ONE SIZE DOES NOT FIT ALL

EXPLORING THE BOUNDARIES OF DESIGN & INCLUSIVE UX

Actionable insights on current design trends to help create experiences that emotionally resonate, are beautifully engaging, and yet, delightfully accessible.

Funka Accessibility Days
Stockholm, Sweden
April 14th, 2016

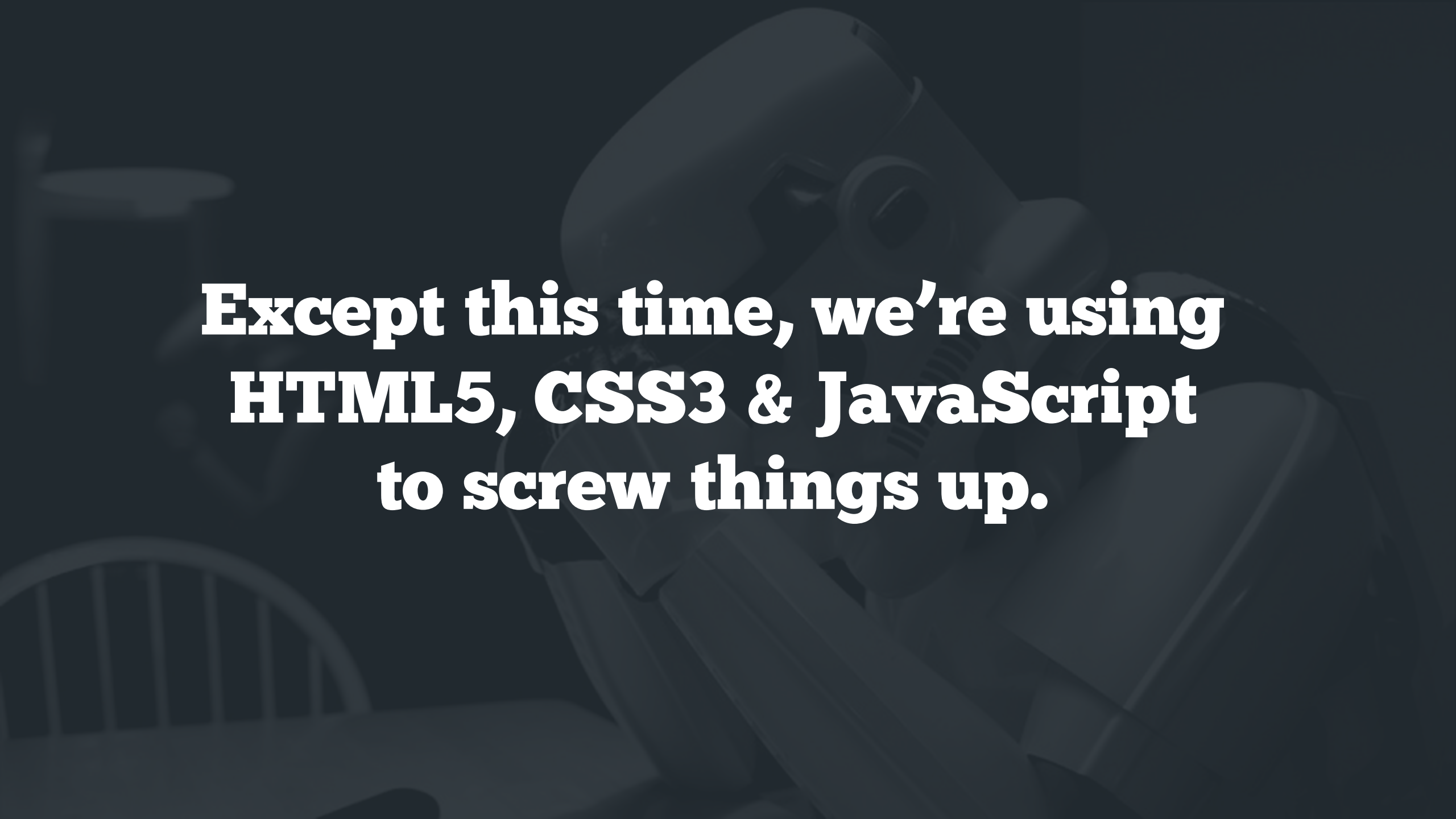
WHEN DID YOU FIRST FALL IN LOVE WITH THE WEB?

FOR ME, IT WAS 1997. MONKEY.COM.

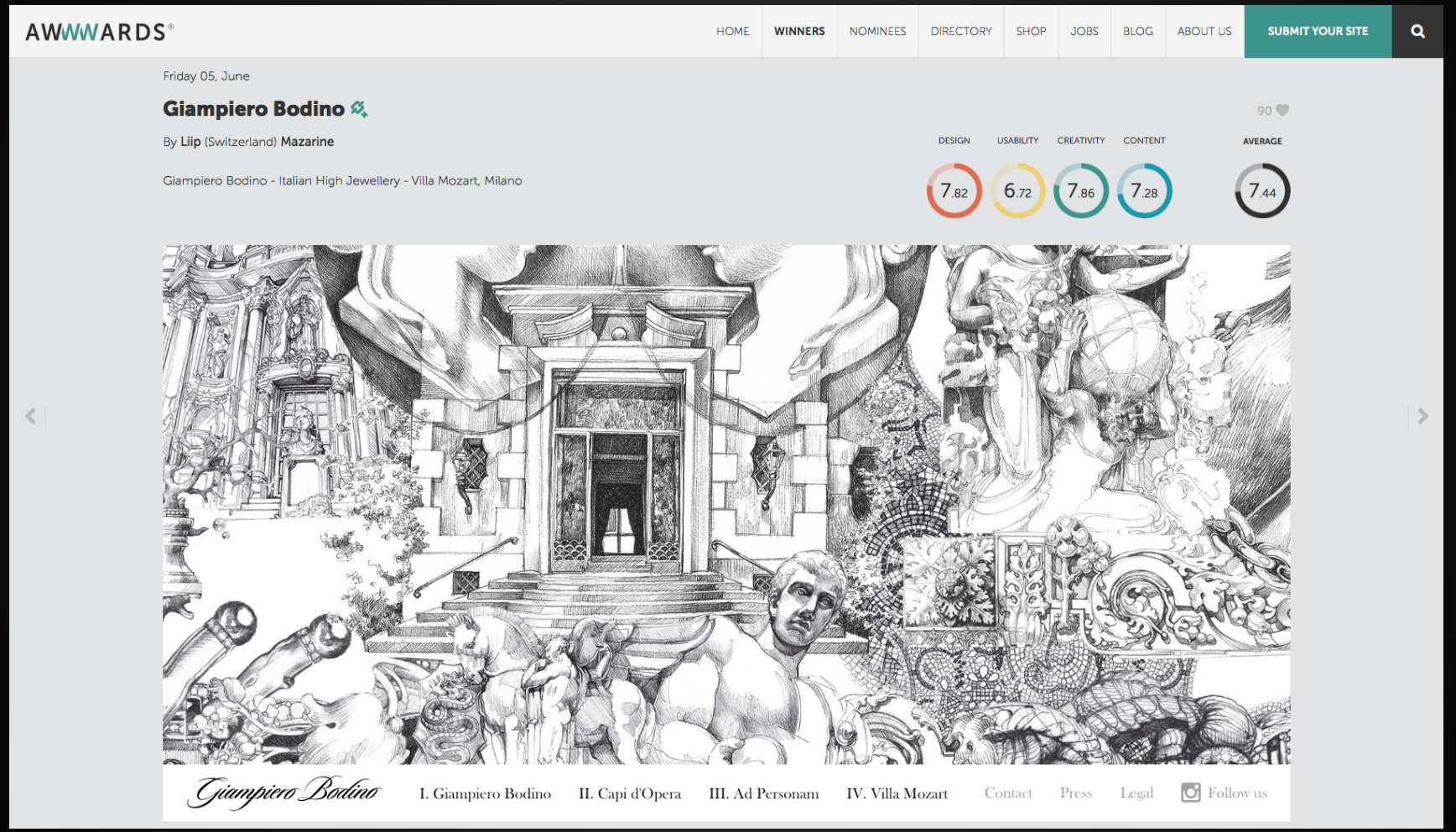
“It feels like this is 1997 all over again.”

WENDY CHISHOLM

SENIOR ACCESSIBILITY STRATEGIST, MICROSOFT


Except this time, we're using
HTML5, CSS3 & JavaScript
to screw things up.

WHAT, YOU DON'T BELIEVE ME?



http://www.giampierobodino.com/

Which begs the question…
What have we learned
these past 20 years?

DENIS BOUDREAU

User eXperience. Accessibility. Inclusive Design. Gamification. Empathy.
Empowering all users. Geek. Introvert. Pragmatism. Good design = inclusive design.

Deque Systems / Knowbility / W3C

ACCESSIBILITY / UX PERSONAS

ARE YOUR AVERAGE USERS DIFFERENT THAN MINE?

ADAM ALLENDER
TECHNICAL WRITER

ANJA BLACK
NURSE PRACTITIONER

MARC LEWIS
SOFTWARE DEVELOPER

AMY C. BECK
ASL TEACHER & INTERPRETER

EMMA JONES
CUSTOMER SERVICE REPRESENTATIVE

We're all people. Disability is just another trait to consider.

Charcot-Marie-Tooth disease
Bipolar disorders
Achromatopsia
Alzheimer's disease
Asperger's syndrome
Retinoblastoma
Tendinitis
Corneal opacification
AUDITORY
Nearsightedness
Vestibular disorders
Learning difficulties
Narcolepsy
Down syndrome
Photoepileptic seizures
VISUAL
Dyspraxia
Acquired brain injuries
Anomalous trichromacy
Getting older
Noise-induced hearing loss
Fuchs' dystrophy
Huntington's disease
Spino-cerebellar ataxia
Muscle slowness
Lazy Eyes
Dyscalculia
And many, many more!
Chemo brain
Neurodiversity
Deuteranomaly
Muscular dystrophy
Vertigo
Carpal tunnel syndrome
Astigmatism
Dichromacy
Deafness
Directionally challenged
Arthritis
Neurodegenerative diseases
Language barriers
Developmental disabilities
Dysorthographia
Tritanopia
Dementia
Benign paroxysmal positional vertigo
COGNITIVE
Tremors
Age-related macular degeneration
Post-concussion syndrome
Monochromacy
Trachoma
Color blindness
Protanomaly
Sleep deprivation
Attention deficit disorders
Optic neuritis
Multiple sclerosis
Deuteranopia
Hard of hearing
Gamer's thumb
Difficulty concentrating
ADHD
Dysgraphia
MOTOR
Retinal detachment
Diabetic retinopathy
Aphasia
Amyotrophic lateral sclerosis
Dysphasia
Low vision
Chronic migraines
Autism spectrum disorders
Reading disorders
Cystic Fibrosis
@dboudreau
ONE SIZE DOES NOT FIT ALL: EXPLORING THE BOUNDARIES OF DESIGN & INCLUSIVE UX
9

1 000 000 000+

MEET ADAM

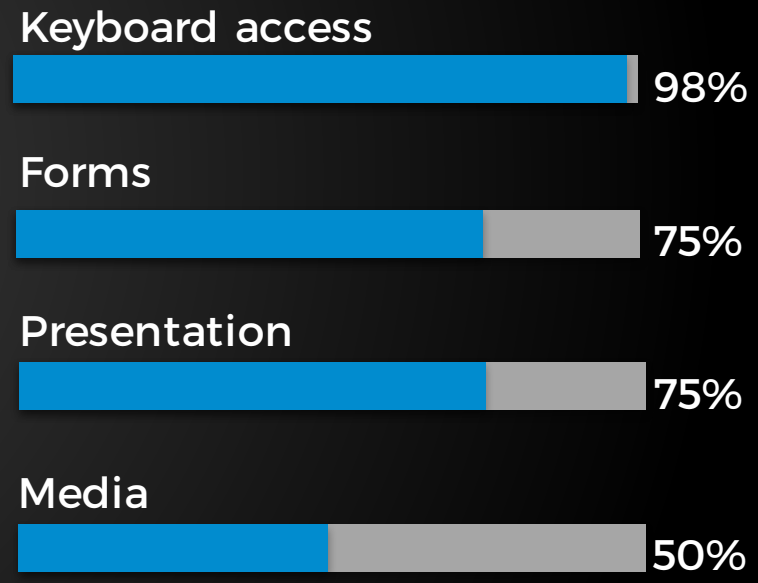
TECHNICAL WRITER

ADAM ALLENDER

56 YEARS OLD

On good days, Adam has no problem using a computer. But on bad days, when his arthritis really kicks in, using a mouse or typing on a keyboard is just too painful. So he turns to tools like voice recognition instead. Adam also runs into issues now and then with colors used on sites, especially for links, as he is colorblind.

MAIN ISSUES



MEET ANJA

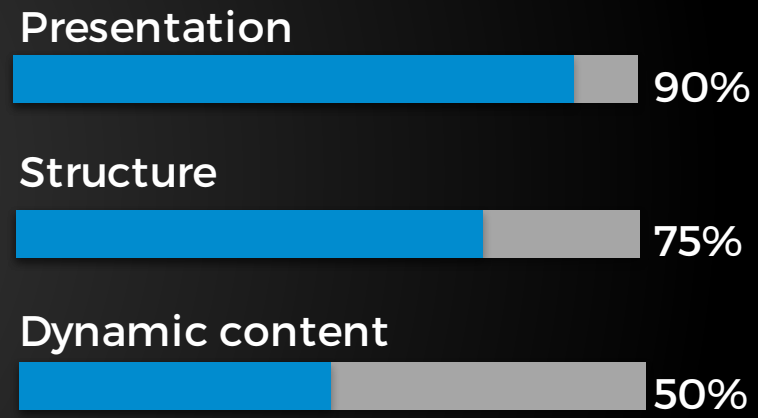
NURSE PRACTITIONER

ANJA BLACK

32 YEARS OLD

Anja has ADD (attention deficit disorder) which makes reading and writing more difficult to her than most people. Thoughtful page layout & font choices often help her, but staying focused is hard. Especially at night, when she's tired. She also recently noticed feeling dizziness and even nausea on certain sites, when content moves too much.

MAIN ISSUES



MEET MARK

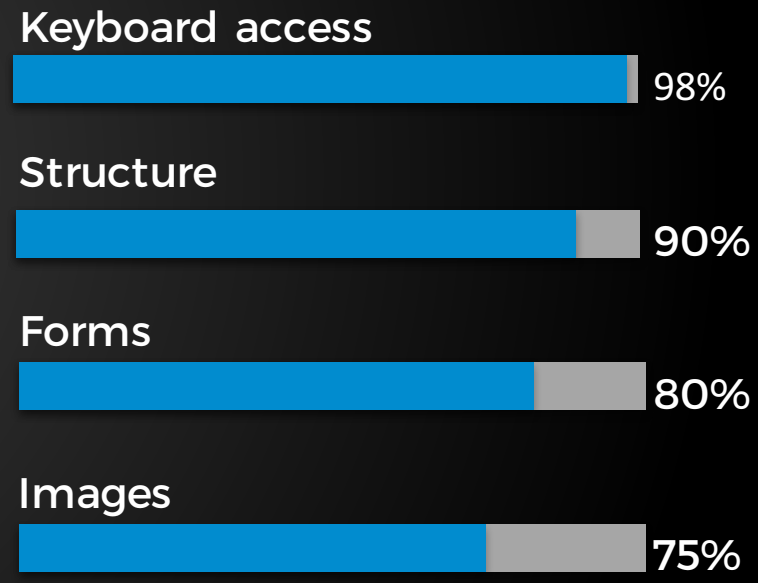
SOFTWARE DEVELOPER

MARK LEWIS

37 YEARS OLD

Mark progressively lost his sight following a severe car accident where he suffered a critical head trauma. As a blind user, he no longer uses a mouse and has no need for a monitor. But he keeps using the web everyday. He now relies exclusively on a keyboard and screen reader software to use computers, work and navigate the web.

MAIN ISSUES



MEET AMY

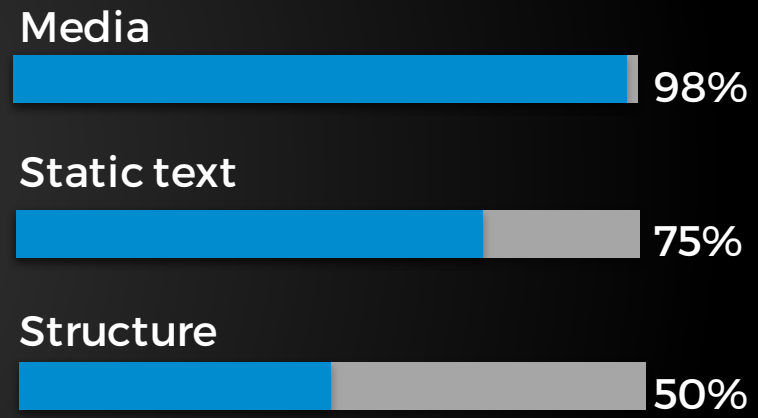
ASL TEACHER AND INTERPRETER

AMY C. BECK

41 YEARS OLD

Deaf since birth, Amy was introduced to American sign language (ASL) way before she began to learn English. As a result, she regularly struggles with content, even to this day. She was diagnosed with dyslexia at a young age, and English is only a second language to her. Media content is often unusable, and walls of text put her off.

MAIN ISSUES



MEET EMMA

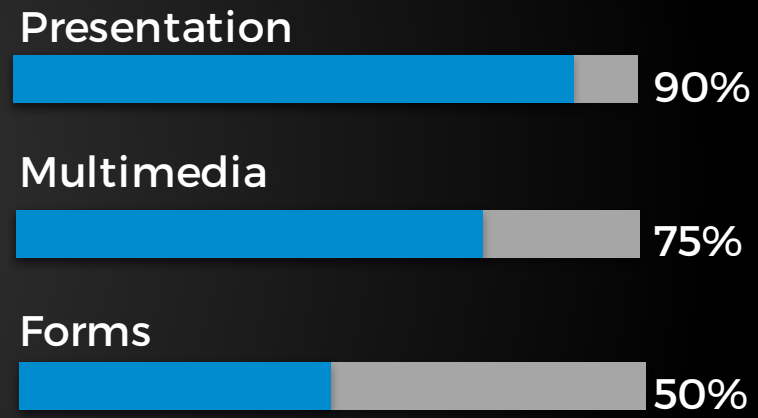
CUSTOMER SERVICE REPRESENTATIVE

EMMA JONES

25 YEARS OLD

Emma has always had poor eyesight. Everything she looks at is perceived as if looking through a straw. Her glaucoma affects not only her ability to see, but also the speed at which she can read content. The computer screen brightness also hurts her eyes, so she tends to use invert color features when they're available.

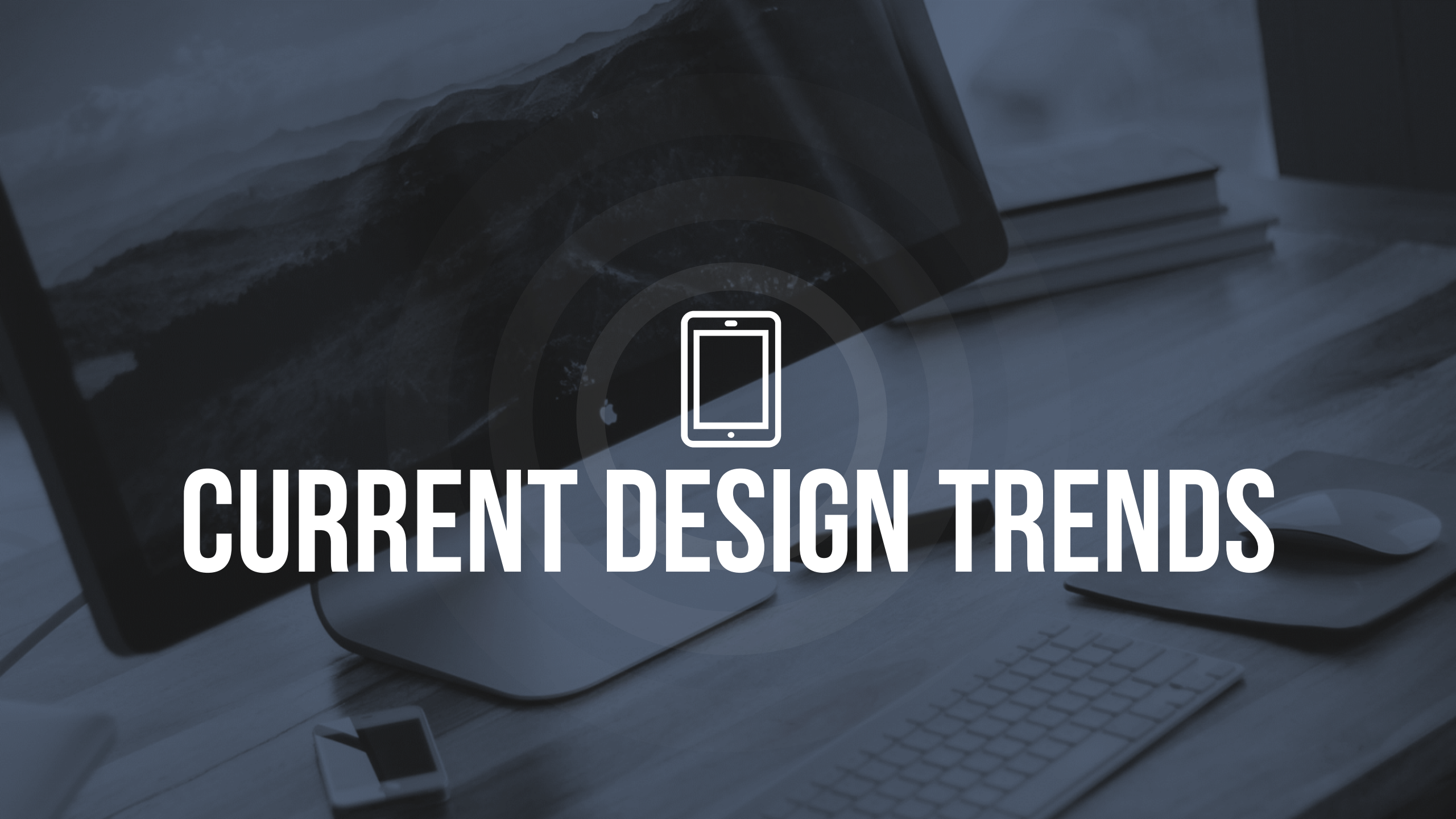
MAIN ISSUES



> **When UX fails to consider ALL users, shouldn't it be known as "SOME UX" or... SUX?**

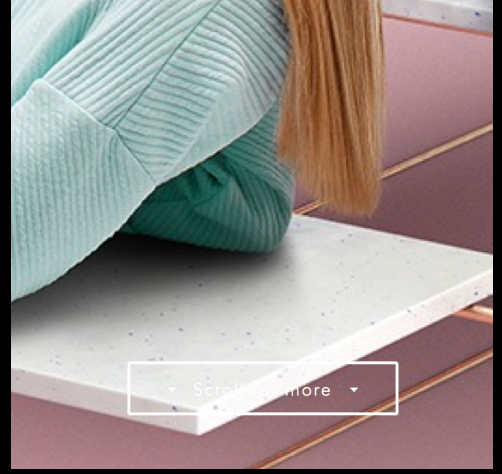
BILLY GREGORY

WEB ACCESSIBILITY CONSULTANT, THE PACIELLO GROUP



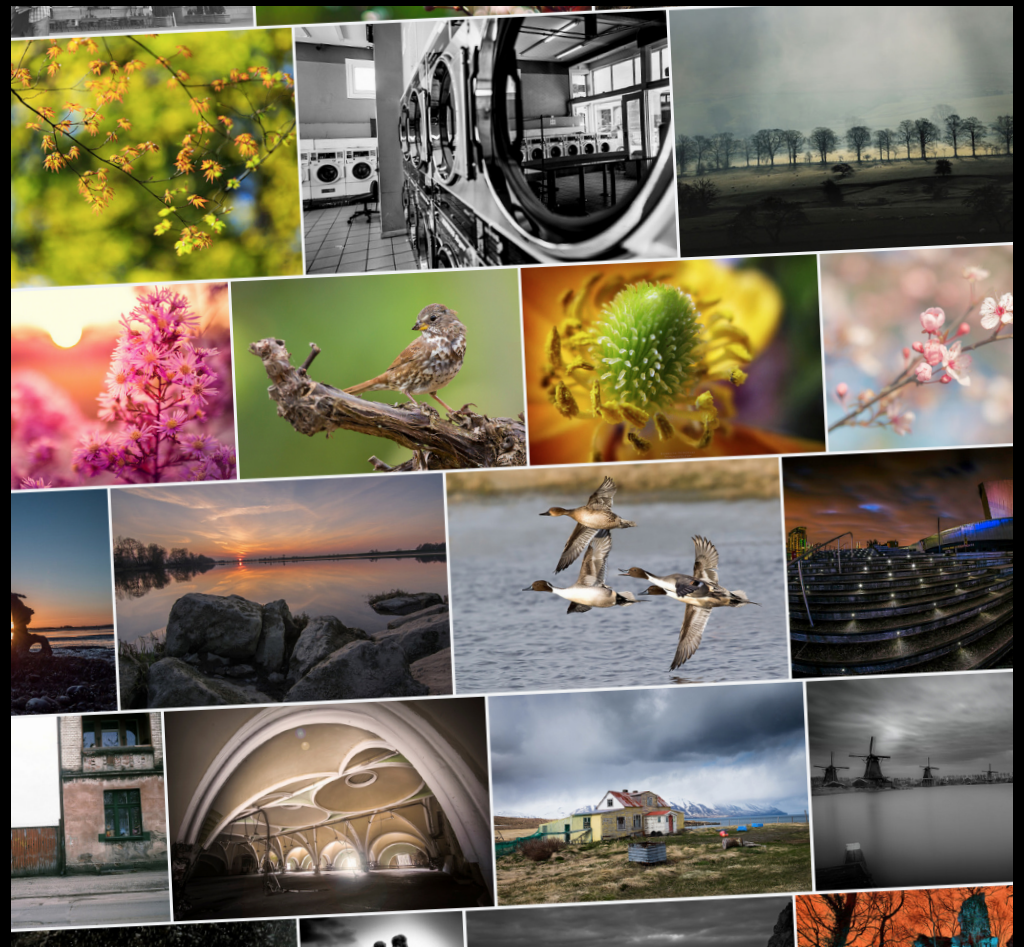
CURRENT DESIGN TRENDS

GHOST BUTTONS

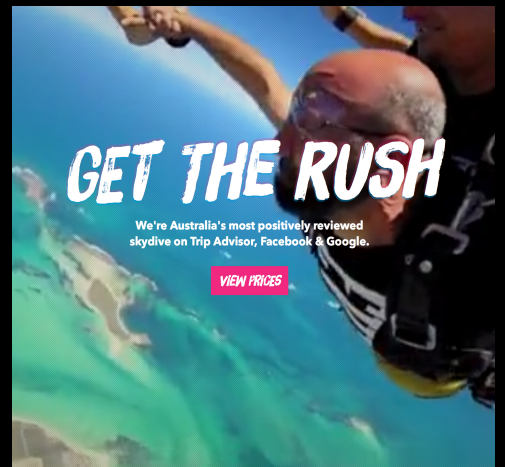


PARALLAX SCROLLING

ENDLESS SCROLLING



COMPLEX TYPEFACES



CINEMAGRAPHS

DESIGN TREND NO. 1

GHOST BUTTONS

GHOST BUTTONS

DESIGN TREND NO. 1

> I get that these buttons are very popular. It feels like every site uses them these days. They may be considered slick and trendy, but I can barely perceive them because they're so thin. I often can't even make out what the text says against the background either.

ADAM ALLENDER
ARTHRITIS, COLOR BLINDNESS

ANJA BLACK
ADD, VESTIBULAR DISORDER

MARK LEWIS
BLINDNESS

AMY C. BECK
DEAFNESS, DYSLEXIA

EMMA JONES
LOW VISION, GLAUCOMA

EMMA JONES – LOW VISION, GLAUCOMA

ACCORDING TO EMMA

ISSUES WITH GHOST BUTTONS

A PROXIMITY ISSUE

"As someone who uses screen magnification, distance between objects is really important. These buttons are often lost for me and consequently, very difficult to find."

A CONTRAST ISSUE

"These buttons are so thin and light, they're often harder to notice against the details provided in the underlying image. It's not uncommon for me to miss them entirely."

WHY WOULD ANYONE PURPOSEFULLY DESIGN THIS?

"I don't get it. Why would anyone design buttons that are difficult to notice, hard to read, and ultimately, unusable? I mean, don't they want us to find them?"

DESIGN TIPS

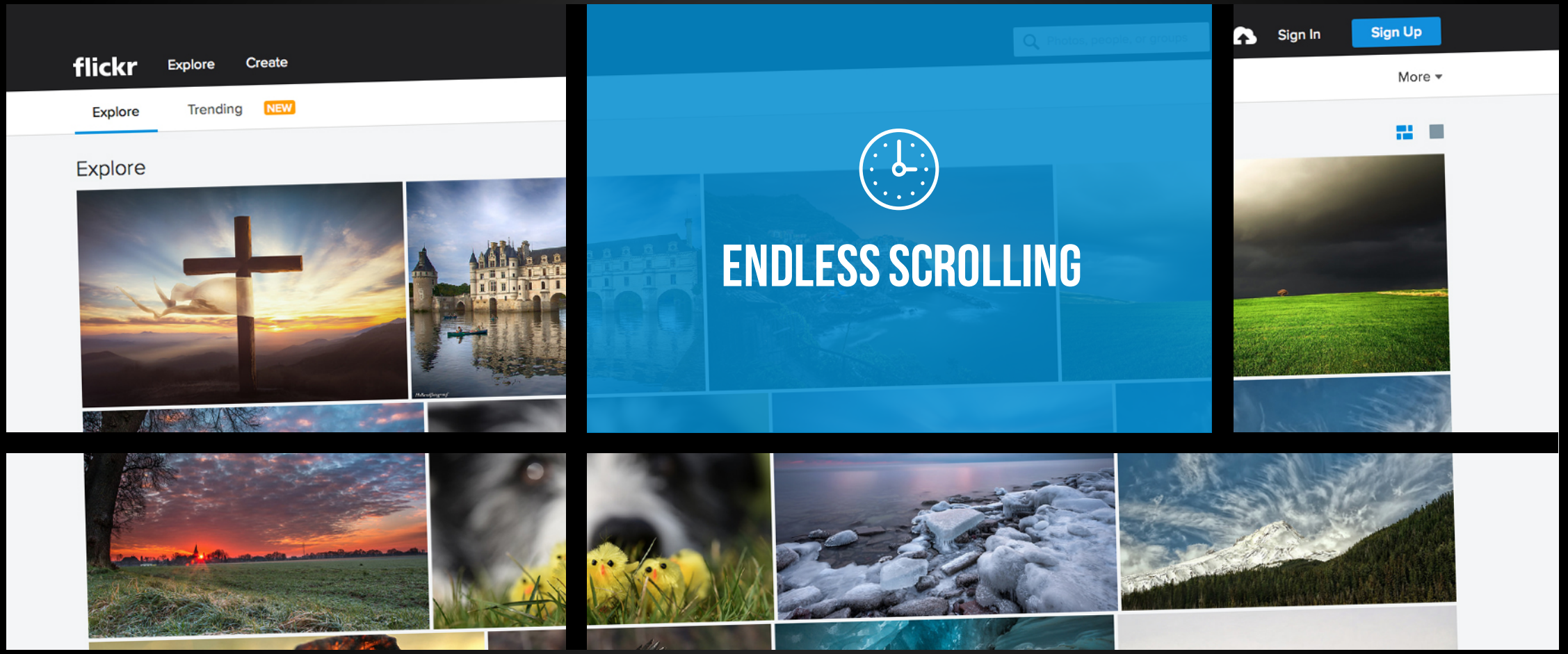
DEALING WITH GHOST BUTTONS

246M | Estimated number of people around the world with low vision issues, according to the World Health Organization (WHO).

- Provide ghost buttons with background color and sufficient contrast, so the text clearly stands out.
- Choose background images carefully, so the buttons always display in an area that is free of clutter.
- Be mindful of placement and proximity, so the buttons don't end up being lost in the page.
- Run extensive user testing sessions with people who are color blind or have low vision.

DESIGN TREND NO. 2

ENDLESS SCROLLING



ENDLESS SCROLLING

DESIGN TREND NO. 2

> I'm trying to reach the links in the footer, but new content keeps loading every time I get near. How many times am I expected to hit the TAB key before I can finally reach what I need? Sometimes, the pain will get so intense, I have no other option but to give up.

ADAM ALLENDER
ARTHRITIS, COLOR BLINDNESS

ANJA BLACK
ADD, VESTIBULAR DISORDER

MARK LEWIS
BLINDNESS

AMY C. BECK
DEAFNESS, DYSLEXIA

EMMA JONES
LOW VISION, GLAUCOMA

ADAM ALLENDER –ARTHRITIS, COLOR BLINDNESS

ACCORDING TO ADAM

ISSUES WITH ENDLESS SCROLLING

A DISCOVERY ISSUE

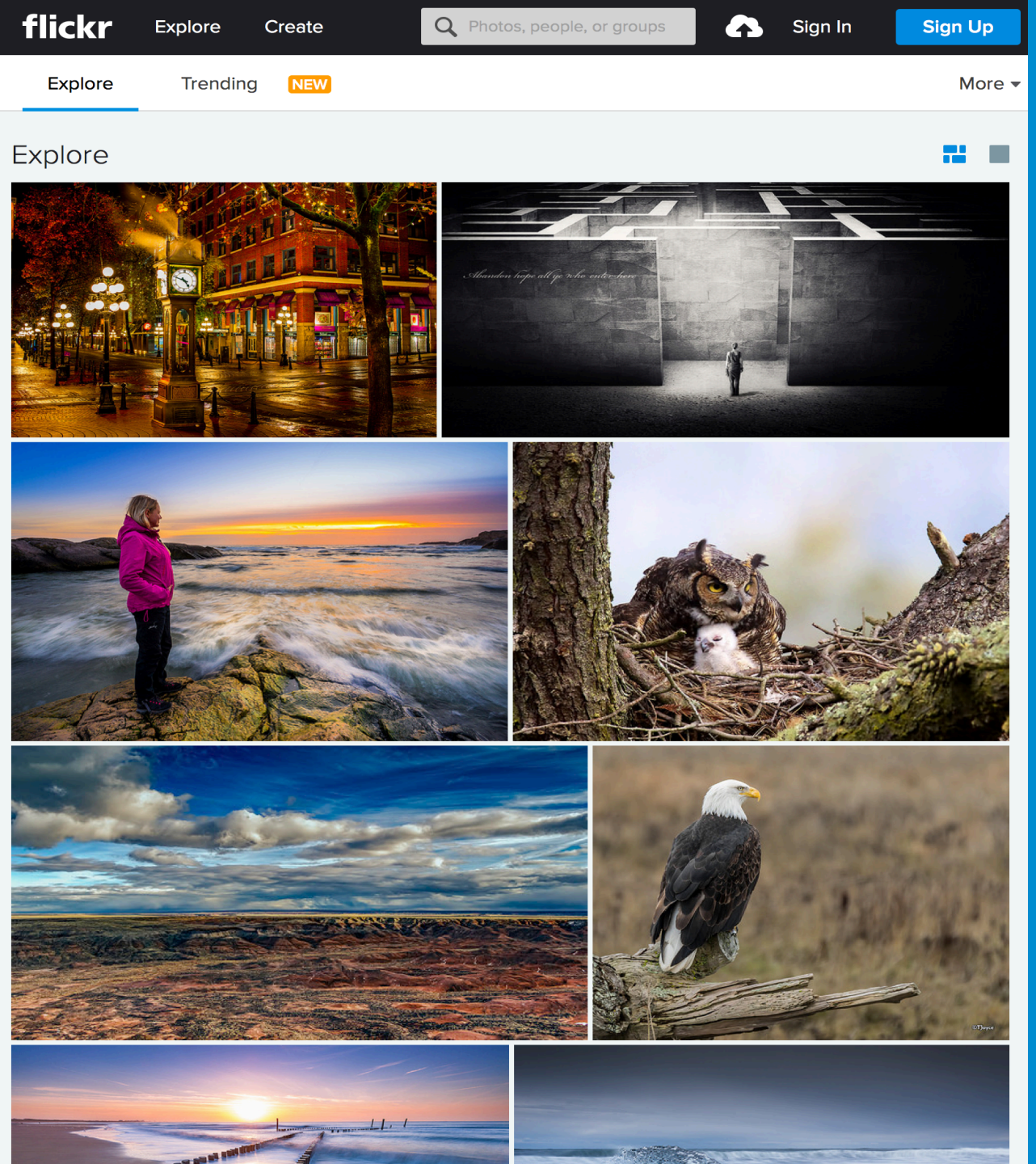
"As someone who can't use a mouse, I'm frustrated to be unable to keep track of where I am in the page because no visible indicators are provided when I hit the TAB key."

A FUNCTIONALITY ISSUE

"I don't think the people who built this realize that not everyone uses the web the way they do. When each TAB is an effort, using the site becomes a painful experience."

WHY WOULD ANYONE PURPOSEFULLY DESIGN THIS?

"I don't get it. Why would anyone design a page with important information located in the footer, or in an area that is virtually impossible to reach?"



DESIGN TIPS

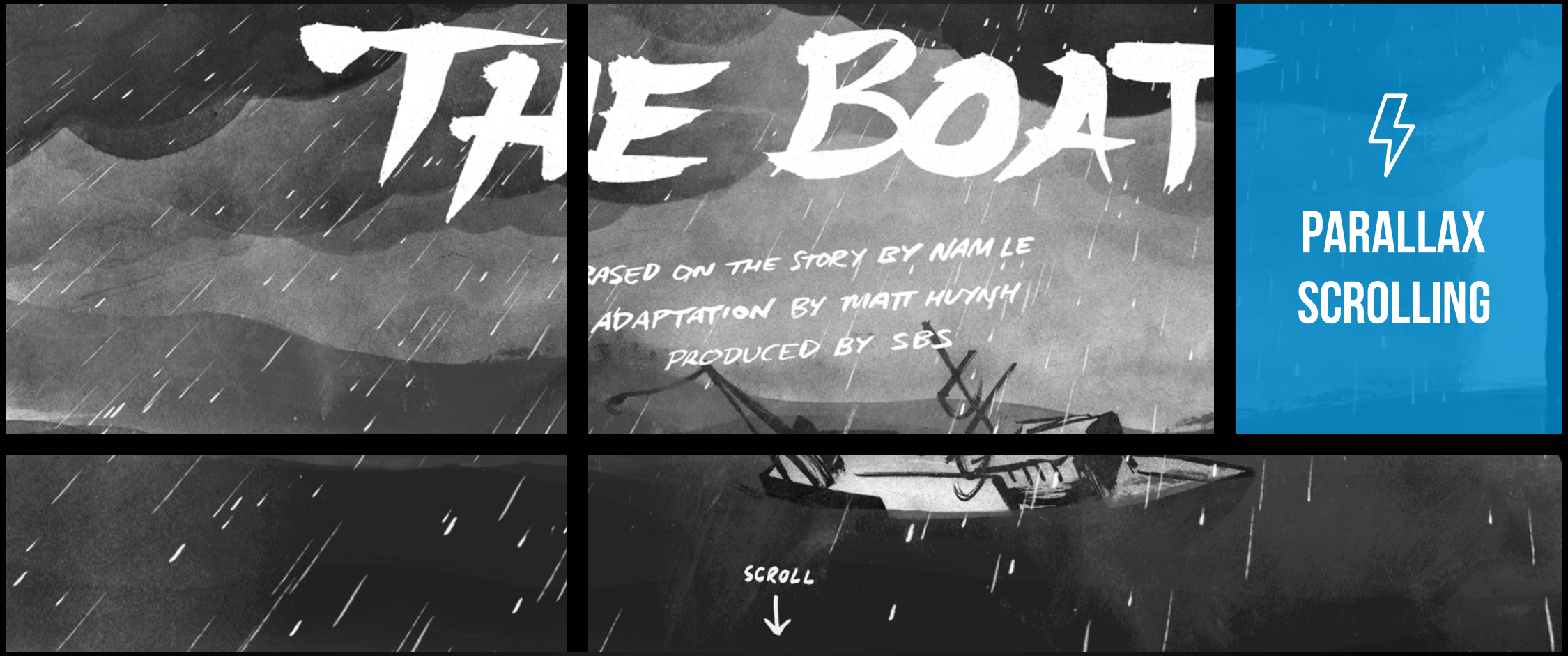
DEALING WITH ENDLESS SCROLLING

100% | Estimated number of people around the world who hate sites that use endless scrolling, then provide info in the footer.

- Make sure objects that get focus with the mouse also receive focus when tabbed to, using the keyboard.
- Provide a visible focus indicator that clearly identifies each object that is meant to grab focus.
- Design a mechanism to turn off endless scrolling, and provide a quick link to bypass the main content.
- Run extensive user testing sessions with people who navigate using only the keyboard.

DESIGN TREND NO. 3

PARALLAX SCROLLING



PARALLAX SCROLLING

DESIGN TREND NO. 3

> There's an increasingly high number of sites that use movement these days. I see longer pages with big background images that move at a different speed than the rest of the page, creating a feeling of depth. After a while, I just have to close my browser... it makes me feel dizzy and sick.

ADAM ALLENDER
ARTHRITIS, COLOR BLINDNESS

ANJA BLACK
ADD, VESTIBULAR DISORDER

MARK LEWIS
BLINDNESS

AMY C. BECK
DEAFNESS, DYSLEXIA

EMMA JONES
LOW VISION, GLAUCOMA

ANJA BLACK – ADD, VESTIBULAR DISORDER

ACCORDING TO ANJA

ISSUES WITH PARALLAX SCROLLING

AN ETHICAL ISSUE

"I can't spend more than a few minutes on some of these sites before I start feeling nauseated, kind of like when I'm reading in a car. I now avoid those sites. It's not worth it."

A FUNCTIONALITY ISSUE

"I'm no expert, but it seems to me these moving effects are only decorative, but they keep distracting me. Why can't they provide us with ways to turn all of this off?"

WHY WOULD ANYONE PURPOSEFULLY DESIGN THIS?

"I don't get it. Why would anyone design a page that has effects that can make some people feel sick? Don't they care about the well-being of their users?"

DESIGN TIPS

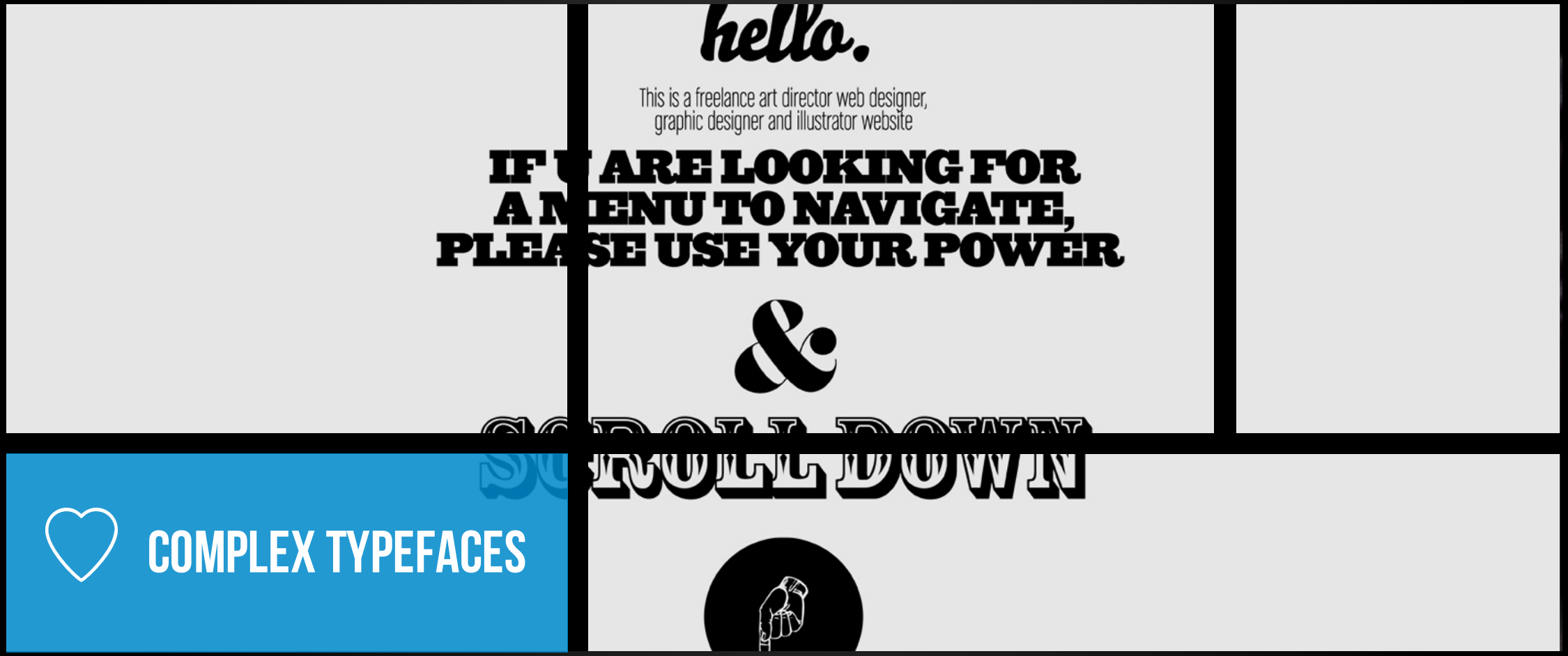
DEALING WITH PARALLAX SCROLLING

35% | Estimated number of US adults aged 40 and over who may experience feelings of motion sickness on sites that use parallax effects.

- Limit the number of animations and movement effects in the page, so they are used parsimoniously.
- Provide a warning on page load, to inform users about risks for people with vestibular disorders.
- Provide a means to disable parallax, so users can quickly switch to a static version, if need be.
- Run extensive user testing sessions with people who are diagnosed with vestibular disorders.

DESIGN TREND NO. 4

COMPLEX TYPEFACES



COMPLEX TYPEFACES

COMPLEX TYPEFACES

DESIGN TREND NO. 4

> About two years ago, I started noticing a wide variety of new fonts being used on sites. It was cute at first, but as people began using new fonts in their designs, content also became much harder to read. Adapting to all those fonts on each site is a huge pain in the neck. A lot of them are so hard to read!

ADAM ALLENDER
ARTHRITIS, COLOR BLINDNESS

ANJA BLACK
ADD, VESTIBULAR DISORDER

MARK LEWIS
BLINDNESS

AMY C. BECK
DEAFNESS, DYSLEXIA

EMMA JONES
LOW VISION, GLAUCOMA

AMY C. BECK – DEAFNESS, DYSLEXIA

ACCORDING TO AMY

ISSUES WITH COMPLEX TYPEFACES

A READABILITY ISSUE

"When too many words are presented using complex fonts, it makes it much more difficult for me to be able to read the words. It feels confusing and cluttered."

A LEGIBILITY ISSUE

"As someone who mostly uses the web on my iPad and iPhone, I often find these fancy fonts don't render well on smaller screens. I wish they did though, some look pretty."

WHY WOULD ANYONE PURPOSEFULLY DESIGN THIS?

"I don't get it. Why would anyone create a page that uses weird-looking fonts that are hard to read? Isn't design supposed to help make the content easier to use?"

DESIGN TIPS

DEALING WITH COMPLEX TYPEFACES

17% | Estimated percentage of people around the world who have some form of dyslexia, according to Dr. Tasman, Kentucky U.

- Try to limit the use of complex typefaces to elements like headings, titles, value propositions, slogans, etc.
- Make sure your custom typeface renders well, and is legible across various browsers and devices.
- Refrain from using complex typefaces for blocks of written text or body copy.
- Run extensive user testing sessions with people who are diagnosed with various forms of dyslexia.

DESIGN TREND NO. 5

CINEMAGRAPHS

CINEMAGRAPHS

DESIGN TREND NO. 5

> I've been told that an increasingly high number of sites have started using full-screen background videos on their pages to create compelling, visual storytelling experiences. I'm growing increasingly concerned about where this will lead us in terms of user navigation.

ADAM ALLENDER
ARTHRITIS, COLOR BLINDNESS

ANJA BLACK
ADD, VESTIBULAR DISORDER

MARK LEWIS
BLINDNESS

AMY C. BECK
DEAFNESS, DYSLEXIA

EMMA JONES
LOW VISION, GLAUCOMA

MARK LEWIS – BLINDNESS

ACCORDING TO MARK

ISSUES WITH CINEMAGRAPHS

A FINDABILITY ISSUE

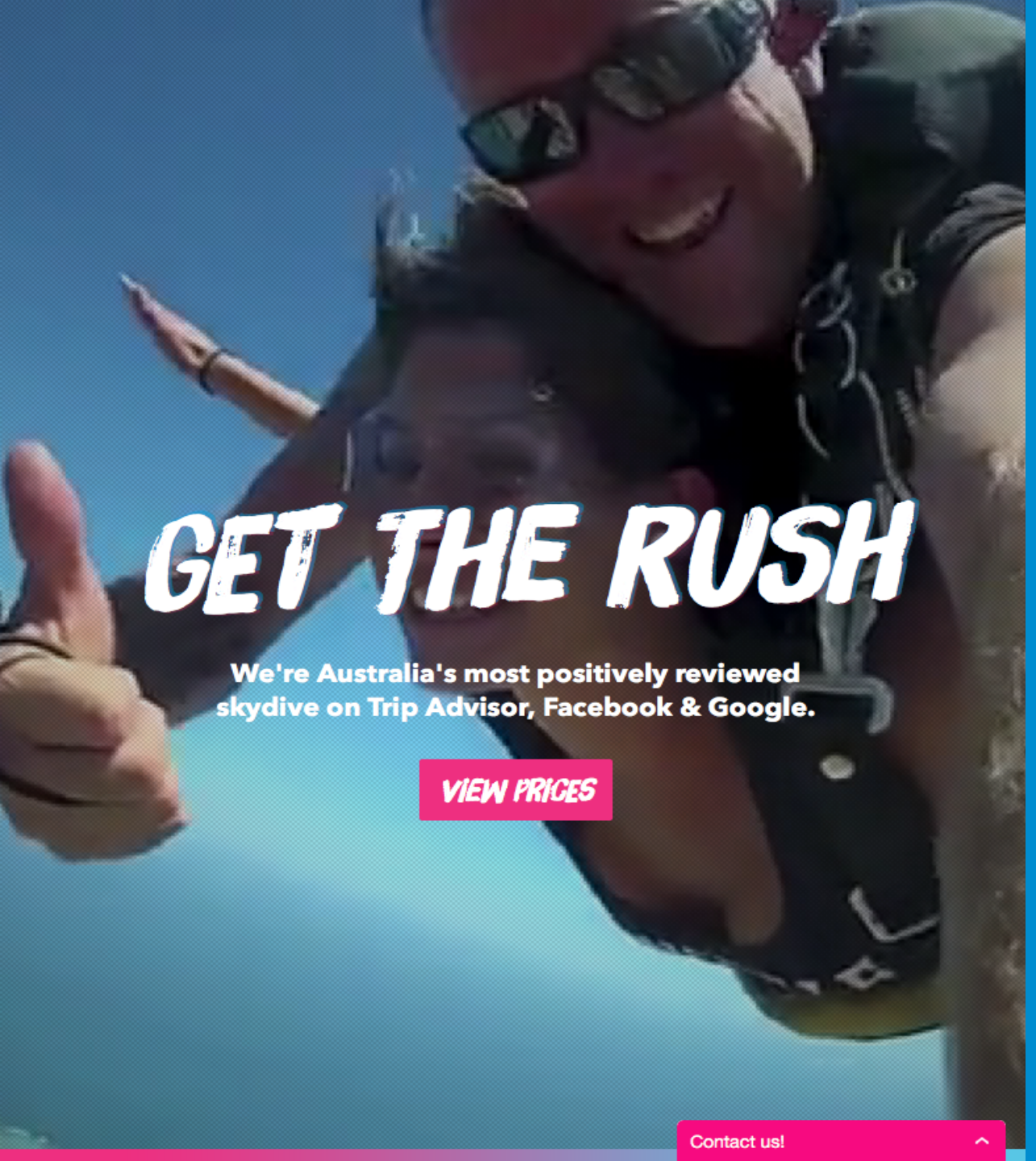
"When content is embedded as part of the background, it becomes impossible for my screen reader to pick it up. It could just as well not be there at all."

AN ETHICAL ISSUE

"With innovations like the Oculus Rift and immersive virtual reality, I am increasingly worried about what this trend will mean for people like me in the future."

WHY WOULD ANYONE PURPOSEFULLY DESIGN THIS?

"I don't get it. Why would anyone use CSS to convey information? Haven't they heard about the virtues of separating presentation, structure and behavior by now?"



DESIGN TIPS

DEALING WITH CINEMAGRAPHS

39M | Estimated number of people around the world who are completely blind, according to the World Health Organization (WHO).

- Refrain from embedding informative content (video or image) as part of the background of the page.
- Non-sighted people want to live the experience, too! Provide text transcripts and audio descriptions.
- Switch to Windows High Contrast, to see how those elements hold up for people who have low vision.
- Run extensive user testing sessions with people who are blind. Are they missing on any of the fun?

RECOMMENDATIONS

There is no such thing as an average pilot.

GILBERT S. DANIELS

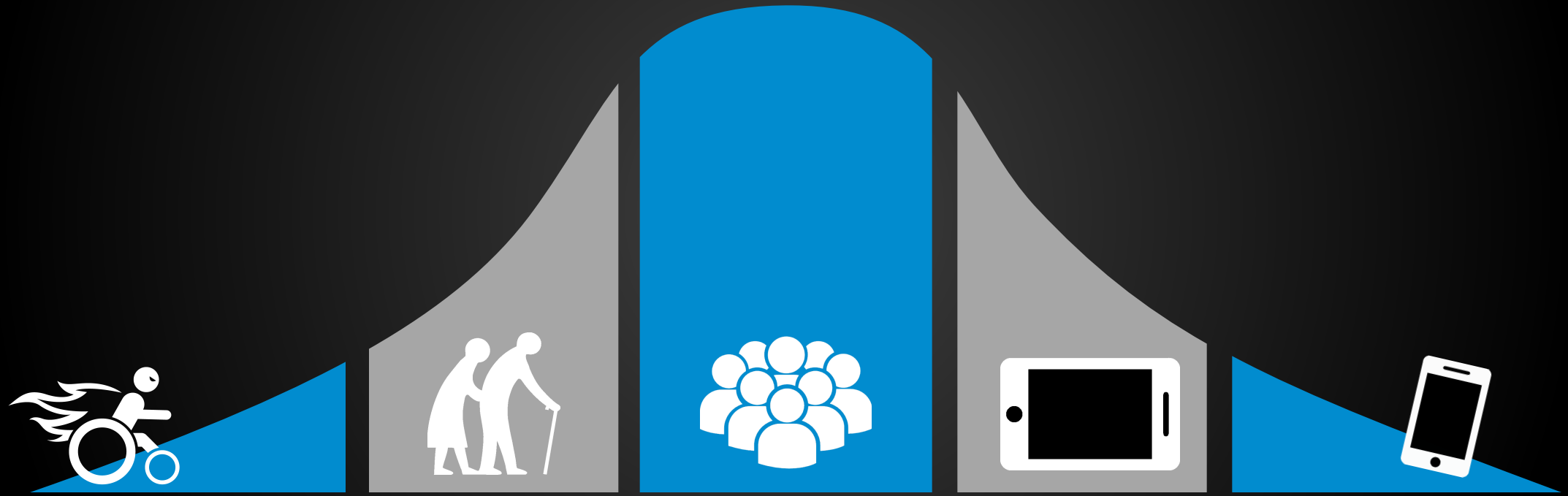
MILITARY RESEARCHER, AERO MEDICAL LABORATORY

Funka
Accessibility Days

There is no such thing as an average user.

DESIGNING FOR THE EXTREMES

LETTING THE MIDDLE TAKE CARE OF ITSELF



PEOPLE WITH DISABILITIES

PEOPLE GETTING OLDER

YOUR "AVERAGE USERS"

PEOPLE USING TABLET DEVICES

PEOPLE USING SMART PHONES

A DESIGNER'S RESPONSIBILITIES

BECAUSE DESIGN IS MORE THAN JUST PRETTY COLORS

Design for everyone regardless of abilities

1. ETHICAL

Design for the common good

3. PHILANTHROPIC

Design to push your own limits

5. PERSONAL

2. LEGAL

Design according to standards & laws

4. ECONOMIC

Design to increase market shares

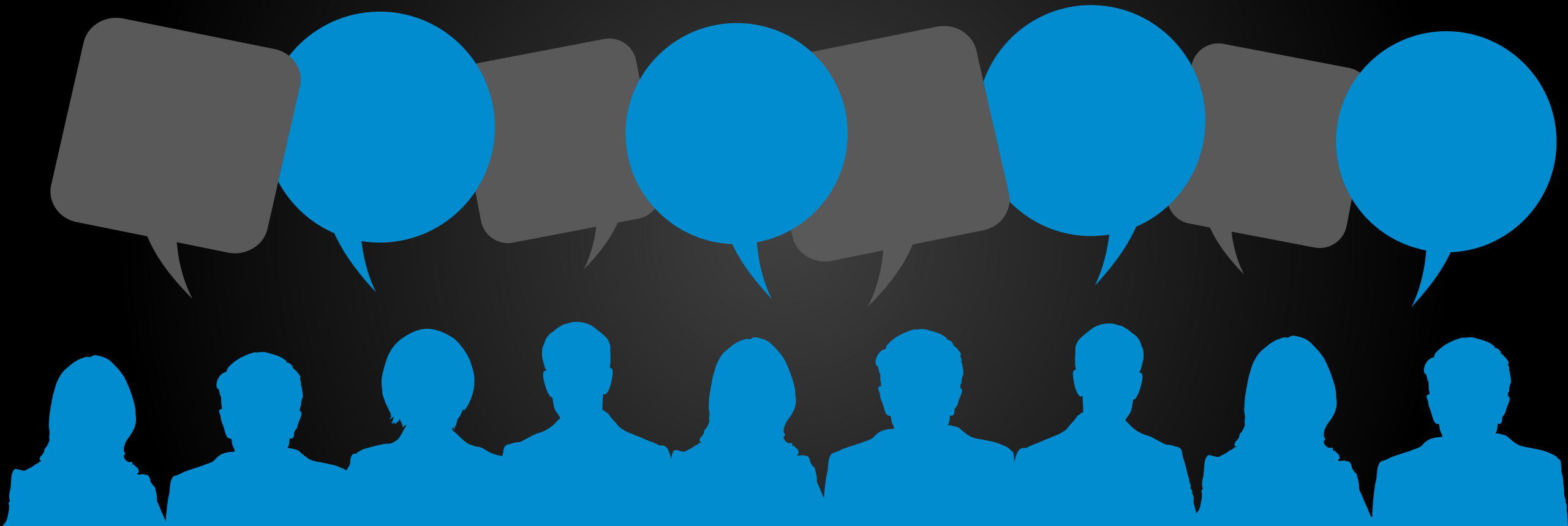
“Good design is obvious.
Great design is transparent...”

JOE SPARANO

DESIGNER, OXIDE DESIGN CO.

Great design is also inclusive!

QUESTIONS & COMMENTS



STAY IN TOUCH!

denis.boudreau@deque.com
+1 (514) 730-9168
@dboudreau

TACK SÅ MYCKET

ACCESSIBLE DESIGN PROVIDES A BETTER USER EXPERIENCE FOR EVERYONE.

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ca.linkedin.com/in/dboudreau

twitter.com/dboudreau

skype.com/denisboudreau

GUILTY PARTIES*

GENERAL NAVIGATION EXAMPLE SITE

Giampiero Bodino - High jewelry, Milano
http://www.giampierobodino.com/

GHOST BUTTONS EXAMPLE SITE

Benoit Challand – Creative image maker
http://www.benoitchalland.com/

ENDLESS SCROLLING EXAMPLE SITE

Flickr
https://www.flickr.com/explore

PARALLAX SCROLLING EXAMPLE SITE

SBS – The Boat
http://www.sbs.com.au/theboat/

COMPLEX TYPEFACES EXAMPLE SITE

Nicola Cozzolino – Art director & designer
http://www.nicolacozzolino.com/

CINEMAGRAPH EXAMPLE SITE

Skydive Jurien Bay - Australia
https://skydivejurienbay.com/

* sincere apologies for any bruised egos.

deque