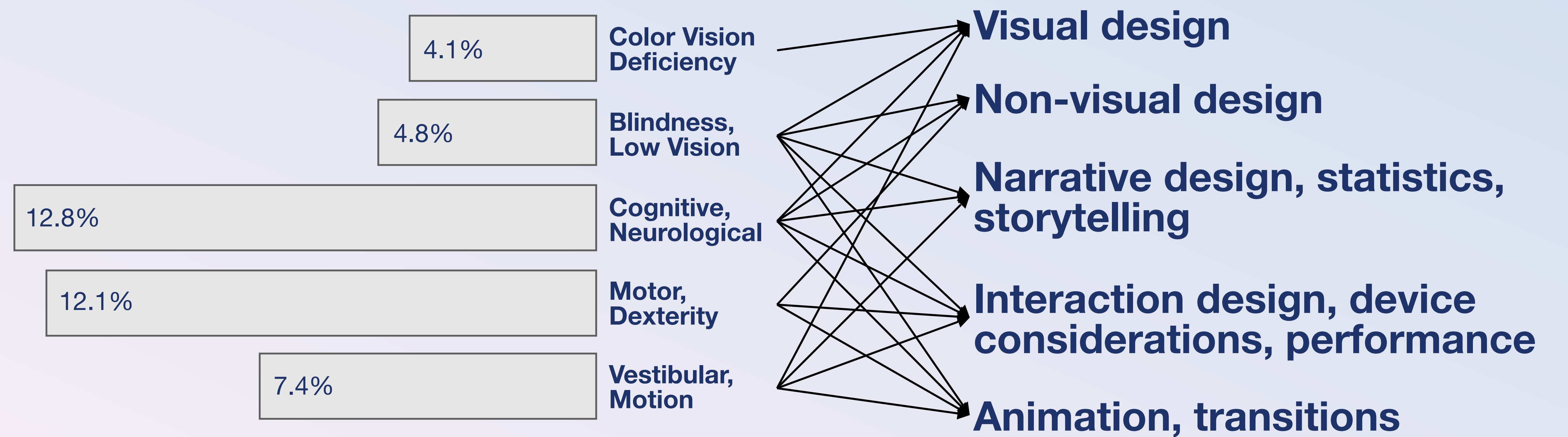
Cognitive disability is on the rise



Centers for Disease Control and Prevention. Disability and Health Data System (DHDS). 2023. Available from: <http://dhds.cdc.gov>

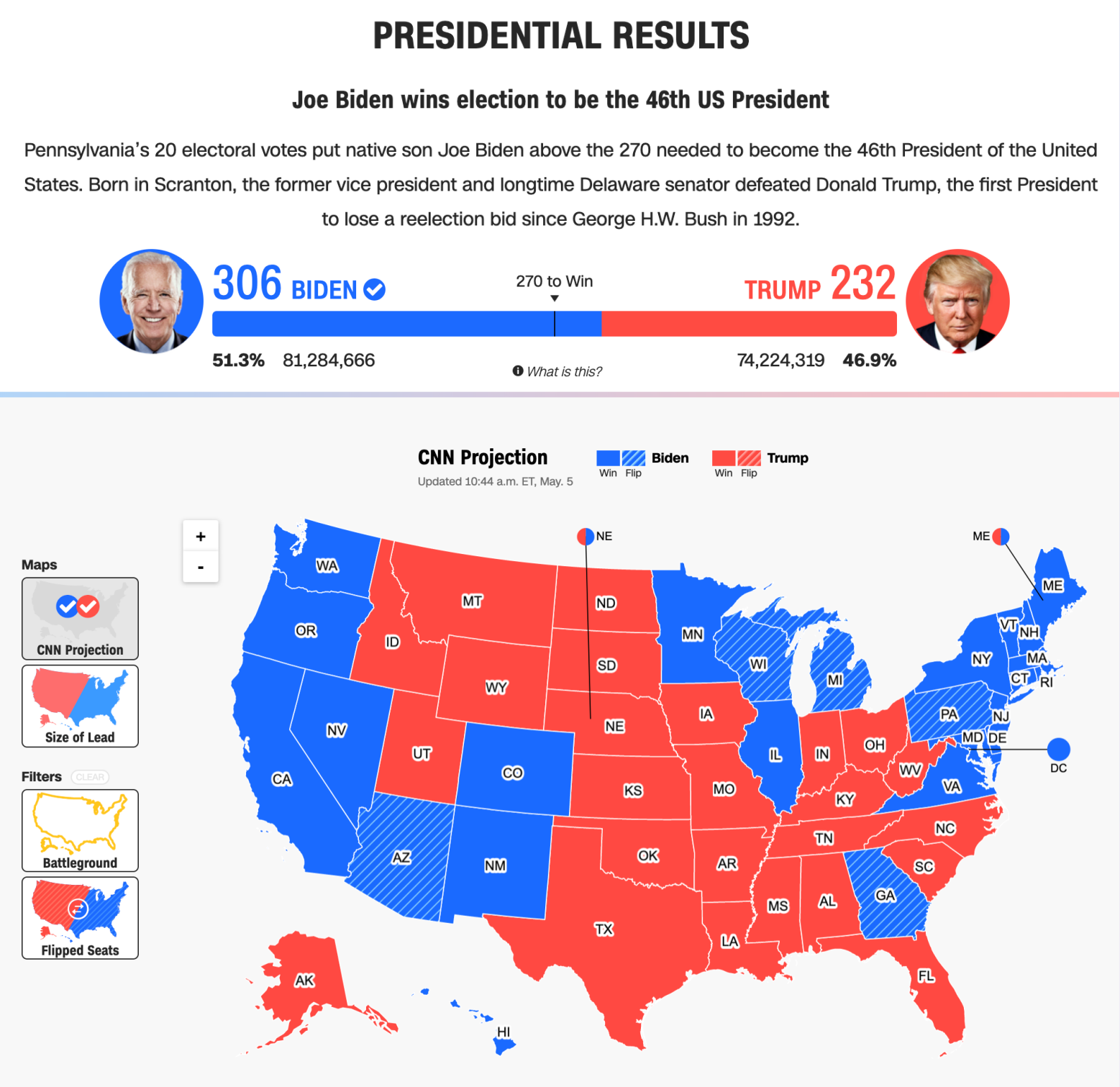
*No new data

Accessibility affects every aspect of visualization work



People with disabilities deserve to:

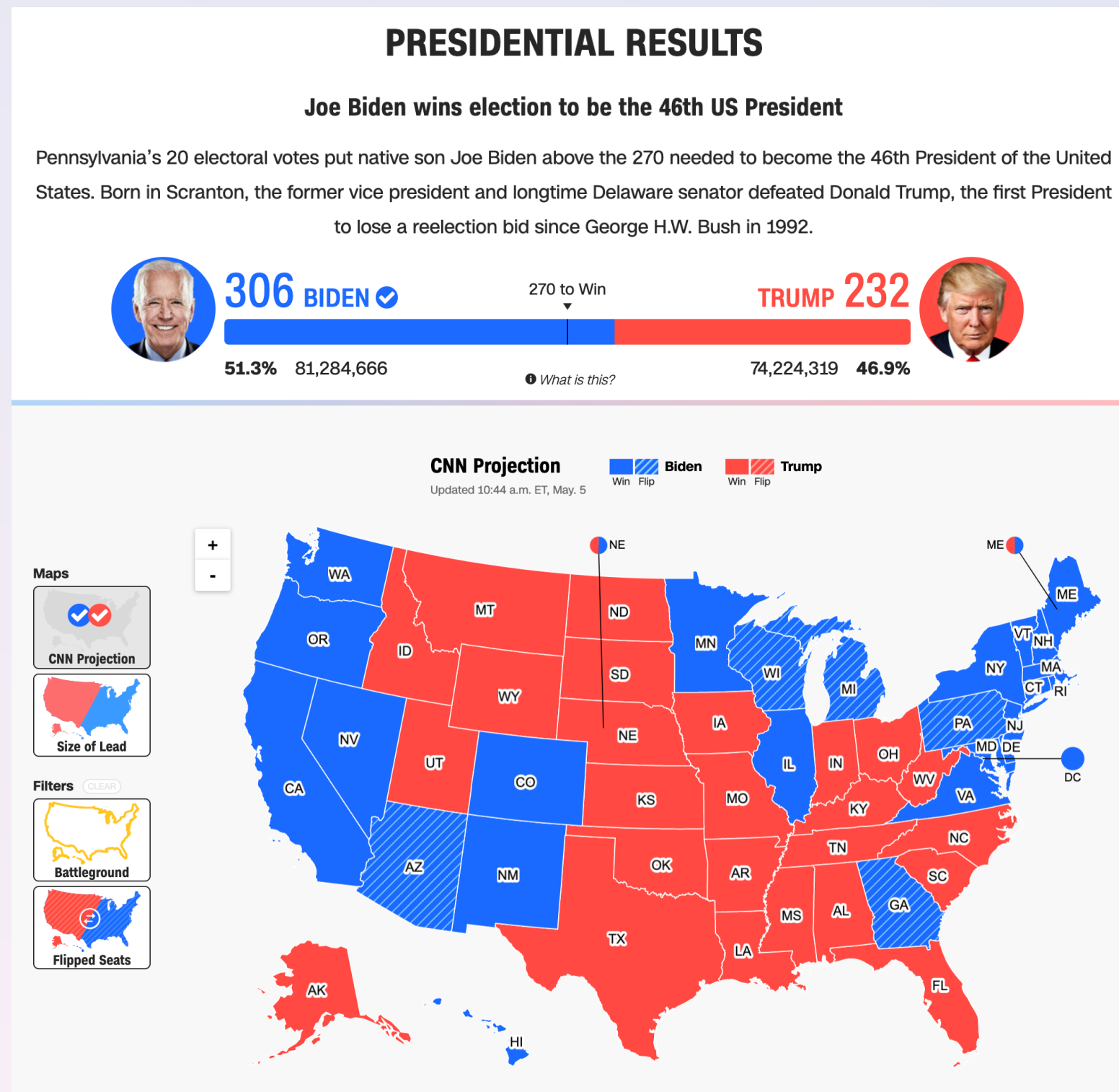
Participate in politics



Credit: [CNN](#)

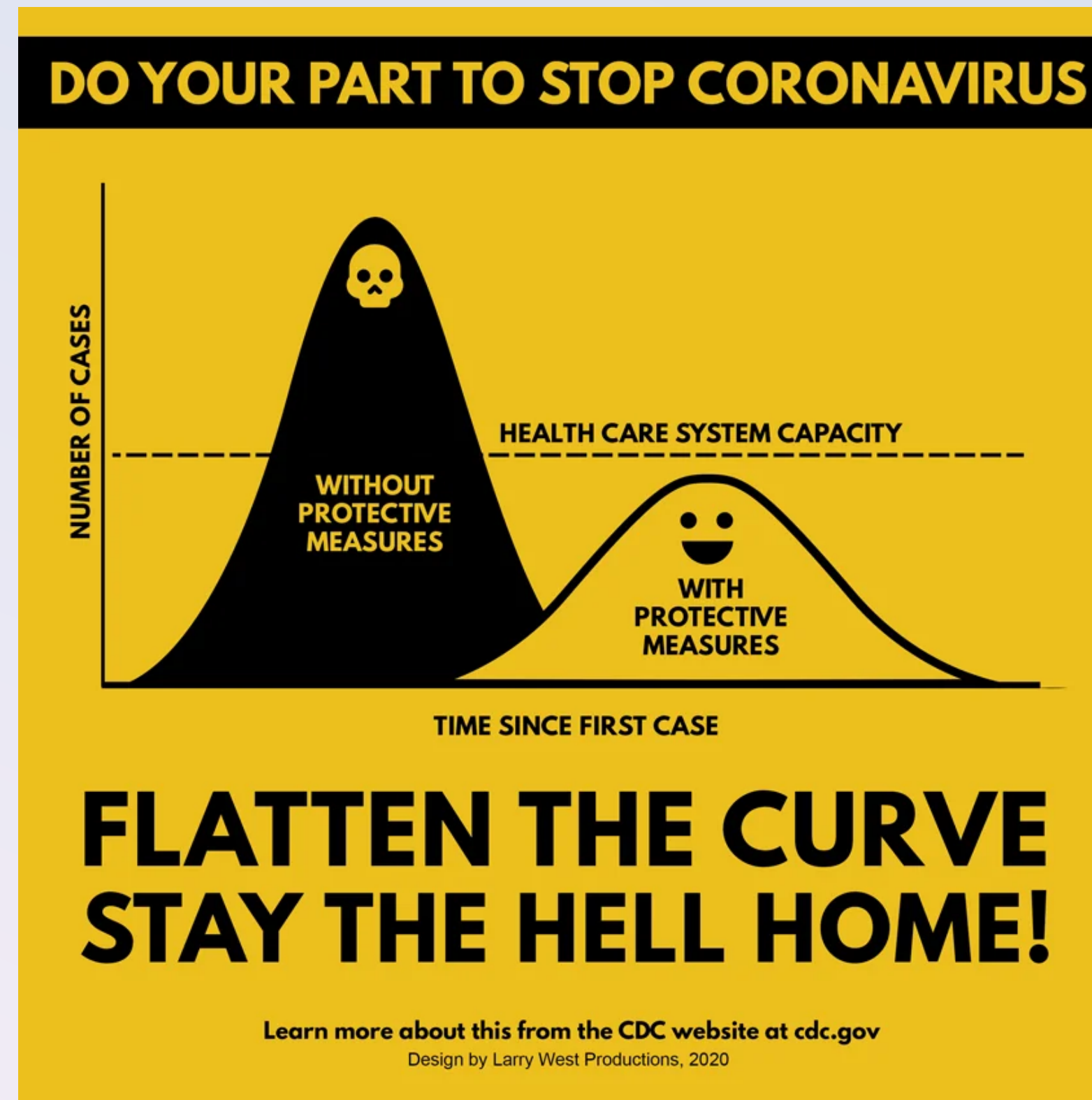
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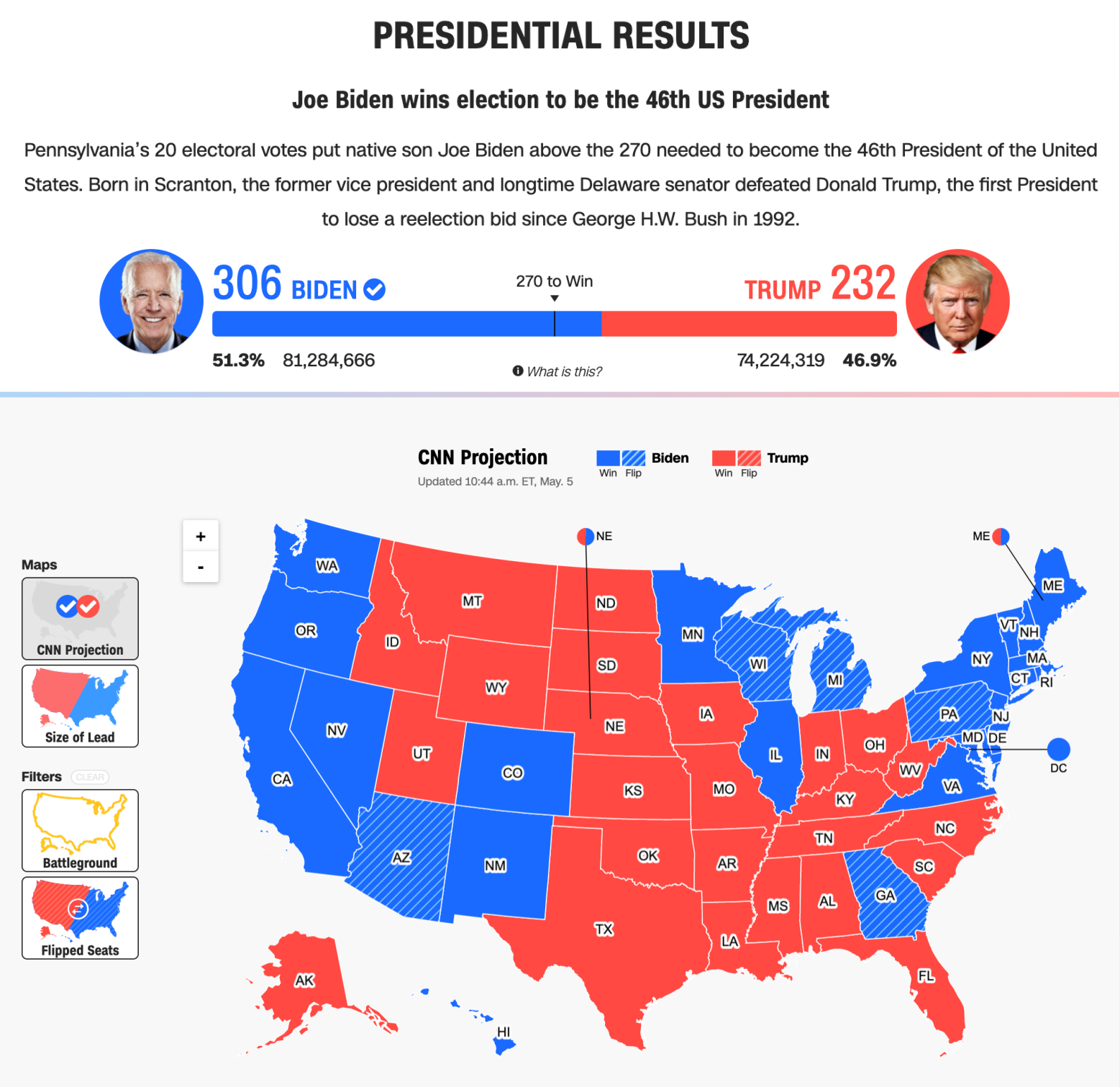
Make informed decisions



Credit: [Reddit](#)

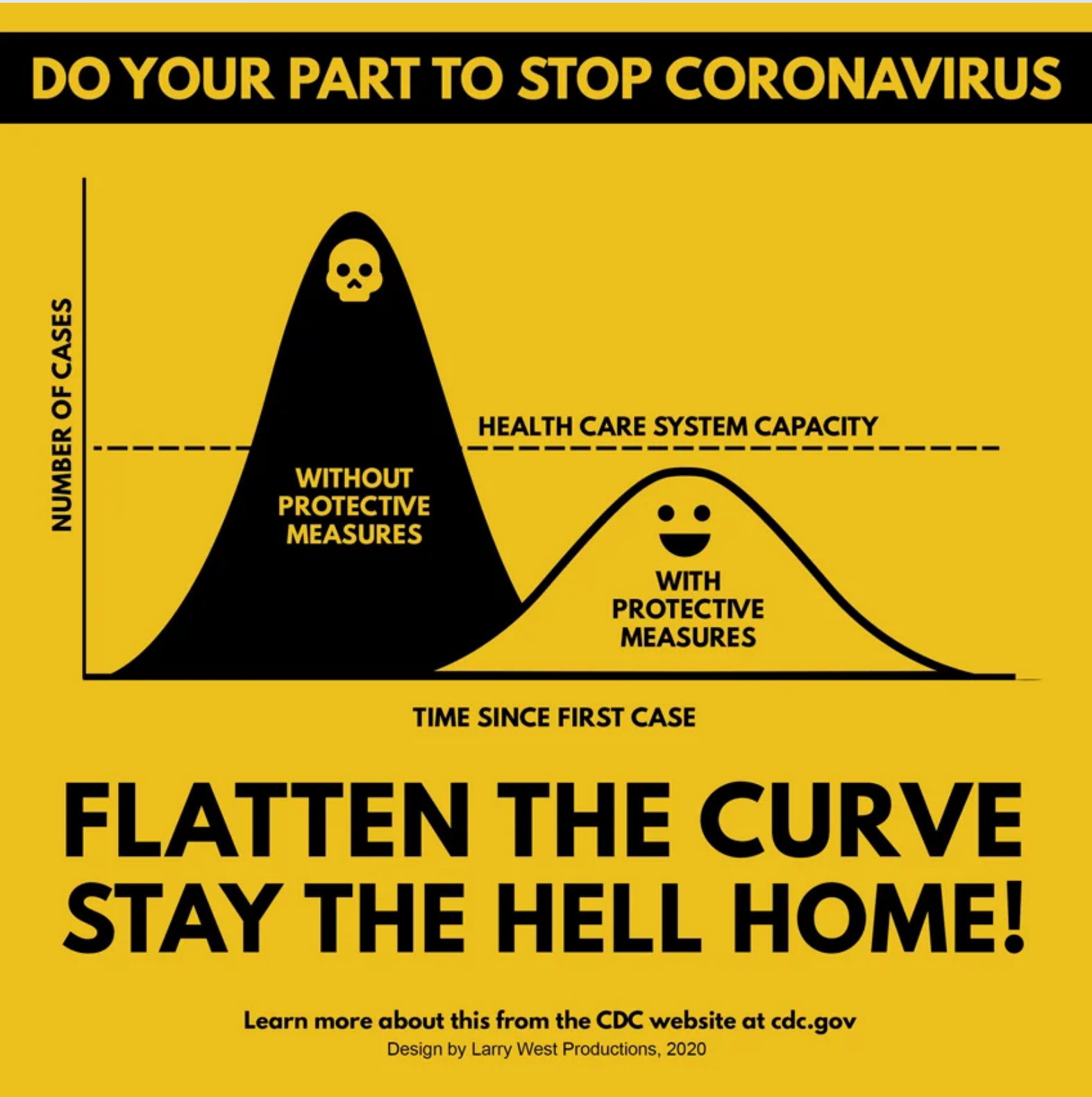
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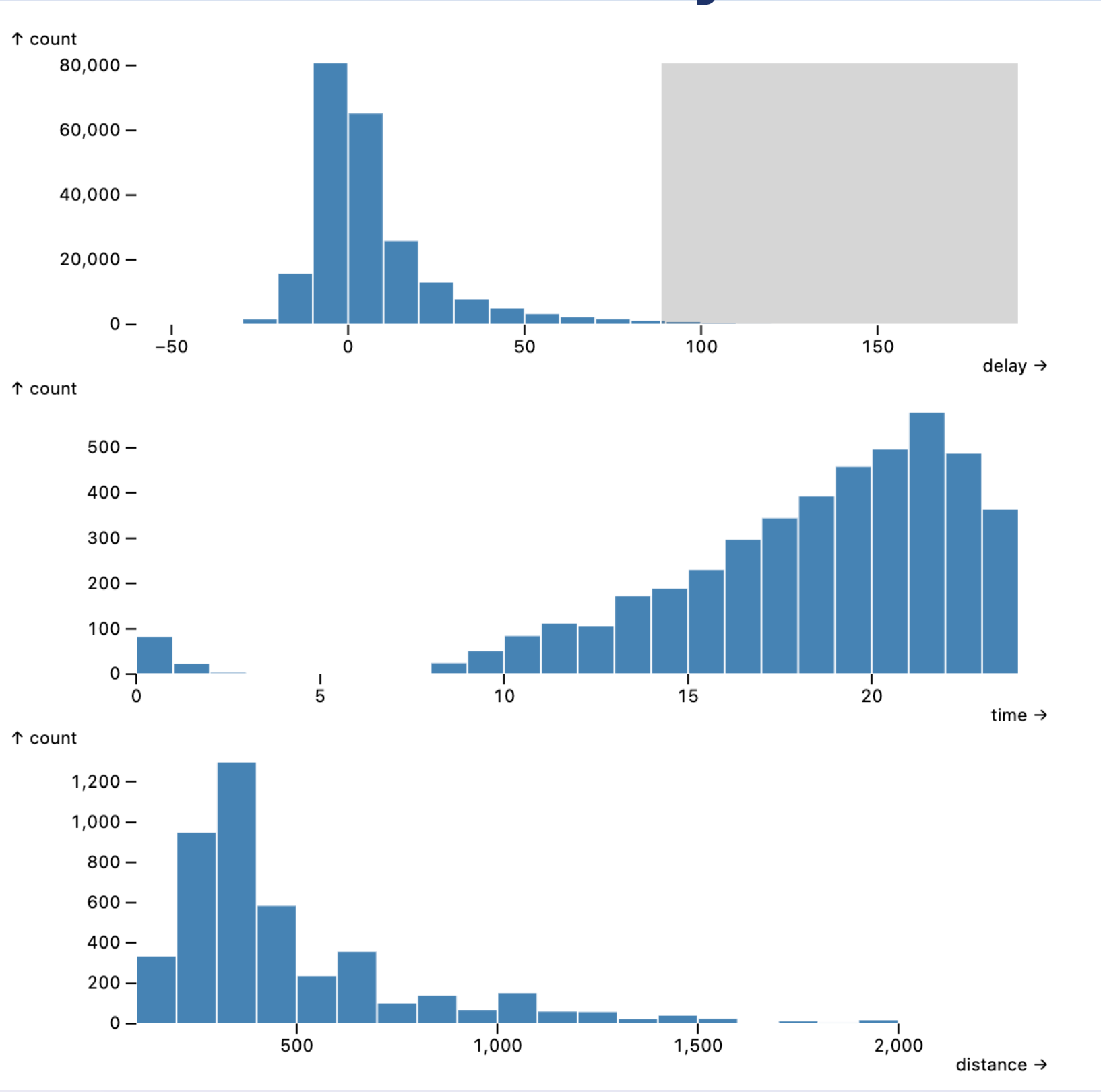
Credit: [CNN](#)

Make informed decisions

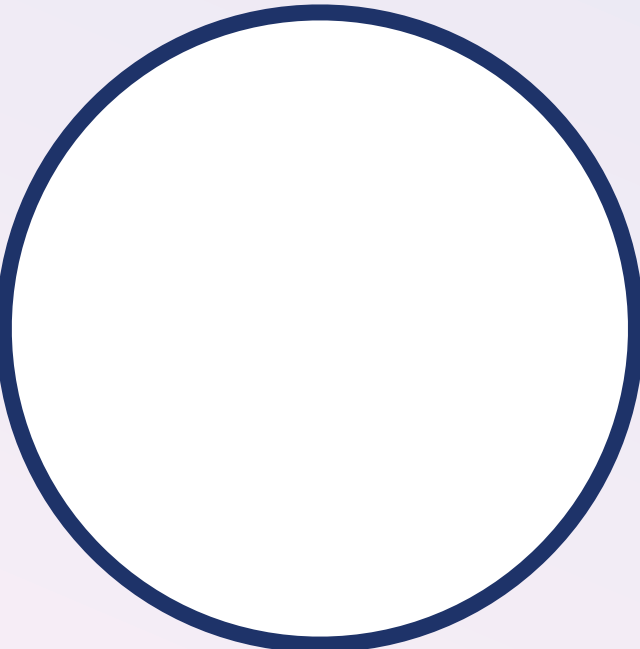


Credit: [Reddit](#)

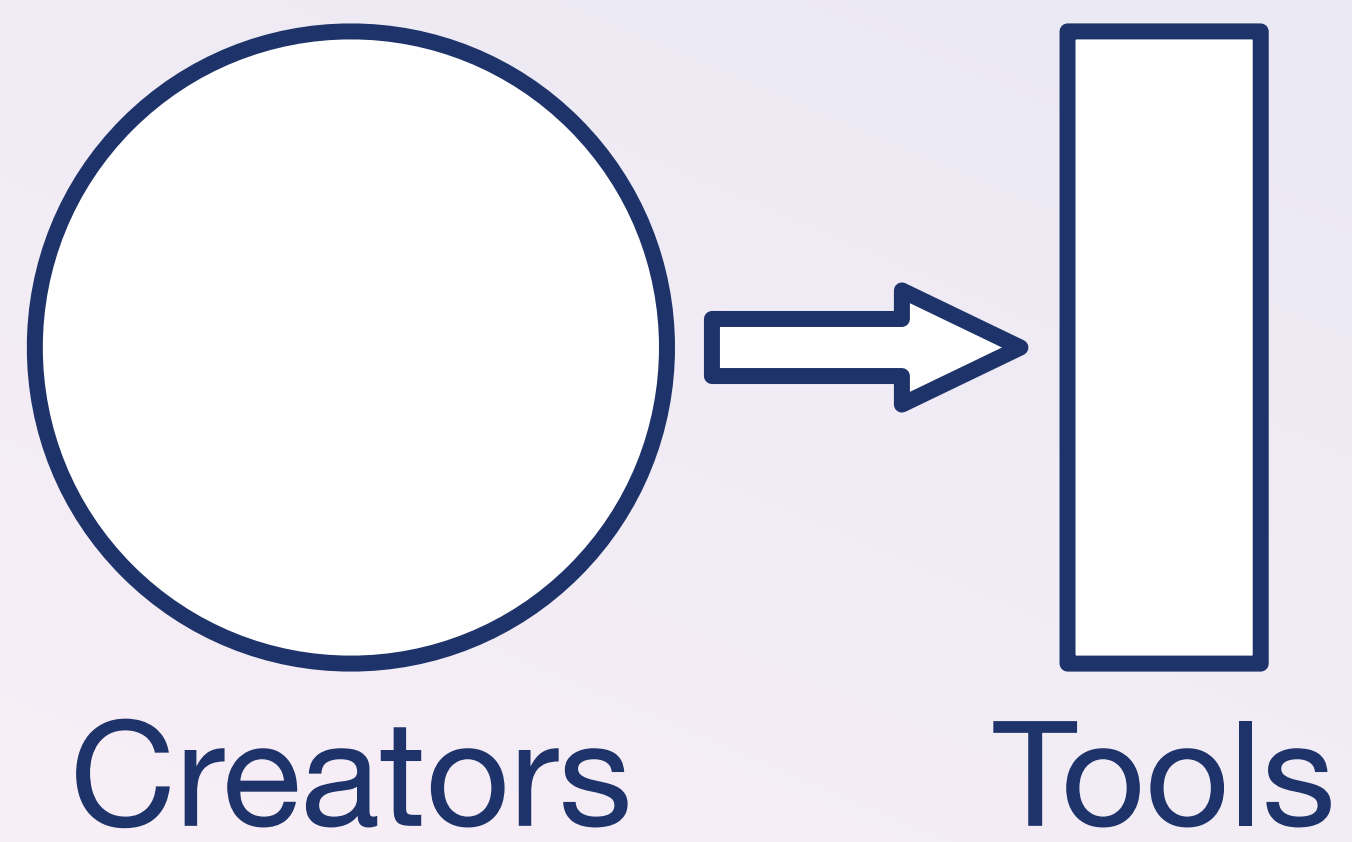
Analyze data quickly and efficiently

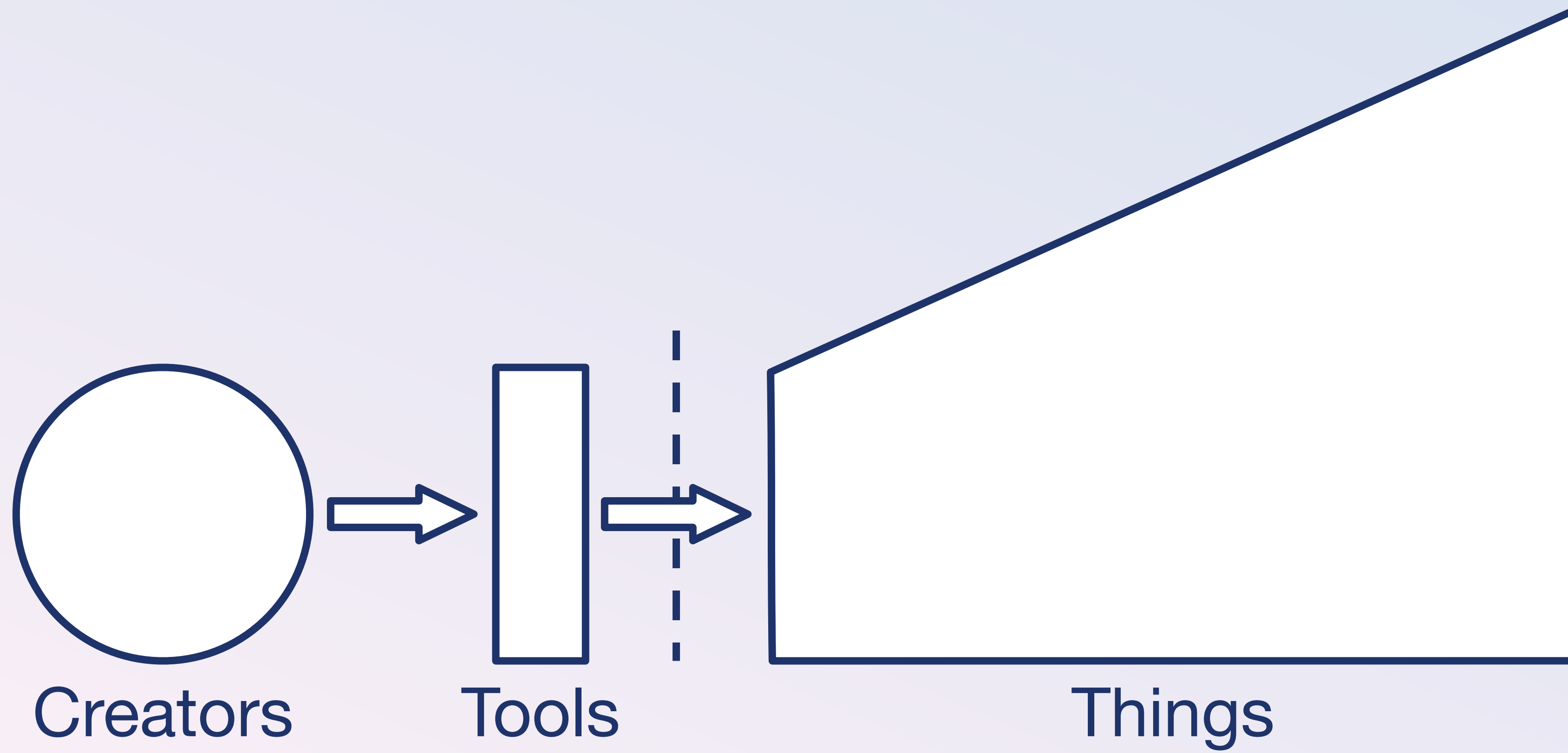


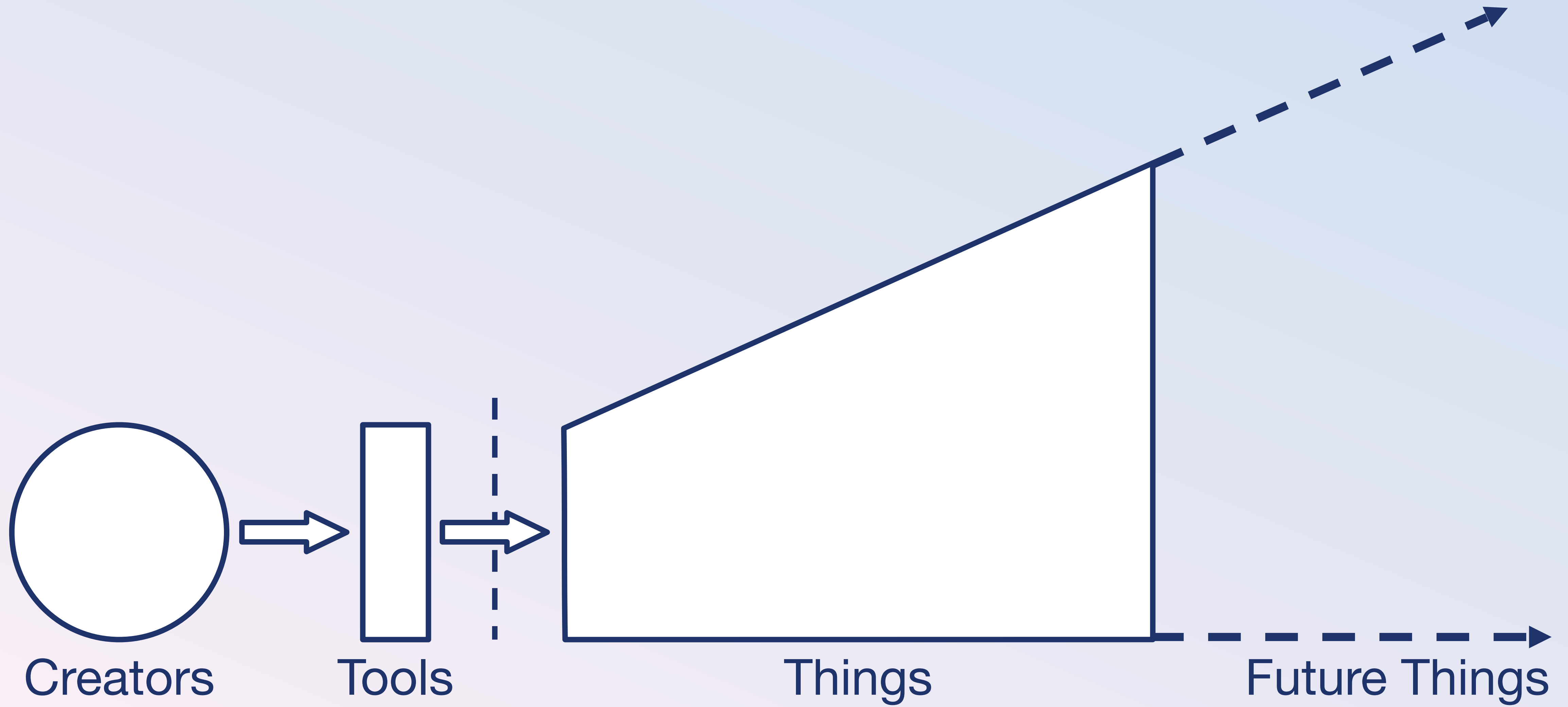
Credit: [Our research](#)



Creators





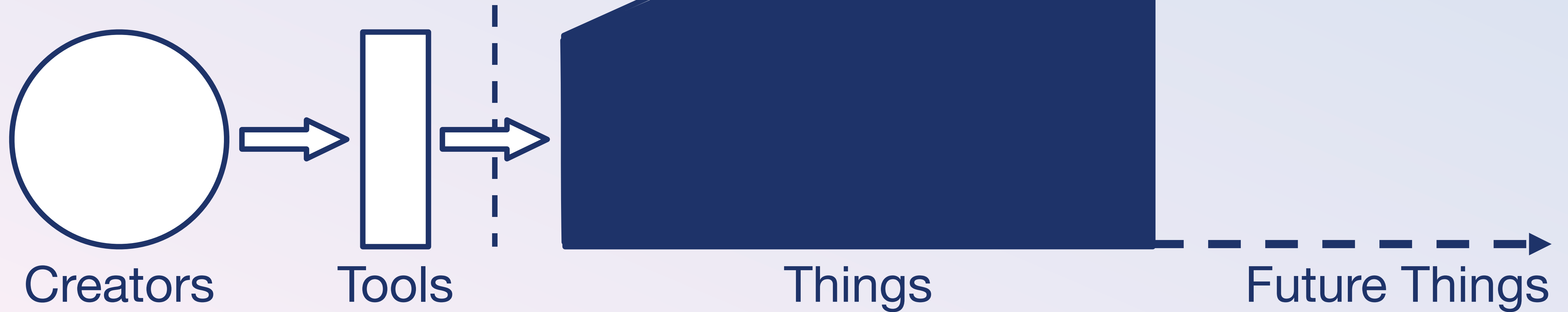


**But how much of this is
inaccessible?**



97-99%

Source: World Wide Web Consortium. "The WebAIM Million Report." 2019-2024

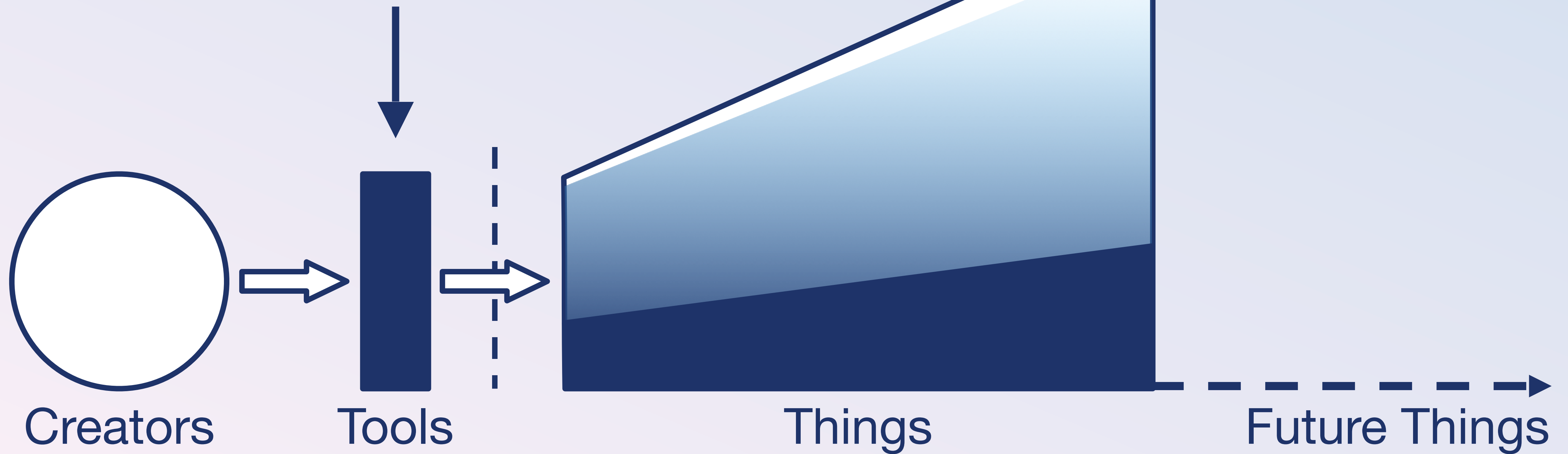


The builders and the makers (*that's us*) are responsible for access.



Credit: Jeff Kubina, [Wikimedia](#)

Can better visualization tools reduce inaccessibility?



Tooling matters:

Looking at data journalism + Flourish

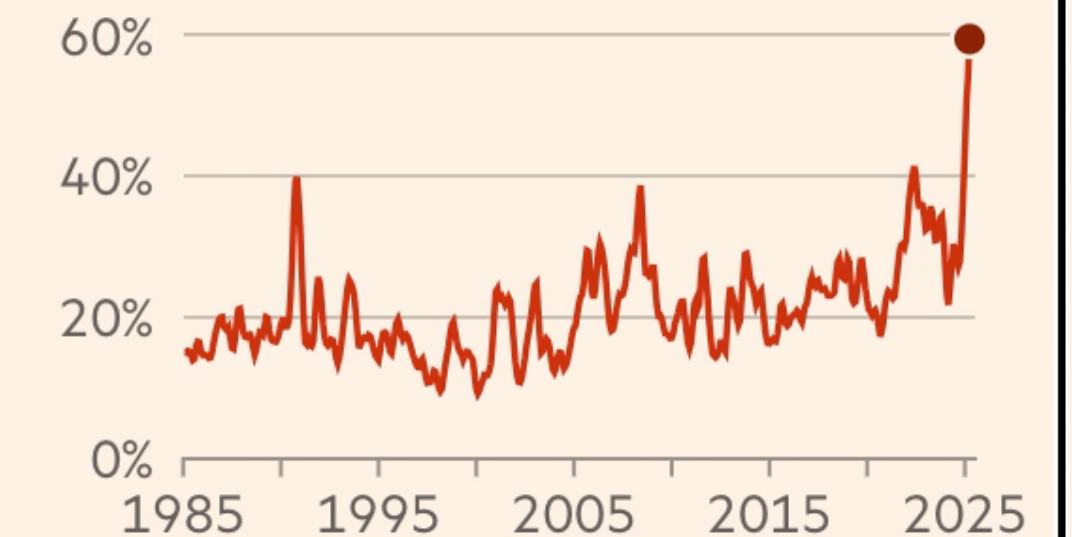
US consumers are rapidly souring on Trump's economic plan

Share of adults who...

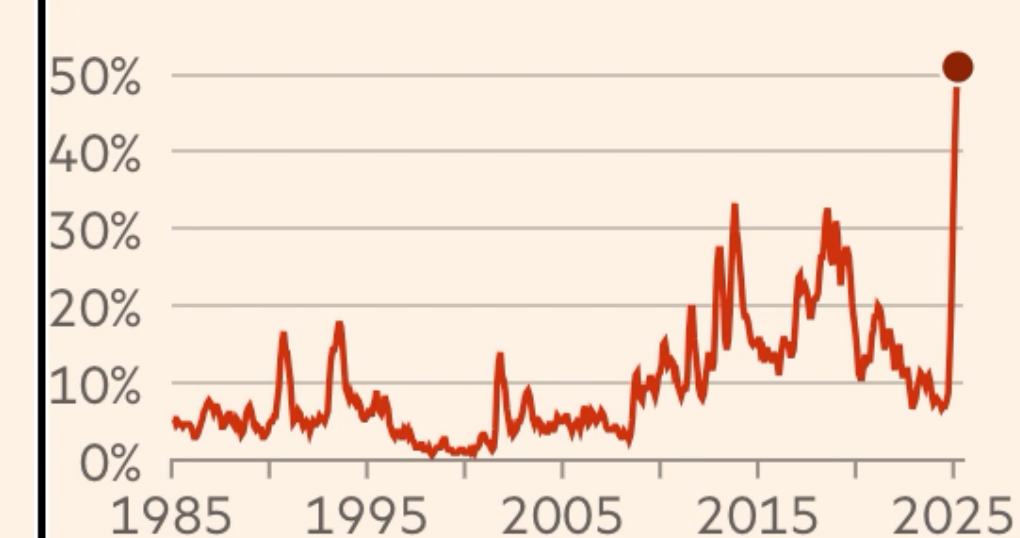
Have a negative opinion of government's economic policy



Expect business conditions to worsen over next year



Have heard unfavourable business news coverage of government



Expect their income will grow faster than inflation in next 5 years



Source: [University of Michigan consumer sentiment survey](#).

FT graphic: John Burn-Murdoch / @jburnmurdoch

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Republican. No need to take that from me: it's a well-evidenced