Unlocking Accessibility

Inclusive and accessible design is not only a necessity for some…

Rasmus Sanko

Chief Strategy Officer

We assist businesses and organisations that are passionate about their field of expertise and aspire to excel digitally.

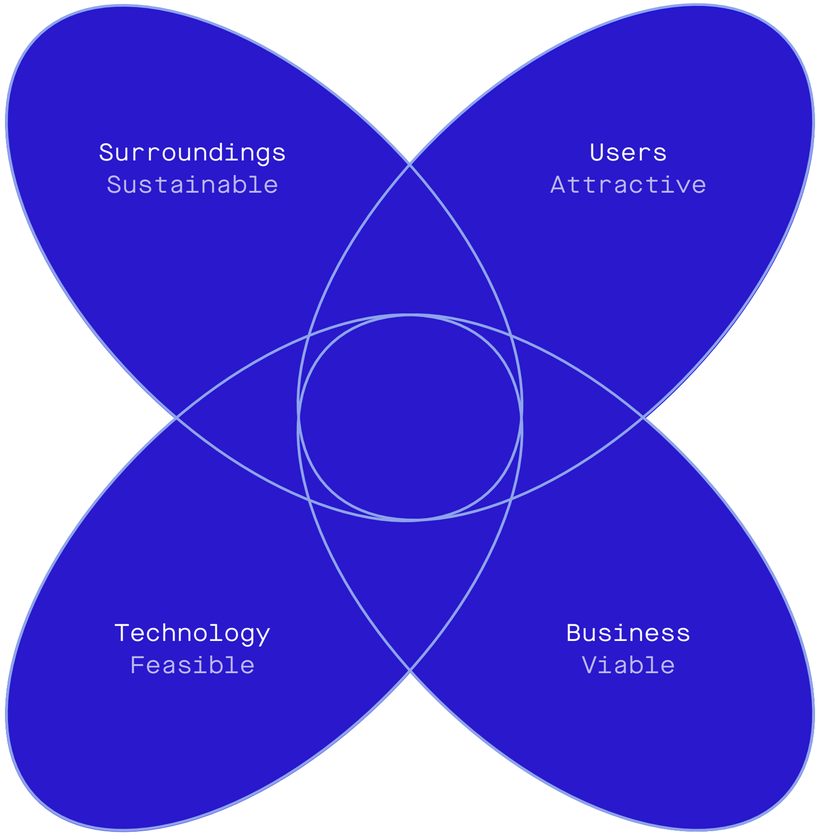
We accomplish this by designing and implementing user centric, data driven products and services of the highest quality.

Together we create modern, digital businesses and organisations that provide meaning and value for society as well as individuals.

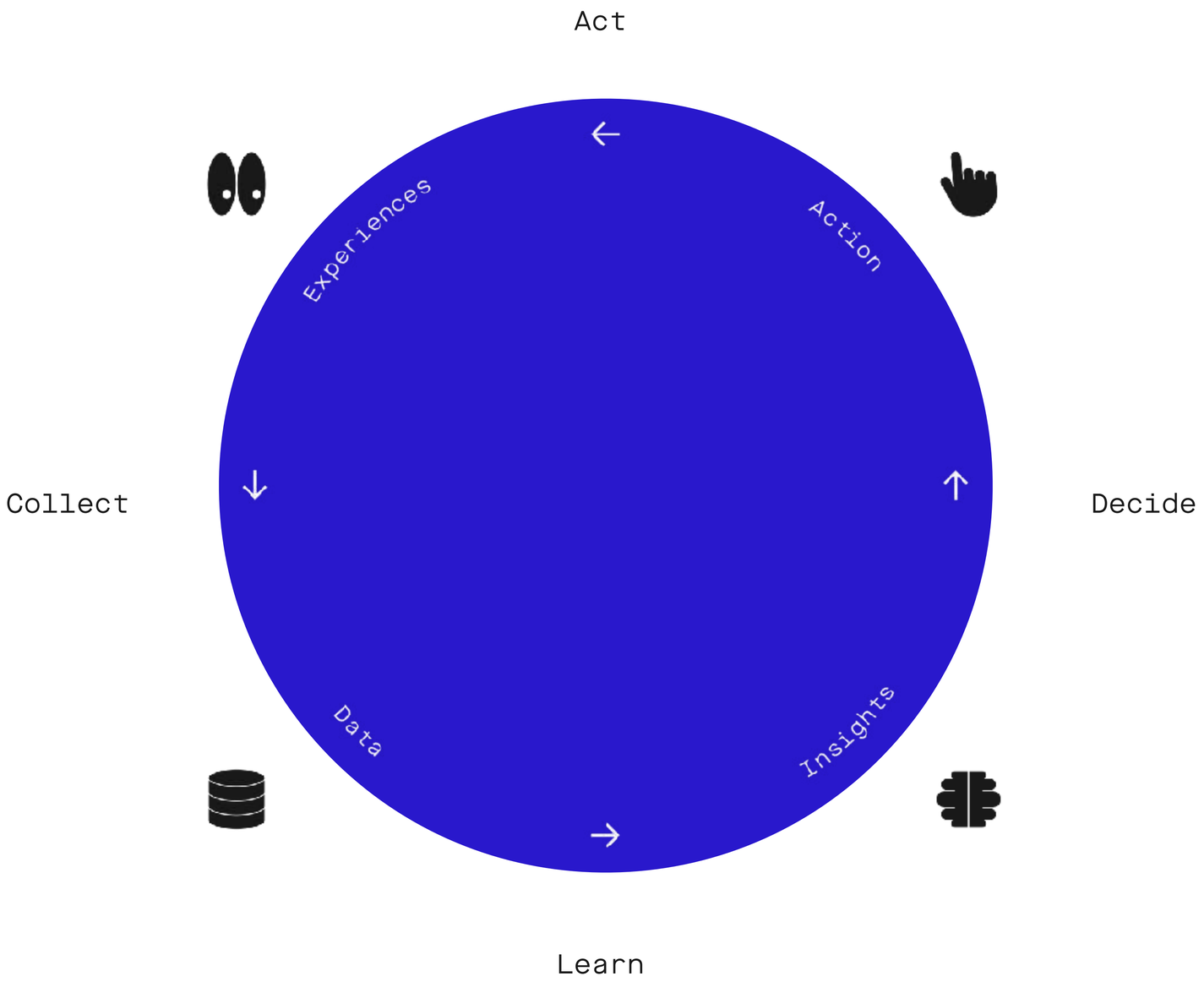
CHARLIE TANGO

CHARLIE
TUPAC.

Design thinking



Data driven mindset



Citizen Proposals

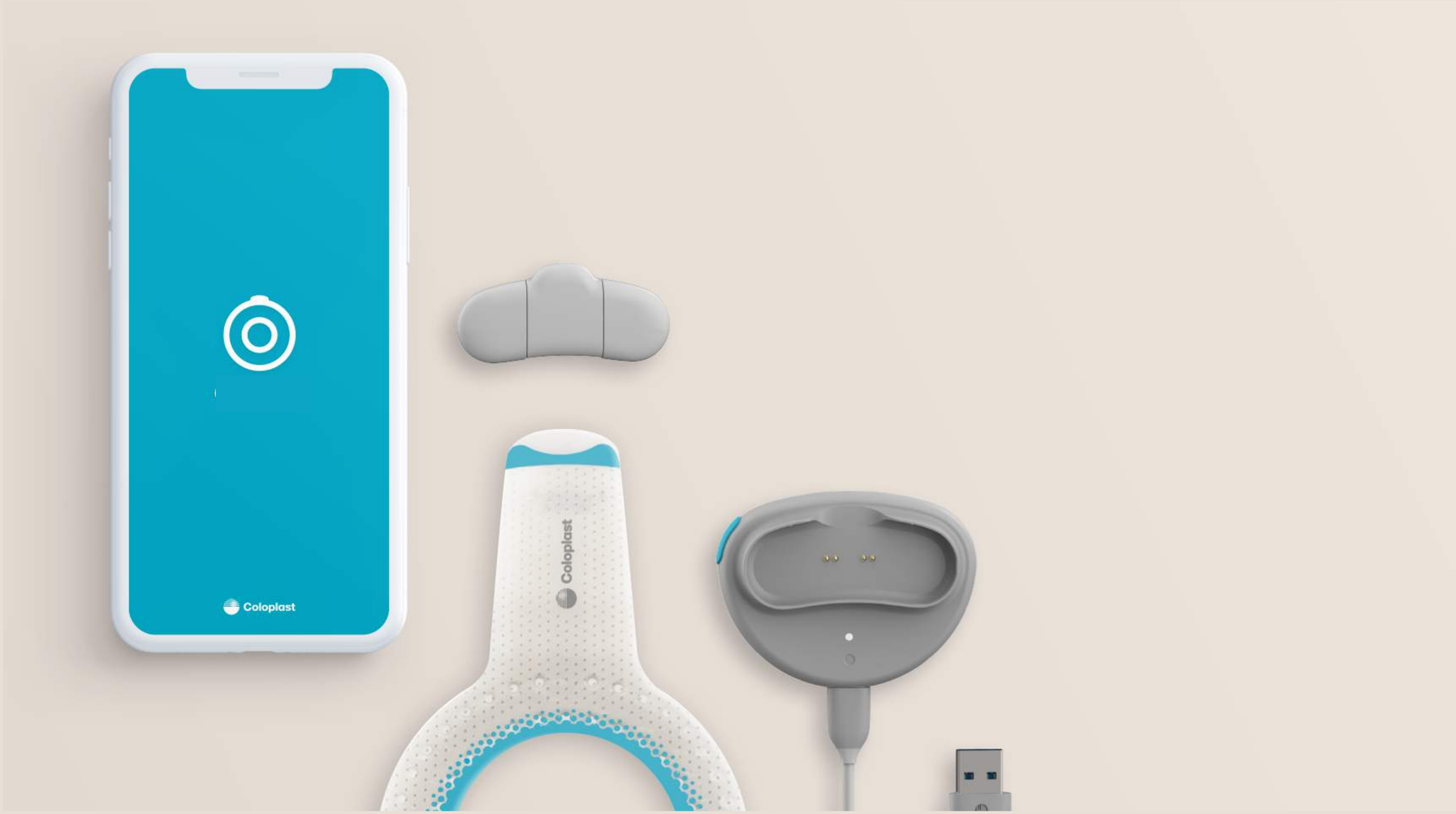
Voter Declarations

DANISH DESIGN AWARD

FINALIST
2022

Coloplast

reddot design award



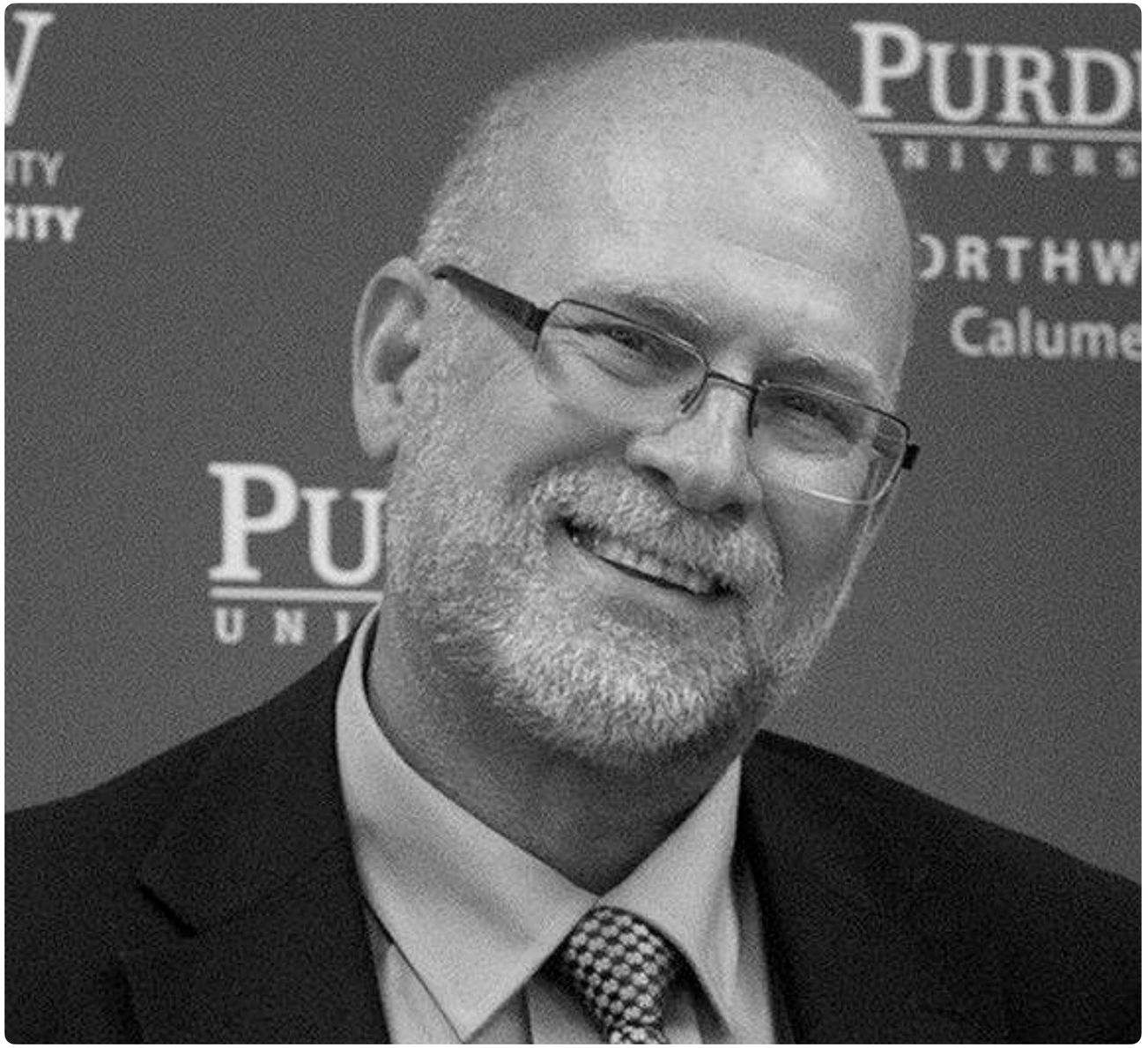
We have likely all felt excluded at some point in our lives.

Whether in our childhood, on the playground, at school, at work, by friends, or even by services we have interacted with.

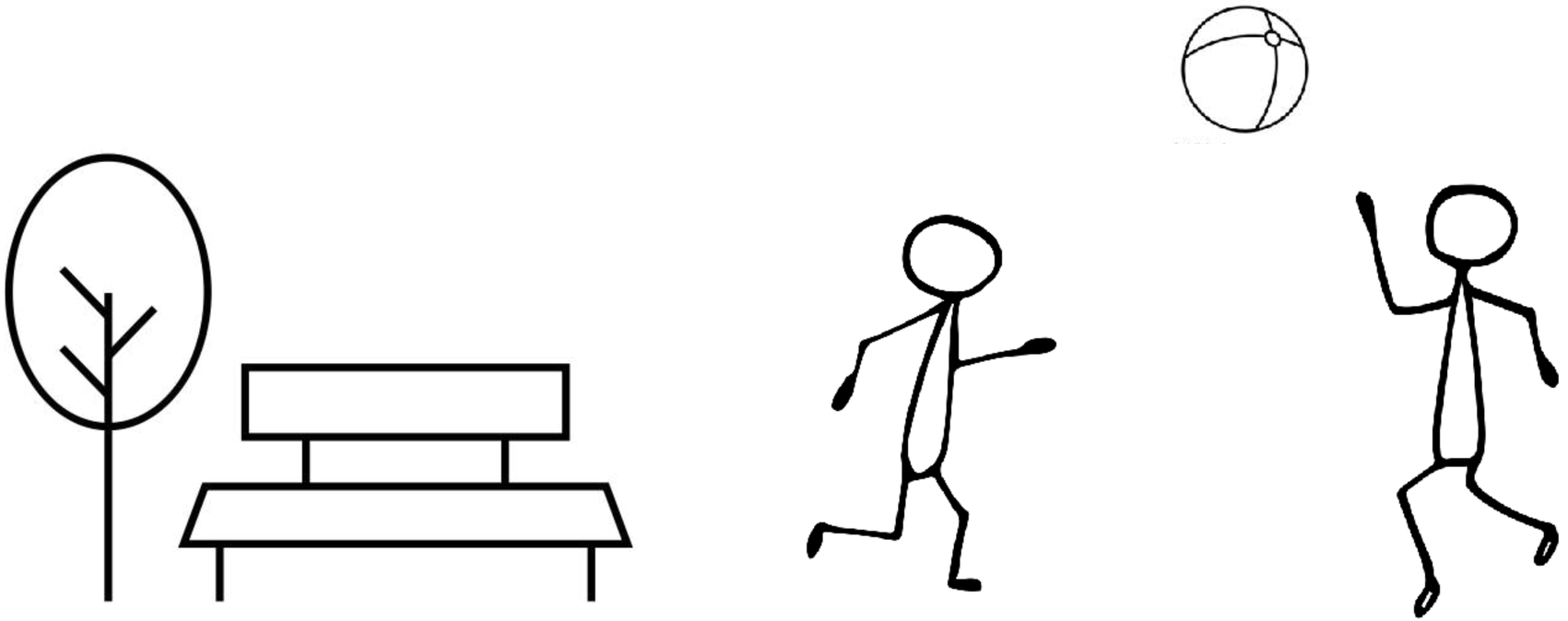
Source: Unsplash, alexandr-podvalny

Kipling Williams

Professor of Psychology,
Purdue University



Director of Diversity, Equity, and Inclusion at the Department of Psychological Sciences at Purdue University



Cyberball

Source: Williams, K. D., Cheung, C. K. T., & Choi, W. (2000). CyberOstracism: Effects of being ignored over the Internet. Journal of Personality and Social Psychology, 79, 748-762.

“

Participant William’s cyber ball study

You know that people will let you down, but computers aren’t supposed to.

There are many reasons to be *excluded*

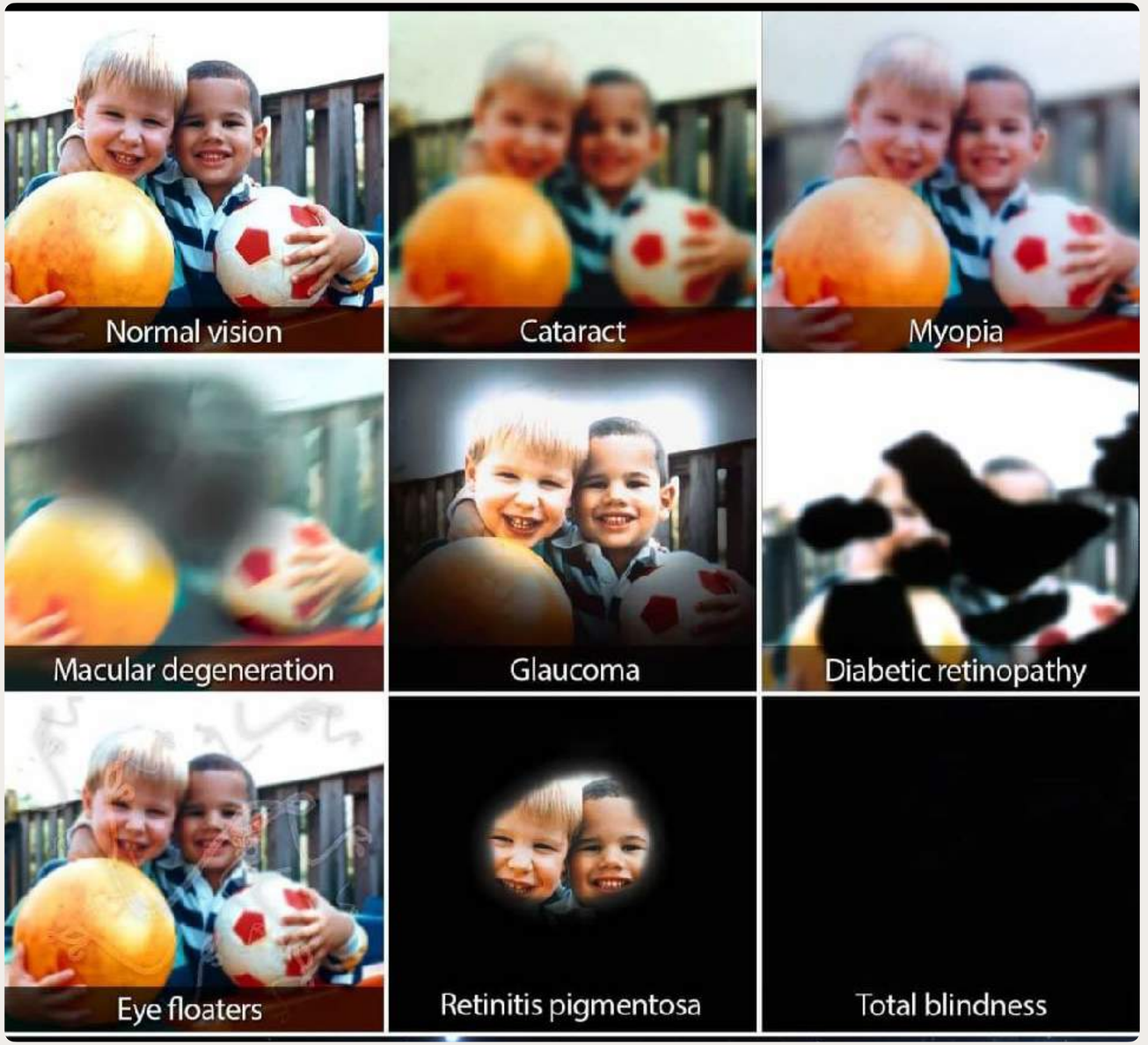
There are many reasons to be *excluded*

Deaf or hearing impaired

Source: @matiisigns (TikTok)

Auditory disabilities range from mild or moderate hearing loss in one or both ears to substantial and uncorrectable hearing loss in both ears.

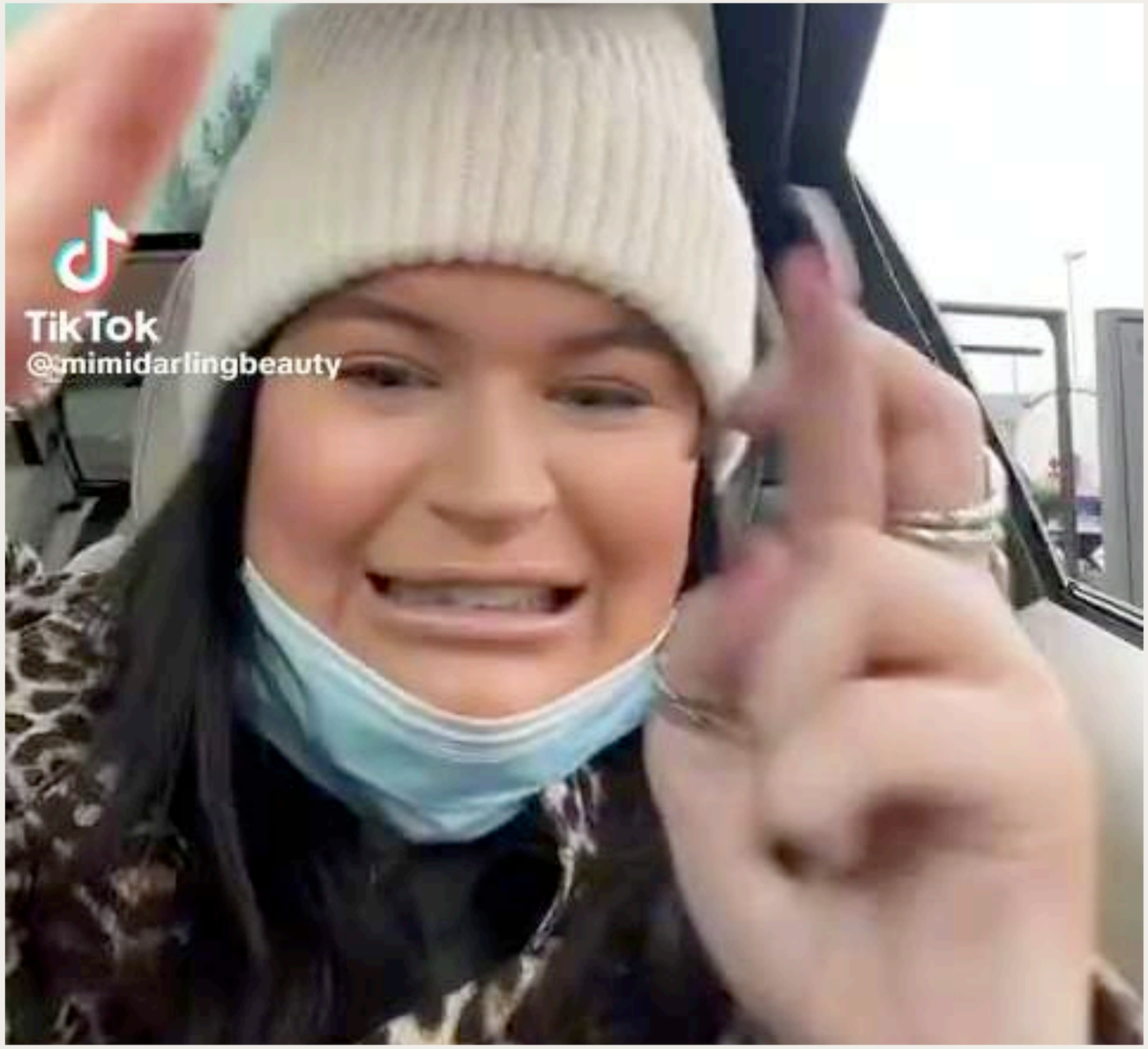
Blind or vision impaired



Source: Hashem Al-Ghaili for National Institutes of Health

Visual disabilities range from mild or moderate vision loss in one or both eyes to substantial and uncorrectable vision loss in both eyes.

Speech impairment



Source: @mimidarlingbeauty (TikTok)

Speech disabilities include difficulty producing speech that is recognisable by others or by voice recognition software.

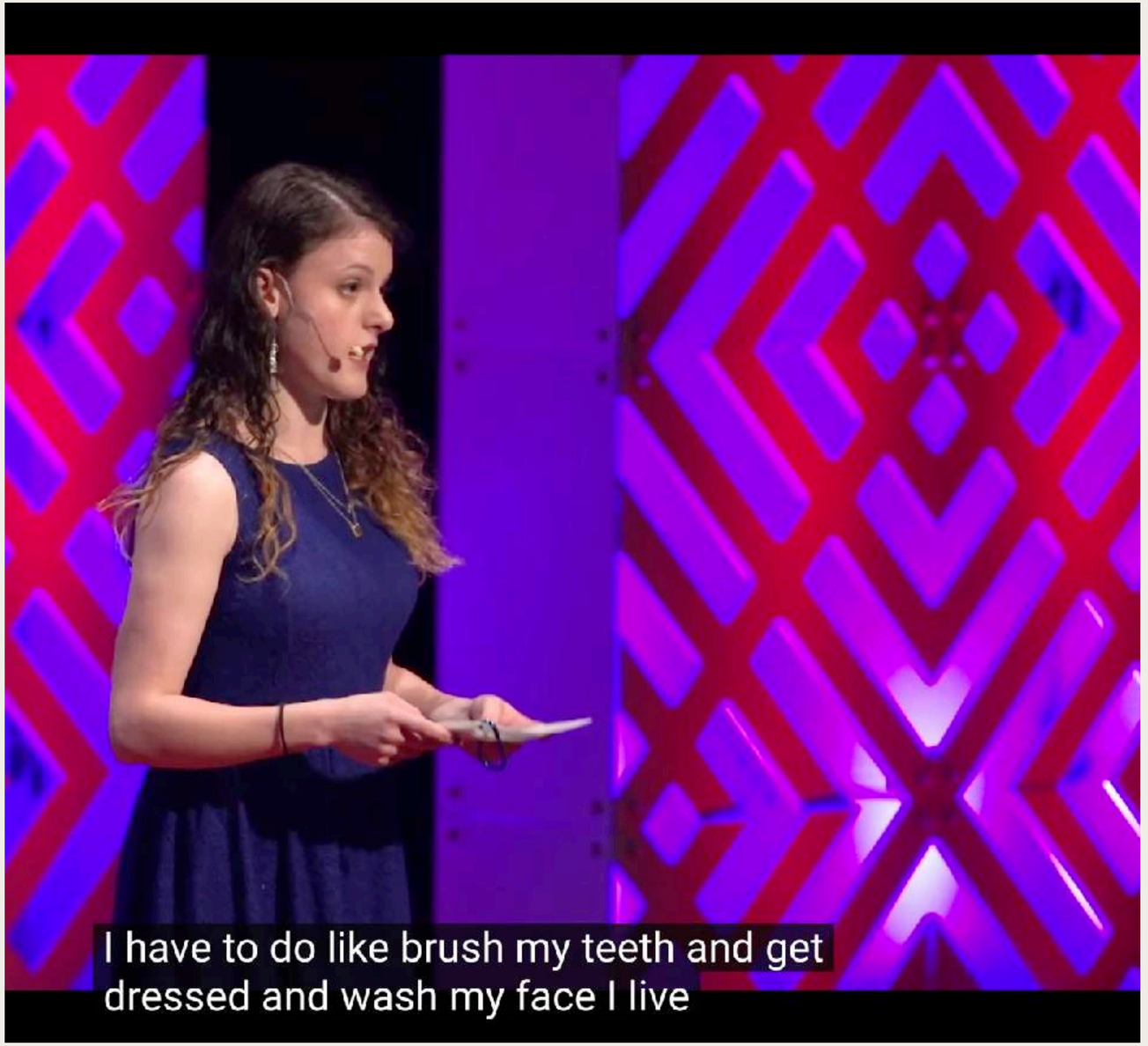
Physical or motor disabilities

Physical disabilities or “motor disabilities” include weakness and limitations of muscular control, limitations of sensation, joint disorders, pain that impedes movement, and missing limbs.

Source: @steadiwear (TikTok)

Cognitive impairment

Cognitive impairment refers to a broad range of disabilities, from people with intellectual disabilities who may have the most-limited capabilities, to age-related issues with thinking and remembering.



Source: Invisible Disabilities: Seeing Others With Compassion | Valerie Kosson | TEDxYouth@Lancaster

1980

Disability as a personal health condition

(...) a disability is any restriction or lack of the ability to perform an activity in the manner or within the range considered normal for a human being.

World Health Organisation

1980

Disability as a personal health condition

(...) a disability is any restriction or lack of the ability to perform an activity in the manner or within the range considered normal for a human being.

World Health Organisation

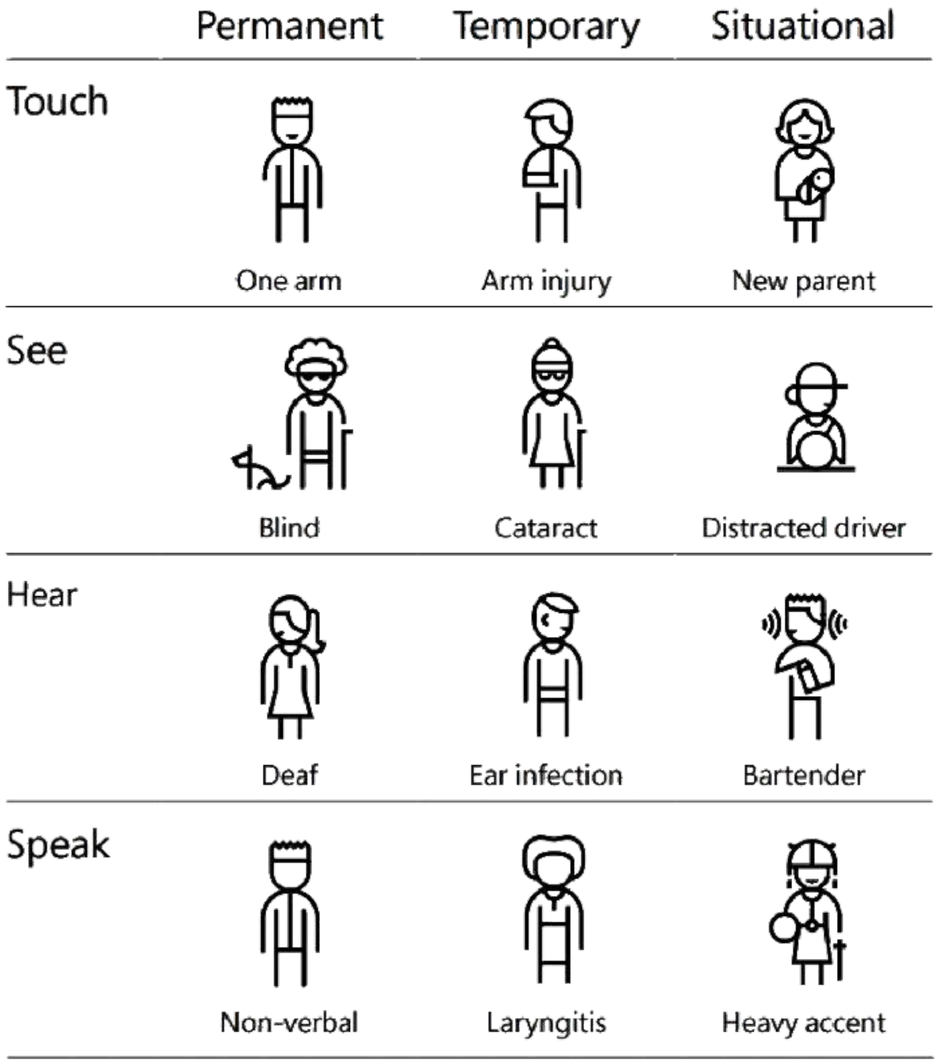
2001

Disability as mismatched interactions

Disability results from the interaction between individuals with a health condition (...) with personal and environmental factors (...)

World Health Organisation

The persona spectrum



Inclusive
A Microsoft Design Toolkit

Hear

Permanent — Temporary — Situational

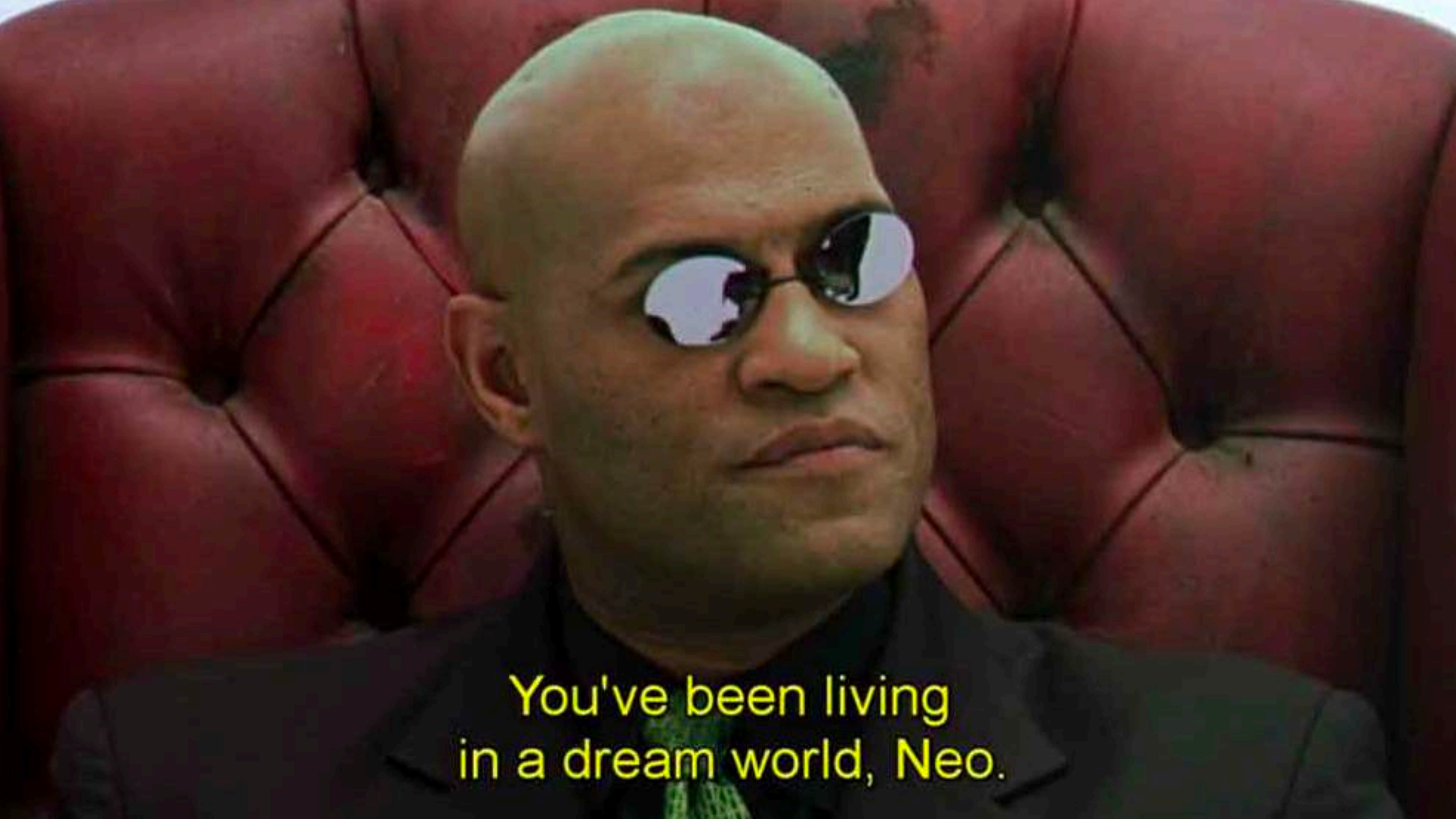
Deaf

Ear infection

Bartender

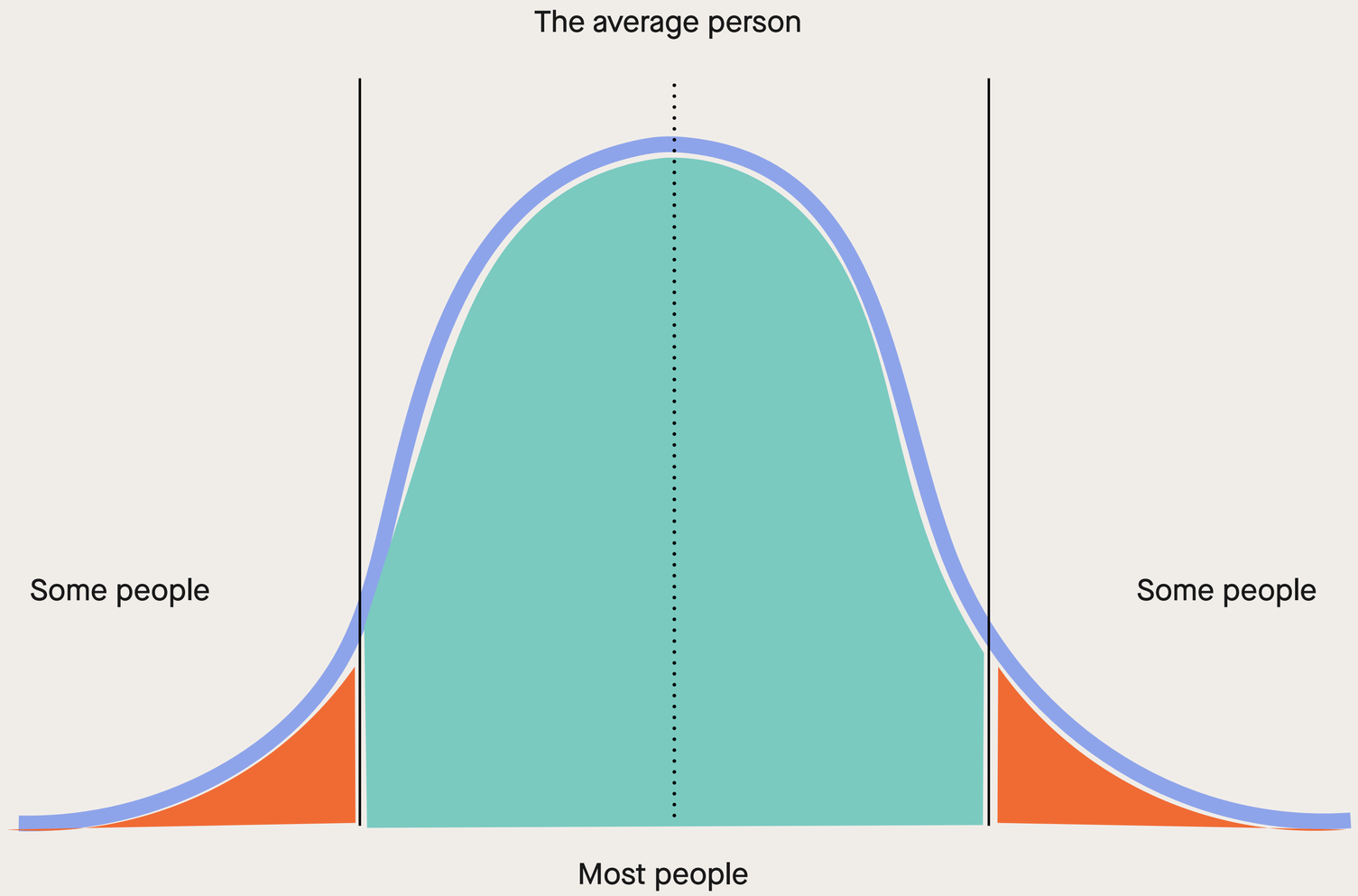
Source: Microsoft, Inclusive Design Toolkit

Safari
File
Edit
View
History
Bookmarks
Gmail
Search mail
Compose
Primary
Inbox

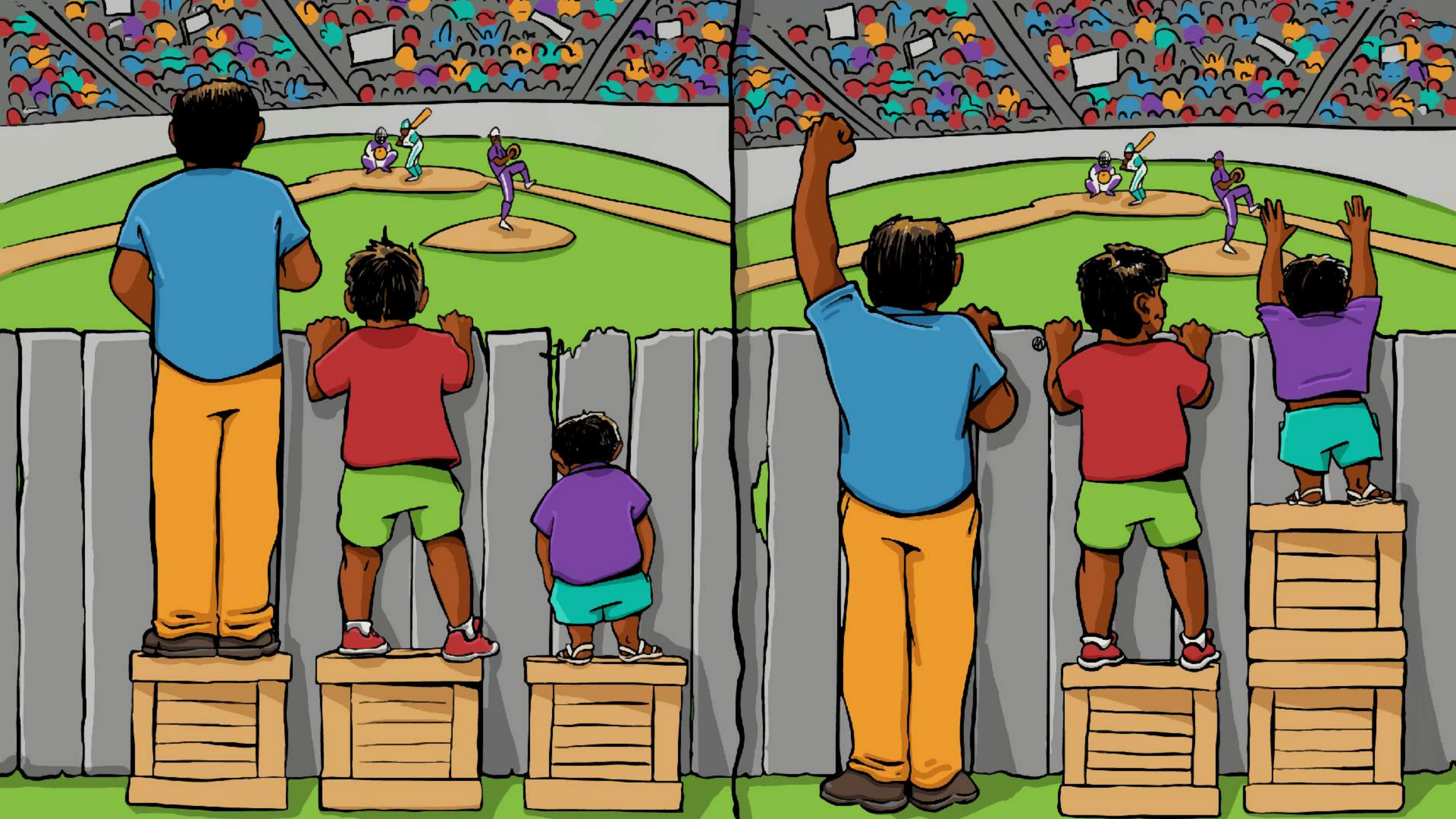

You've been living
in a dream world, Neo.

Focusing on the *typical* user

The bell curve



80/20 Rule



The WebAIM Million

Automatic test performed by WebAIM with the WAVE tool, scanning the **top 1 million home pages**, looking for WCAG failures.

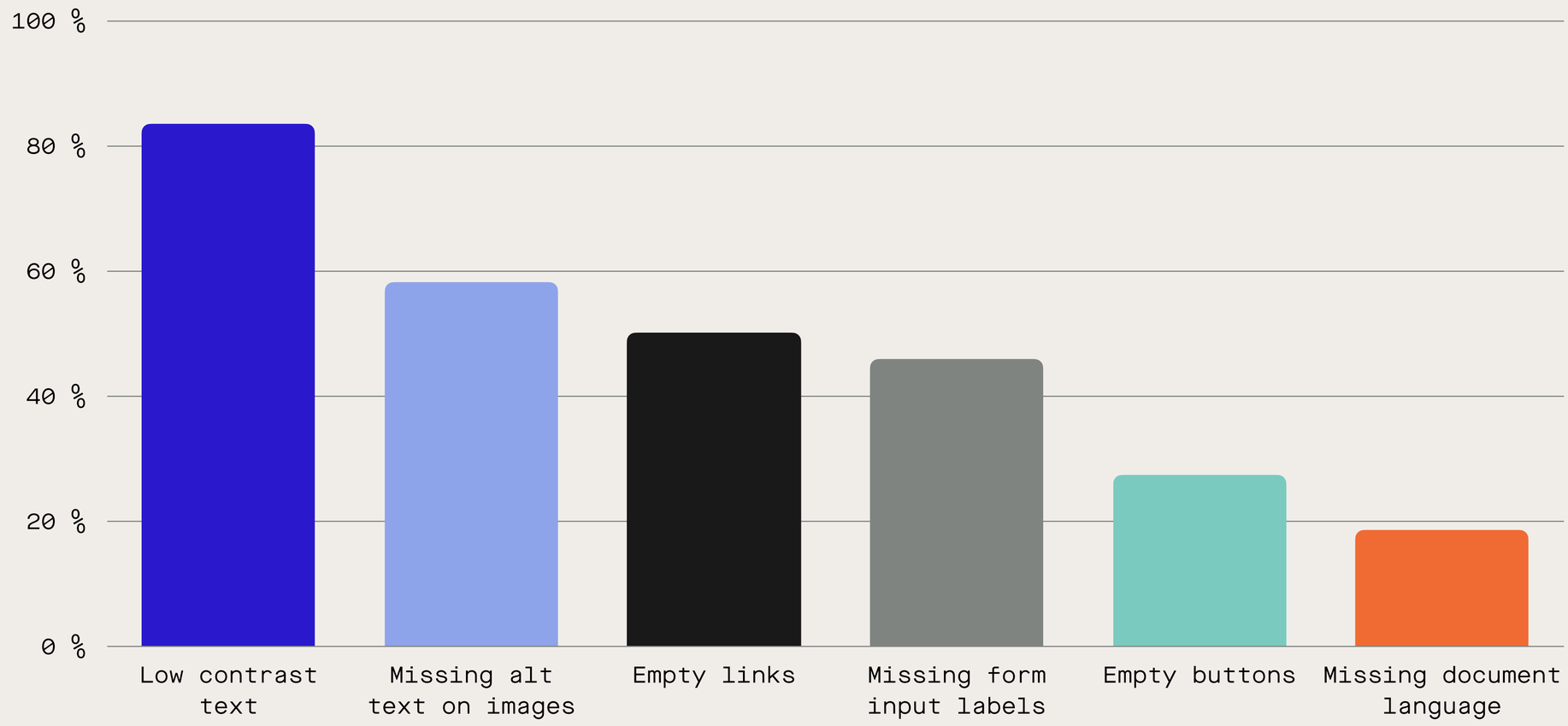
96.3%

Home pages with detected WCAG 2 failures

Only **37.000** out of the **top 1 million** websites, passes the basic automatic test

Source: https://webaim.org/projects/million/

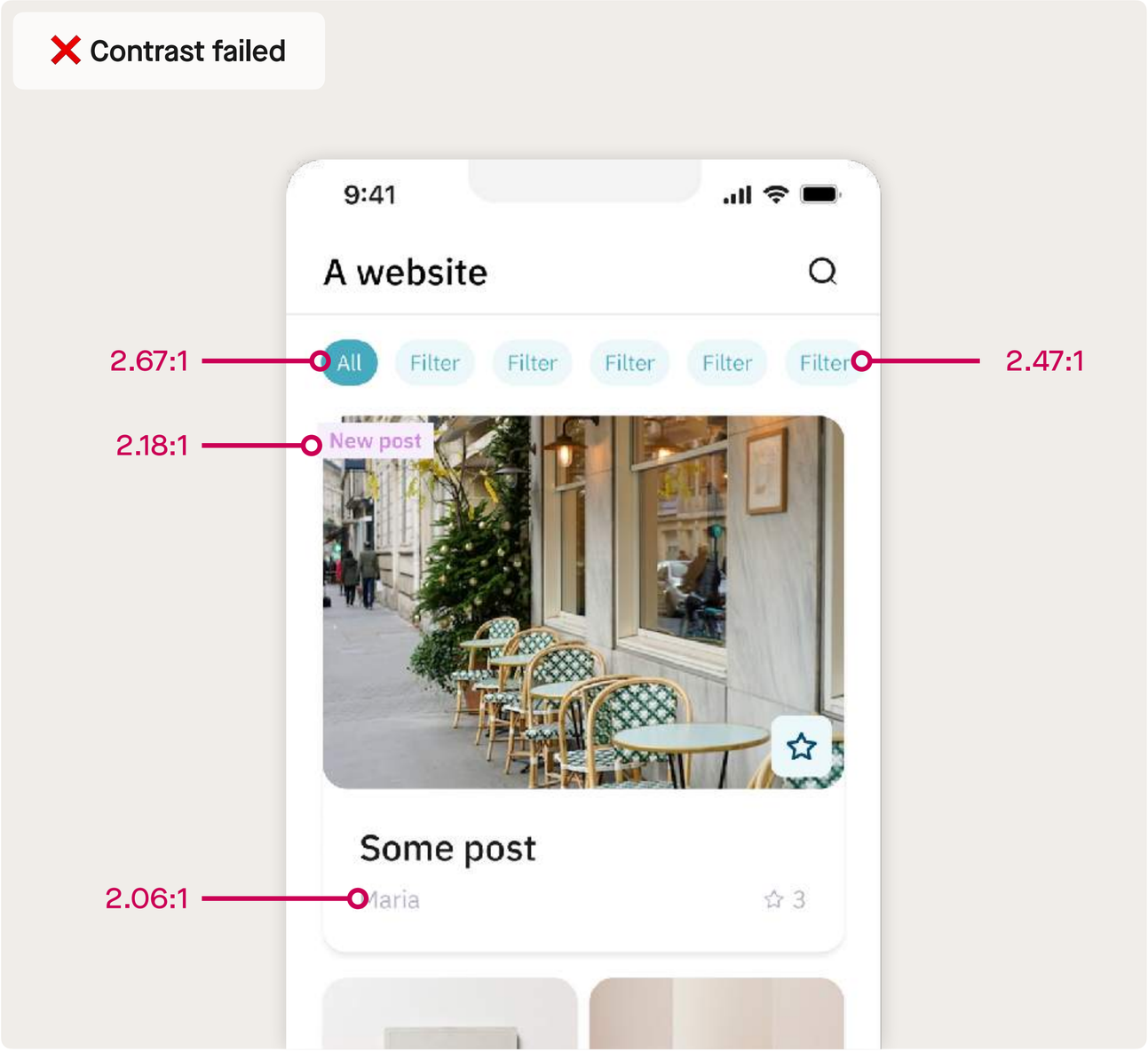
Most common WCAG failure



96.1% of all detected errors, fall into these six categories.

Source: https://webaim.org/projects/million/

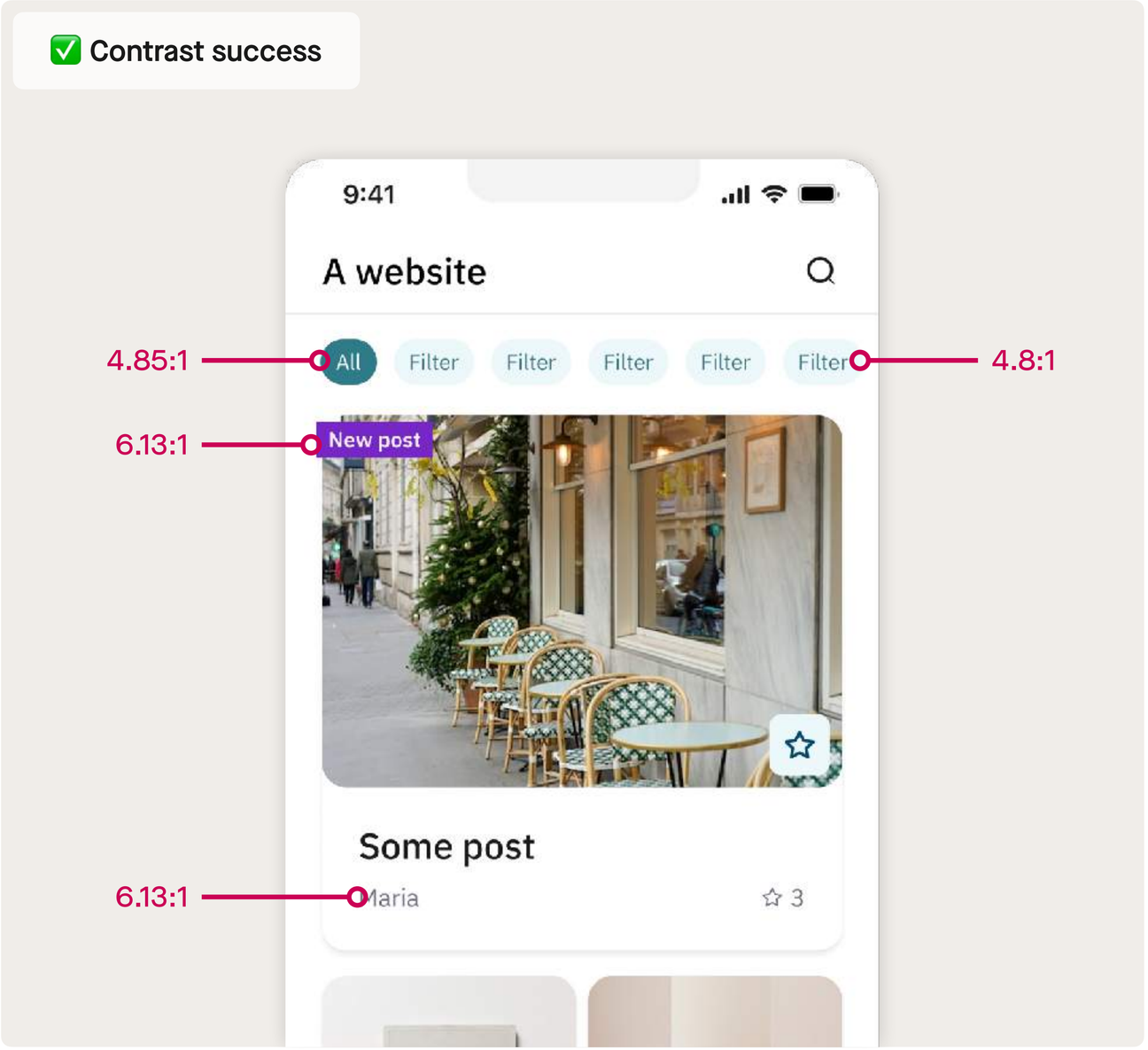
Check your colour contrast and text sizes



According to the **W3C**,
the contrast ratio between text and its background should be at least 4.5 to 1.

Check your colour contrast and text sizes

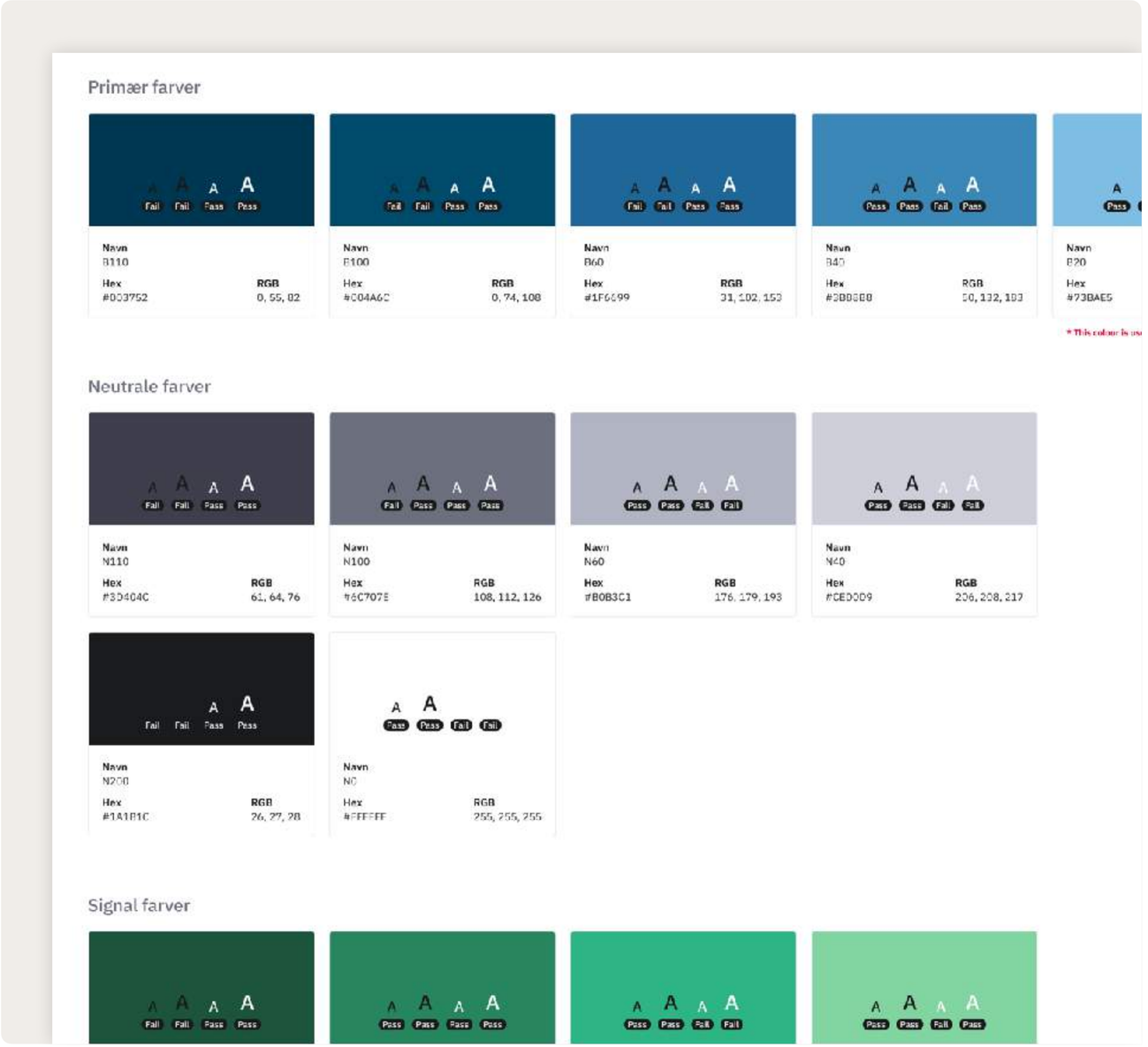
In order to reach the required contrasts, you will likely have to reassess your color schemes a few times throughout. Sometimes it might mean completely changing your original choices.



Create an accessible colour palette

Collaborate with your brand team to create a palette that meets AA standards.

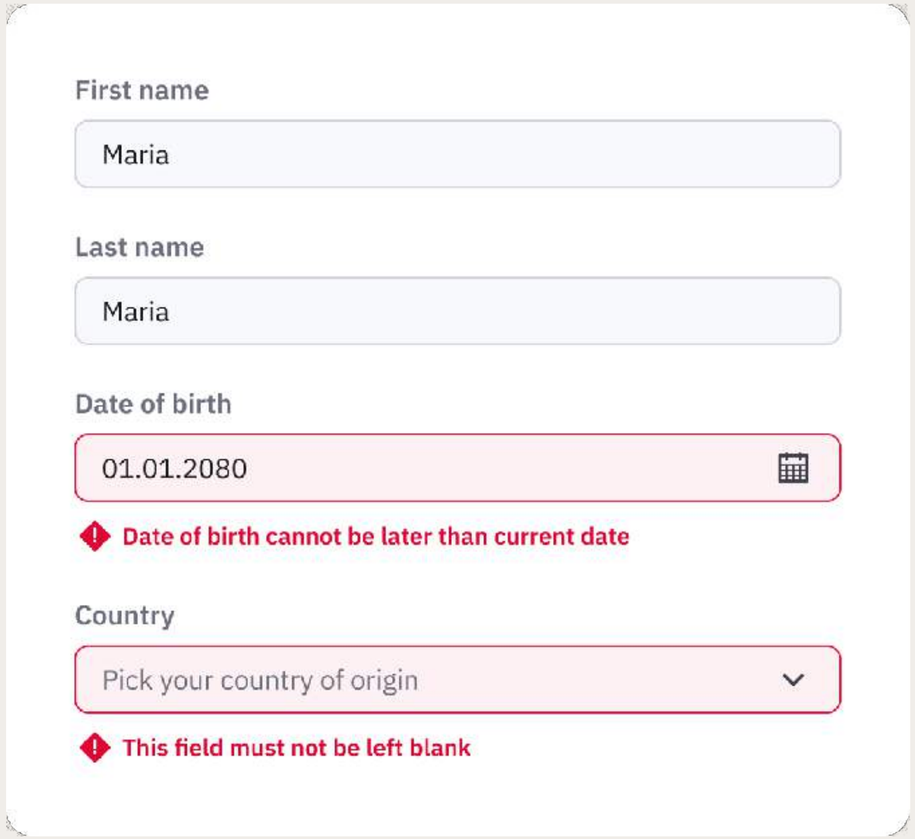
This can be tricky, if there is a set of colours provided through a company’s branding.



Never rely on color alone to relay meaning

When showing errors on the screen, include an icon and supportive message.

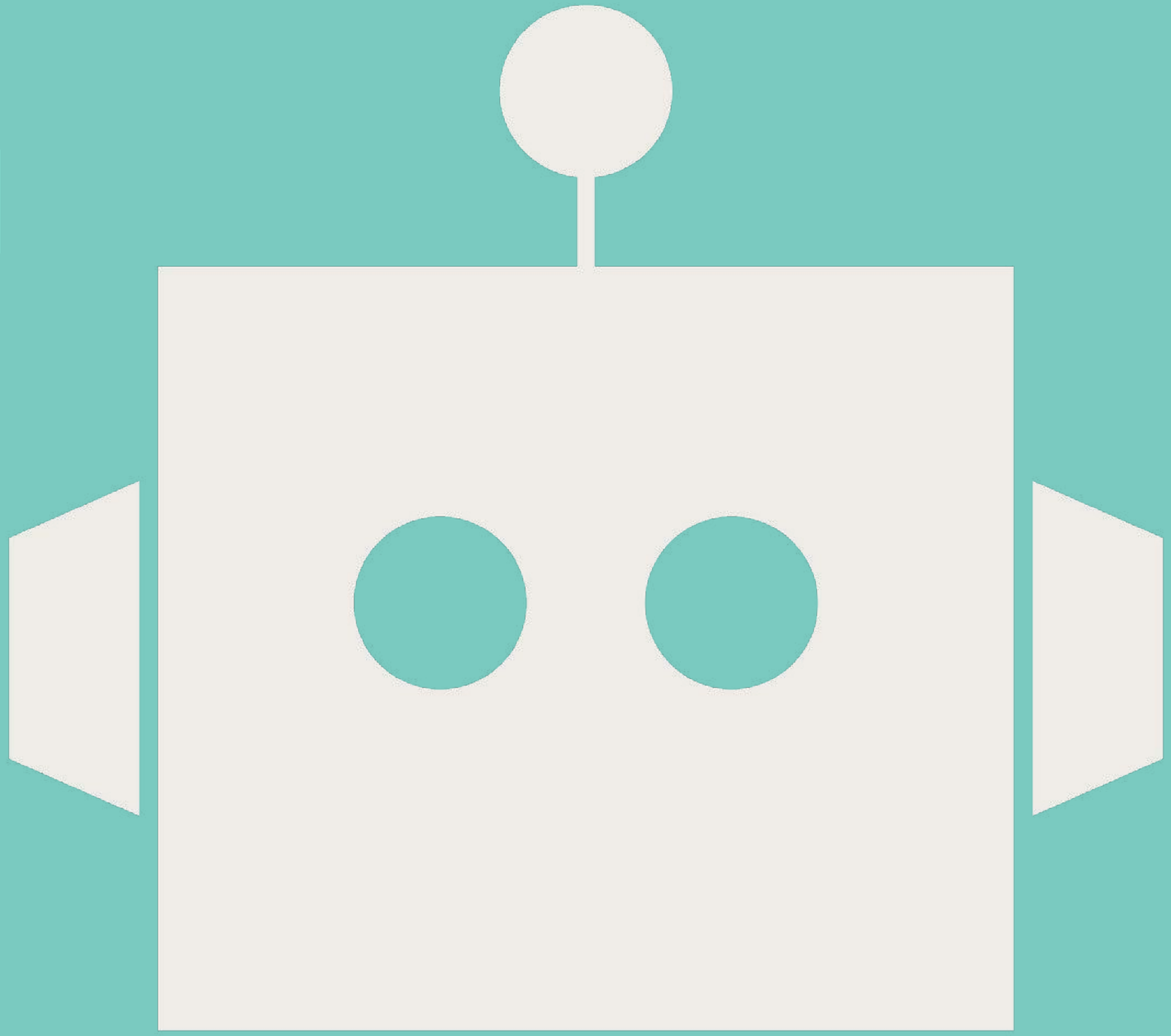
People with low visual acuity or color blindness will have a hard time understanding your content.



✏️ Original

Accessibility Testing

Automated testing



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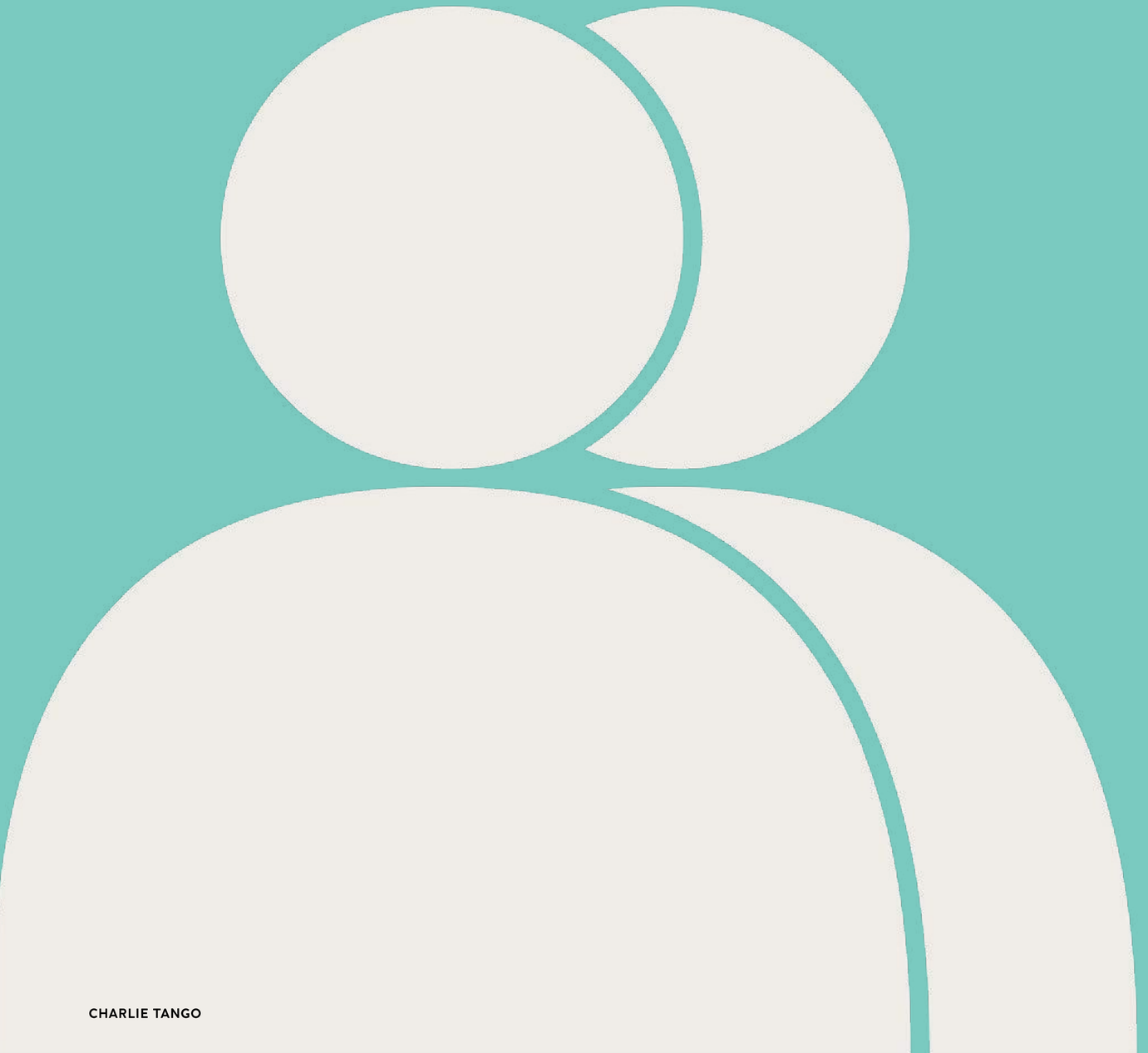
For WCAG 2.1 AA tests, automated scans can only check for 20-25% of WCAG success criteria



Accessibility Testing

Manual testing

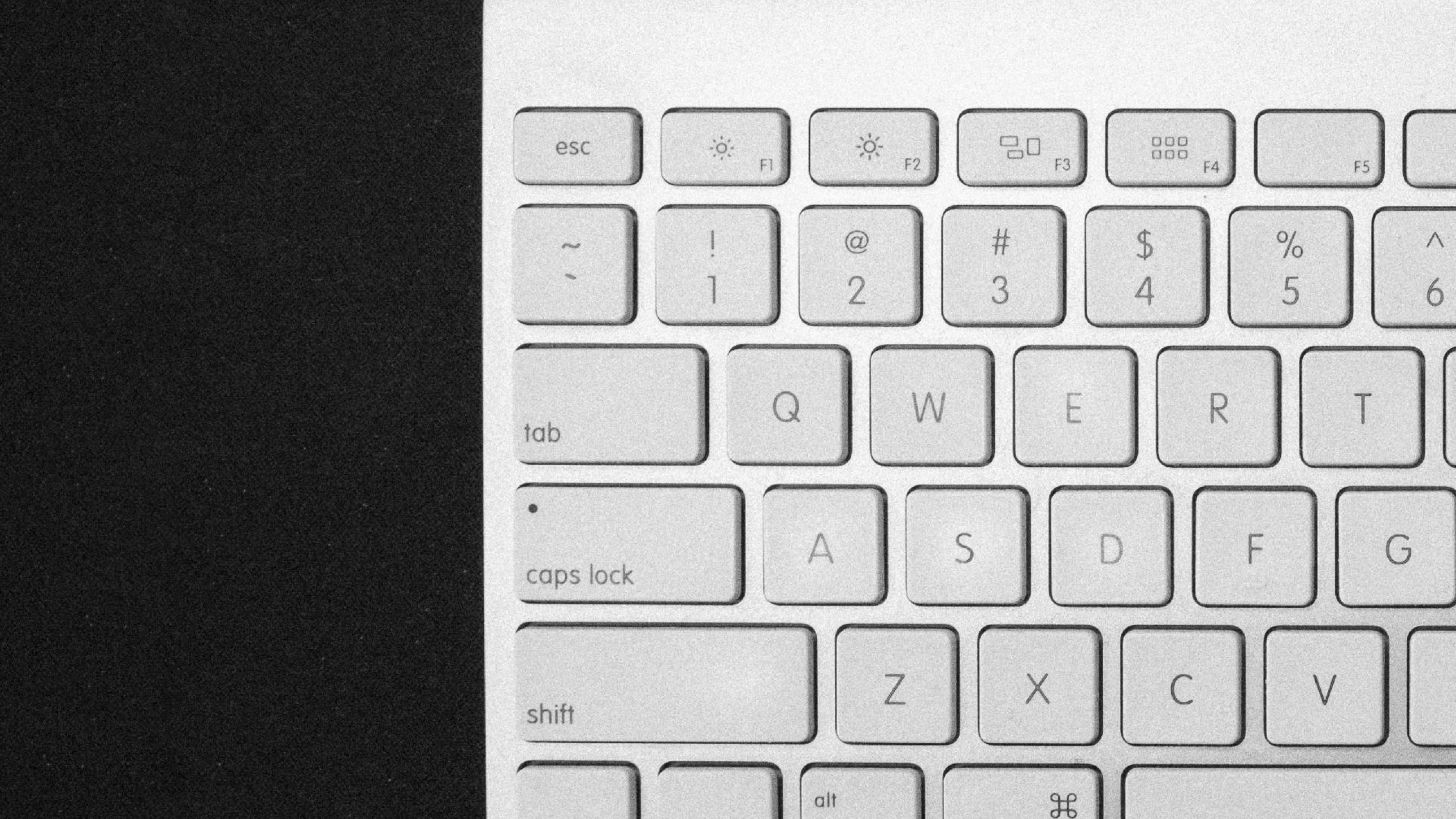
Mouse Driven Testing

Mouse Driven Testing

- We all default to using the mouse, when testing a website
- We are working on the computer
- We are used to navigating with a mouse
- It’s easy

#NoMouseChallenge

No Mouse Testing


esc
F1
F2
F3
F4
F5
~
`
!
1
@
2
#
3
$
4
%
5
^
6
tab
Q
W
E
R
T
caps lock
A
S
D
F
G
shift
Z
X
C
V
alt

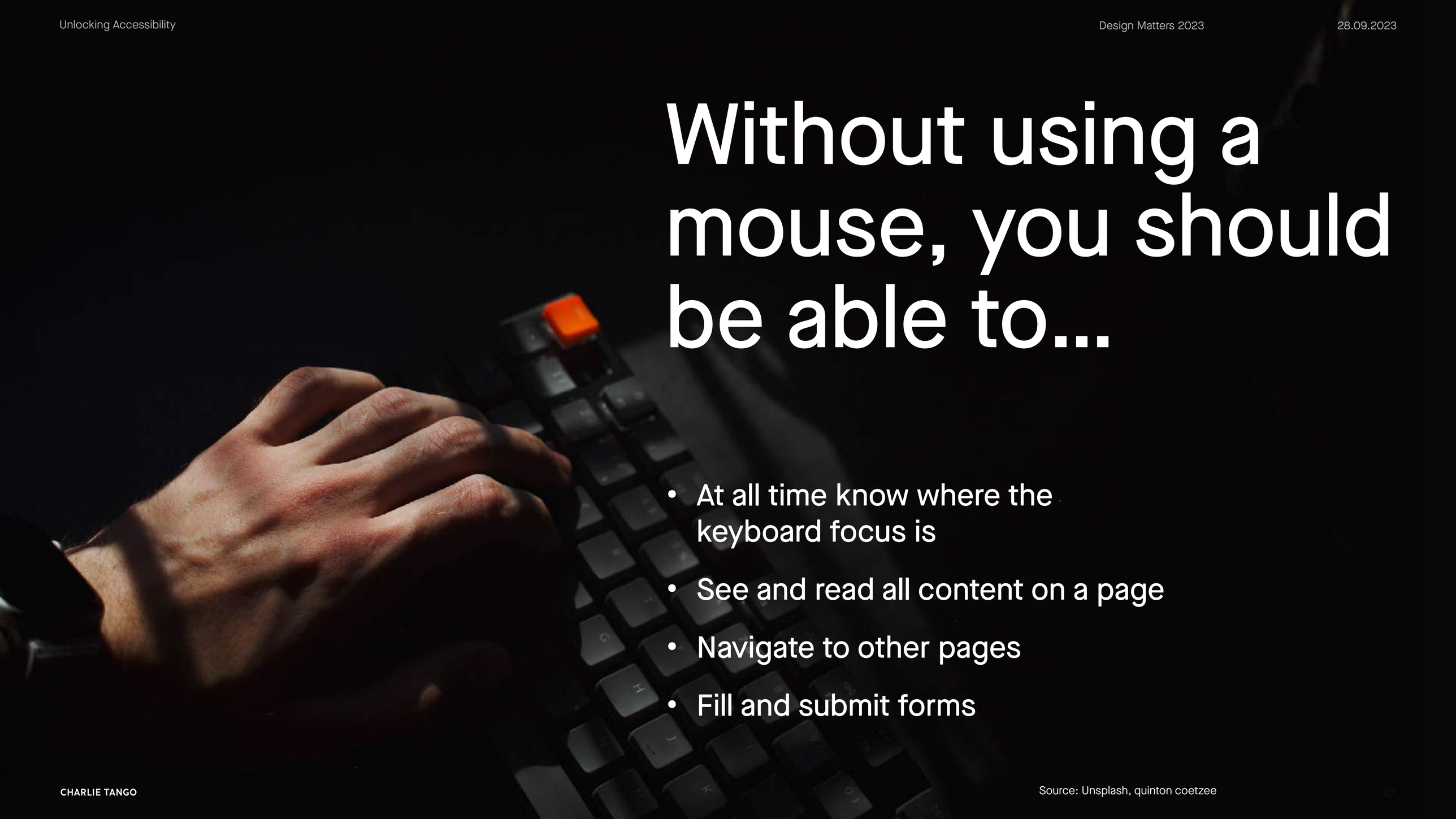
CHARLIE TANGO

Cases
Services
Nyheder
Om os
Kontakt

Vi hjælper virksomheder & organisationer, som brænder for det, de laver, og har en ambition om at udmærke sig digitalt.

Kontakt +45 70 22 15 16

We are going to “Tab” through the site.
Notice how focus is always clearly visible



Without using a mouse, you should be able to...

- At all time know where the keyboard focus is
- See and read all content on a page
- Navigate to other pages
- Fill and submit forms

Source: Unsplash, quinton coetzee

“

If you can’t use your site without a mouse, a screen reader user will have no chance.

“

But, I don’t feel like I can really be creative anymore

Some designer

Make accessibility a priority and the default

Once accessibility becomes a standard part of your way of working, designing accessibly won’t feel hard.

The digital space is constantly changing, and we often have to adapt our way of working.

“How might we create a fun, beautiful and creative product, but also make it accessible?”

Limitations, restrictions, negative pov

Make accessibility a priority and the default

Once accessibility becomes a standard part of your way of working, designing accessibly won't feel hard.

The digital space is constantly changing, and we often have to adapt our way of working.

"How might we create a fun, accessible, beautiful and creative product?"

Equal priority, equal emphasis, positive pov

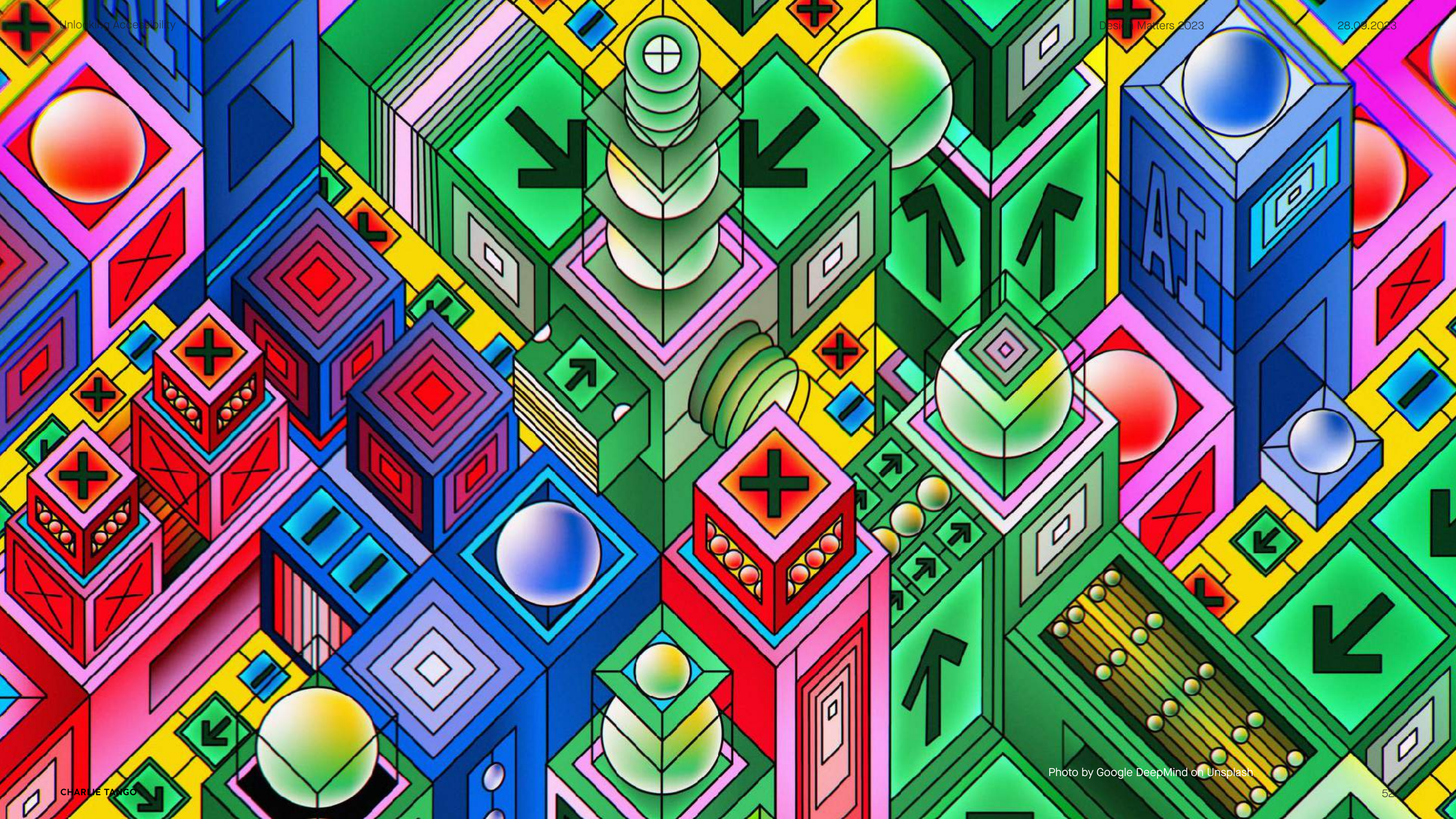


Photo by Google DeepMind on Unsplash

Age
Gender and gender identity
Race and ethnicity
Sexuality
Physical attributes
Cognitive attributes
Language
Culture
Religion
Education
Political or philosophical opinions
Social and economic context

A collage of dozens of Black names marked as misspelled by Microsoft Word's built-in spell checker. 2016, Pluralism, Deborah Roberts. Serigraph on Paper.

✕ The photo you want to upload does not meet our criteria because:

- Subject eyes are closed

Please refer to the technical requirements.
You have 9 attempts left.

Check the photo requirements.

Read more about common photo problems and how to resolve them.

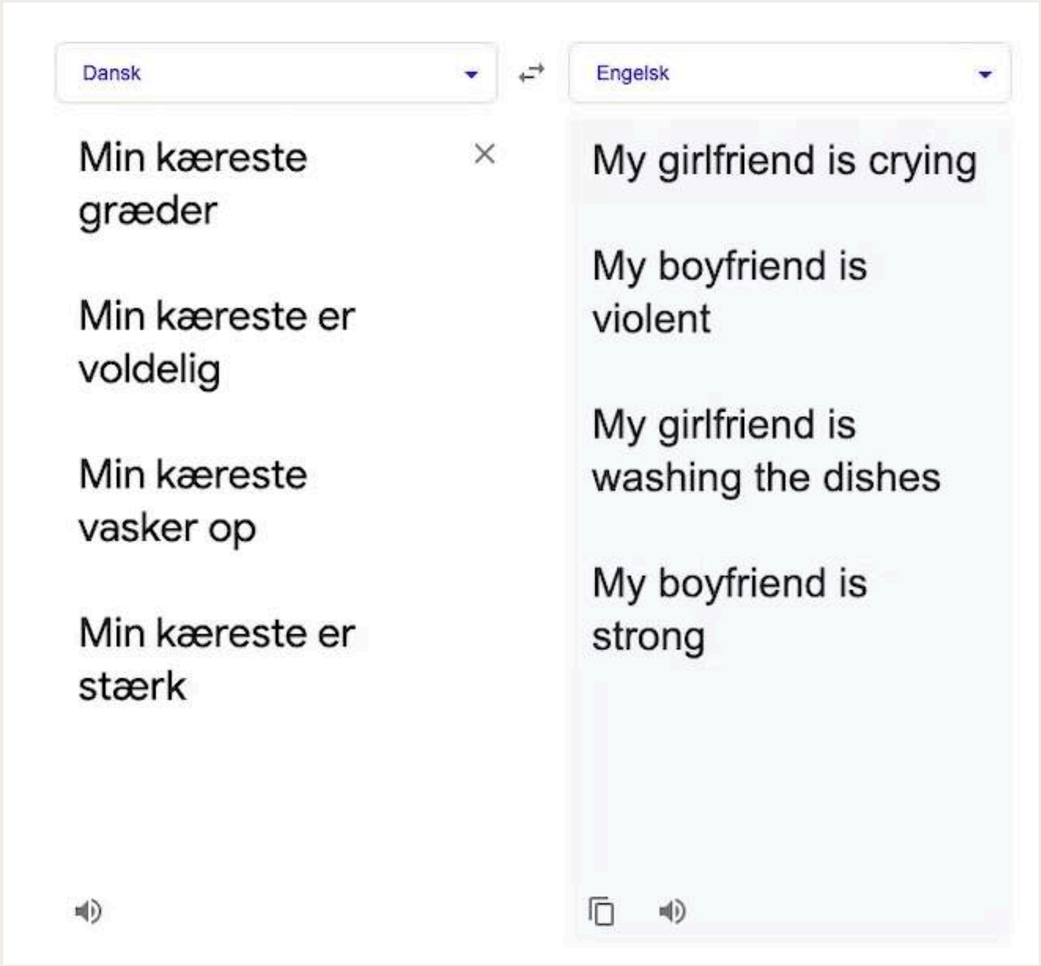
After your tenth attempt you will need to start again and re-enter the CAPTCHA security check.

Reference number: 20161206-81

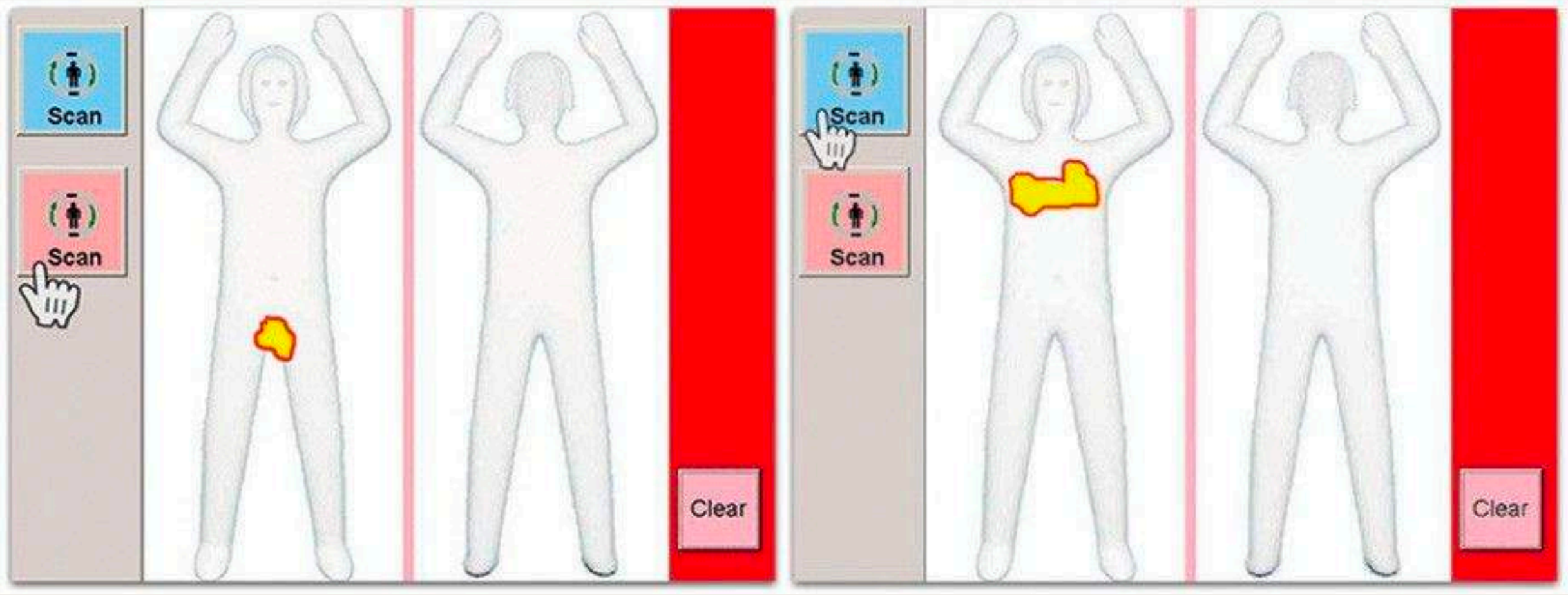
Filename: Untitled.jpg

If you wish to contact us about the photo, you must provide us with the reference number given above.

Source: https://www.userinterviews.com/blog/design-failure-examples-caused-by-bias-noninclusive-ux-research


Dansk
Engelsk
Min kæreste græder
Min kæreste er voldelig
Min kæreste vasker op
Min kæreste er stærk
My girlfriend is crying
My boyfriend is violent
My girlfriend is washing the dishes
My boyfriend is strong

Danish
English
Hendes kæreste laver mad.
Her boyfriend is cooking.
Open in Google Translate • Feedback

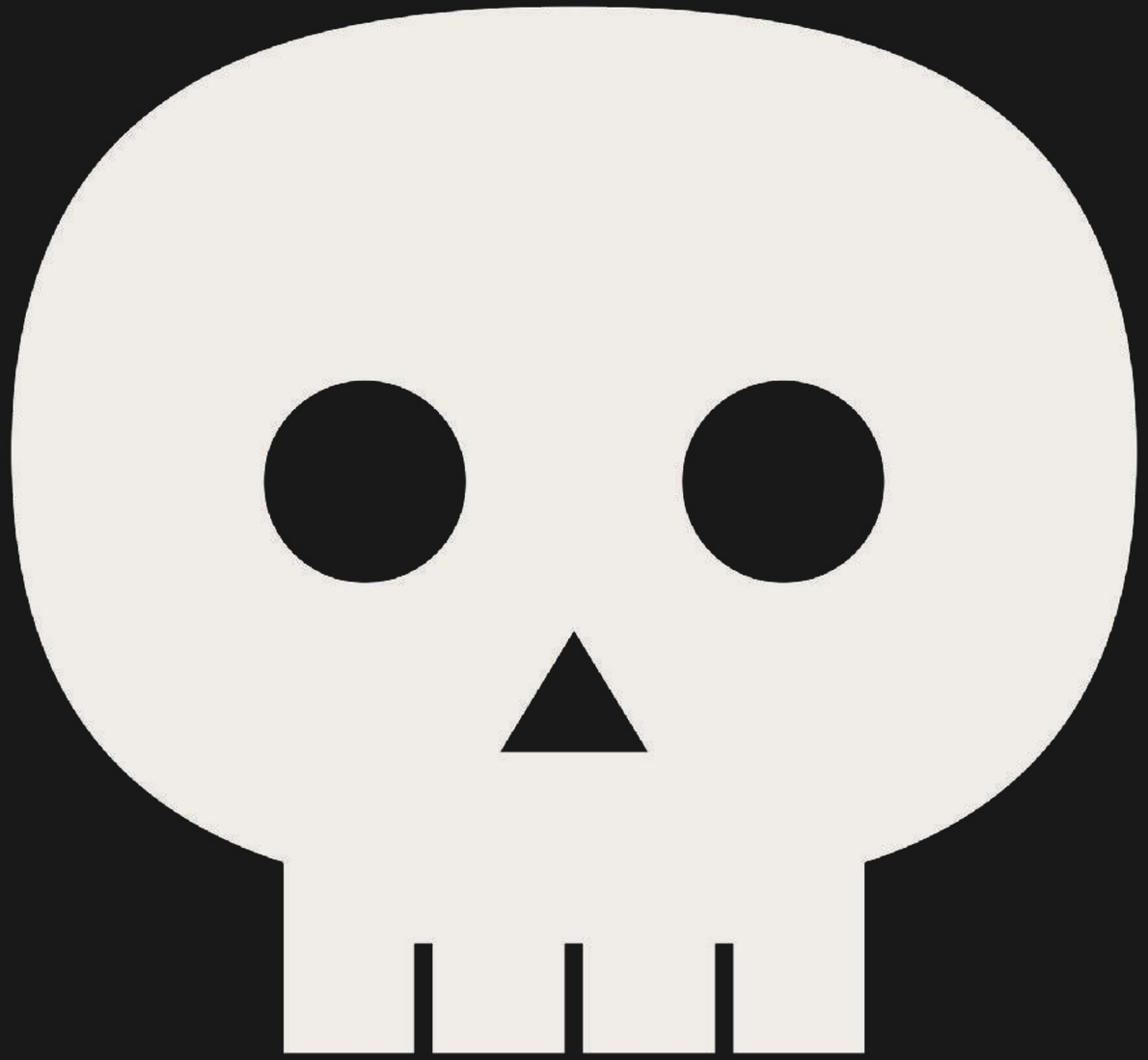


Source: https://designjustice.mitpress.mit.edu/pub/ap8rgw5e/release/1

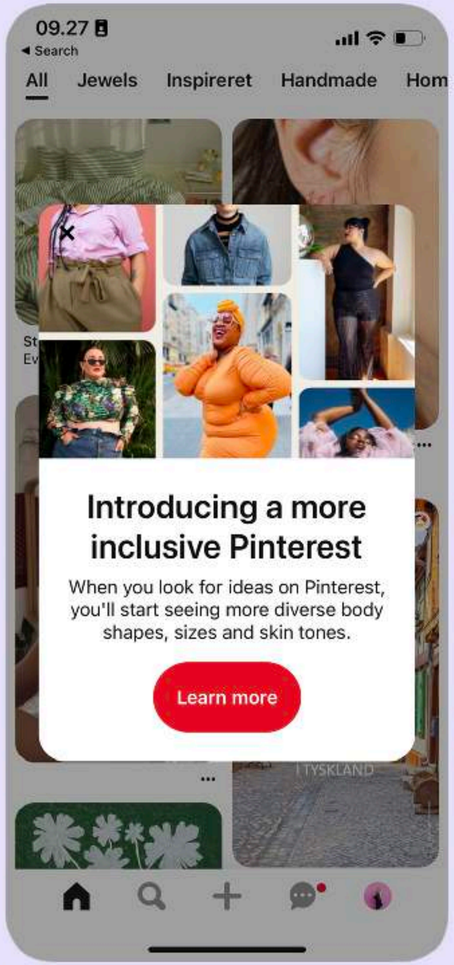
“

There are professions more harmful than design, but only a very few of them.

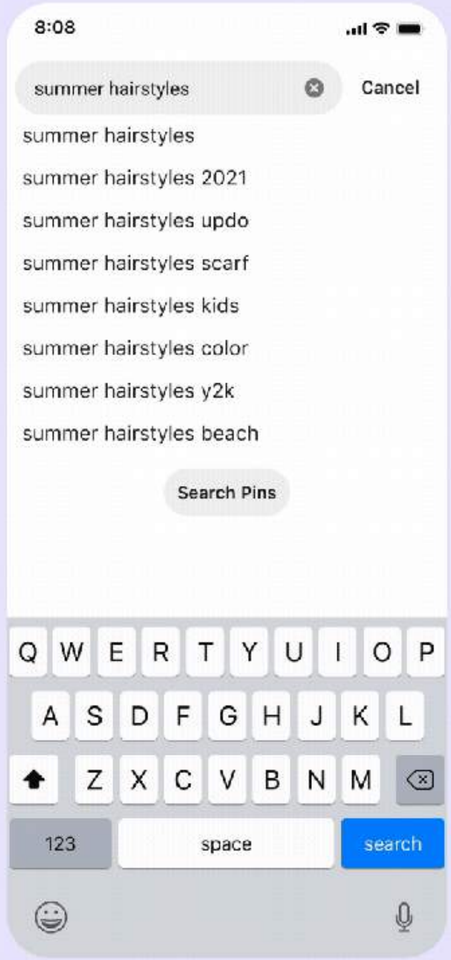
Victor Papanek



Pinterest


09.27
Search
All
Jewels
Inspireret
Handmade
Hom
Introducing a more inclusive Pinterest
When you look for ideas on Pinterest, you'll start seeing more diverse body shapes, sizes and skin tones.
Learn more

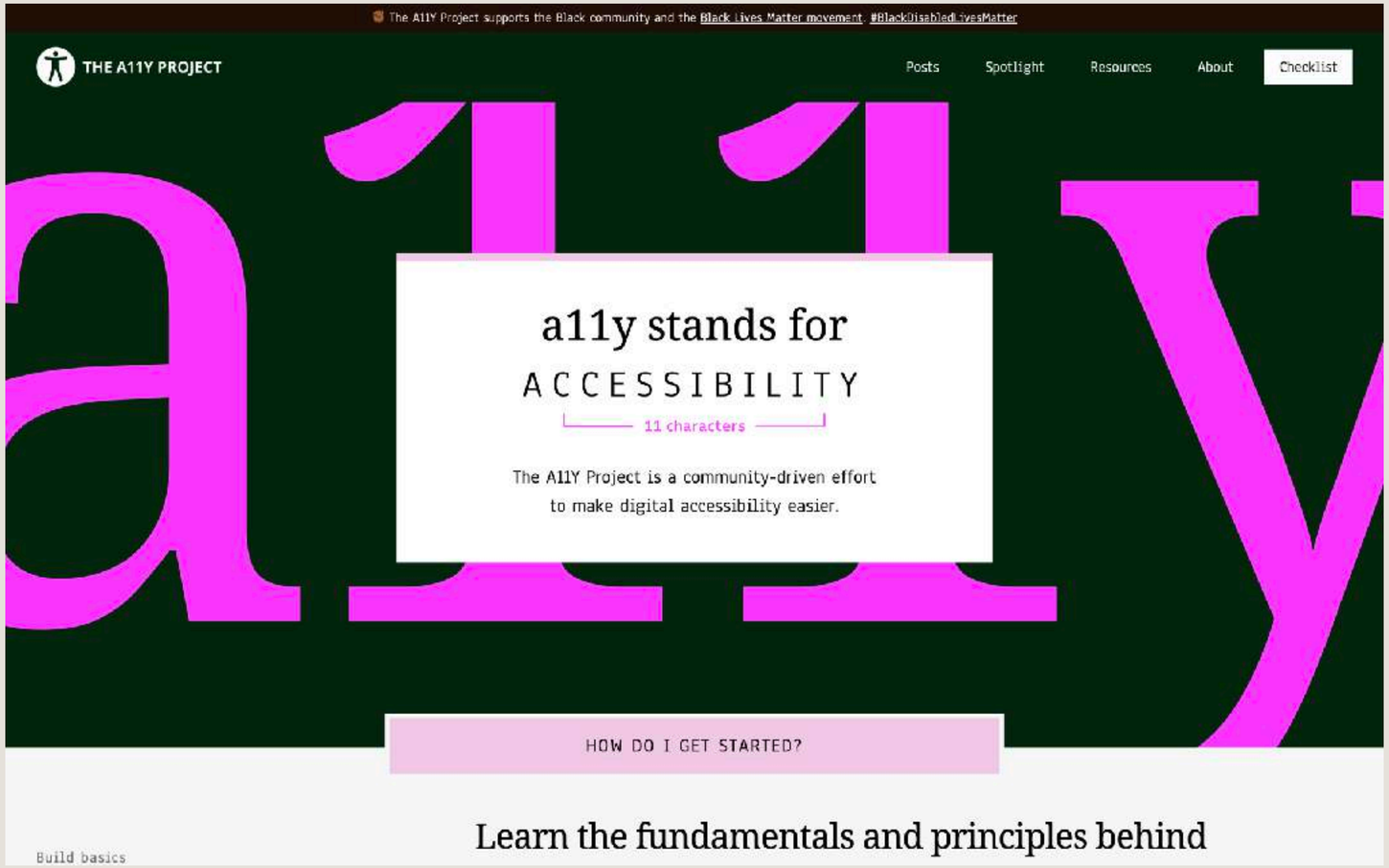
Pinterest



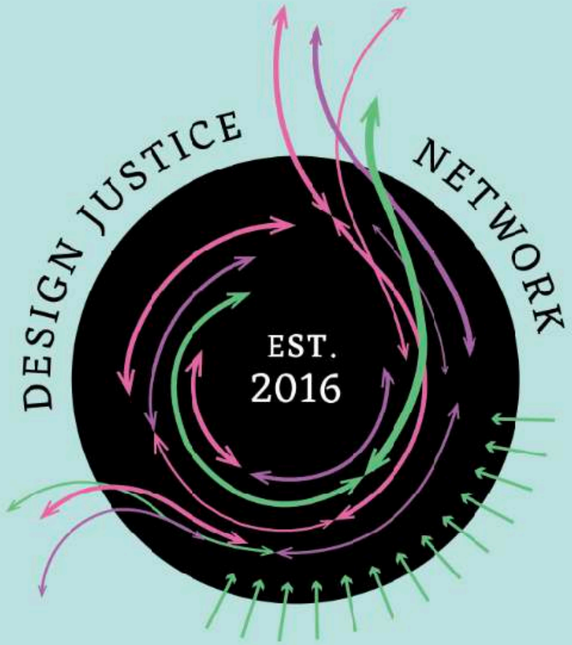
Source: Pinterest Newsroom, “Pinterest introduces first-of-its-kind hair pattern search for inclusive beauty results”, 2021

Some of my favourite resources

The a11y project: Offers accessibility checklist



Det Digitale Etikkompas
Automatisering
Ved hjælp af kunstig intelligens og algoritmer kan vi automatisere vores digitale løsninger. Automatisering er ofte en god ting, fordi maskiner kan løse opgaver hurtigere og mere præcist end mennesker. Men programmeringen kan også indeholde fejl, som kan være gamske store og have alvorlige konsekvenser for mennesker. Det er jeres etiske valg, hvordan I vil designe automatiserede løsninger som gavner mennesker og samfundet.
01. Er jeres brugere klar over, at de interagerer med en automatiseret løsning?
02. Overholder jeres automatiserede systemer lovgivning og menneskers rettigheder?
03. Er der nogen i virksomheden, der står klar til at gribe ind, når automatiseringen fejler?
04. Er jeres automatiserede system gennemsigtigt, så man kan kigge ind i maskinrummet?
05. Kan jeres automatiserede system forklare sig selv?
06. Er jeres algoritmer fordomsfulde?
07. Er der unødig hat risiko ved jeres automatiserede system?
08. Er jeres automatiserede system forandringsparat?
09. Kan jeres automatiserede system hackes?
Sæt mennesket i centrum
Undgå at manipulere
Gør jeres teknologi forståelig
Giv brugerne kontrollen
Undgå at skabe ulighed
Adfærdsdesign
Vi træffer beslutninger baseret på følelser, ikke rationelle. Vi træffer beslutninger – f.eks. gennem nudging, ved hjælp af adfærdsdesign – med at træffe ktoge beslut-ninger, at hjælpe mennesker med at træffe ktoge beslut-ninger, at påvirke folk i en negativ retning som kan have ikke. Det er dit etiske valg om du vil bruge adfærds-eller manipulere.
06. Bekræfter eller udfordrer I jeres brugere?
05. Forsager I at skabe ethængig-hed af jeres produkt med billige tricks?
Data
Data er derfor et tvistende at indsamle så og derfor er det vigtigt, at man ikke har indsamle data, som man ikke har indsamlingen nemt blive kan udeladelse. Det er dit etiske fordelene. Det er til egen fordel.
05. Har I fået brugernes tilladelse til at indsamle og behandle data?
06. Oplyser du dine brugere om, hvordan de bliver profileret?
04. Har I overvejet jeres egne dataog hvordan I vil bruge dem til at skabe værdi for jeres brugere?



Design Justice Network Principles

Rasmus Sanko

Chief Strategy Officer

CHARLIE TANGO