

Intro to Web Accessibility

A Human-first Approach

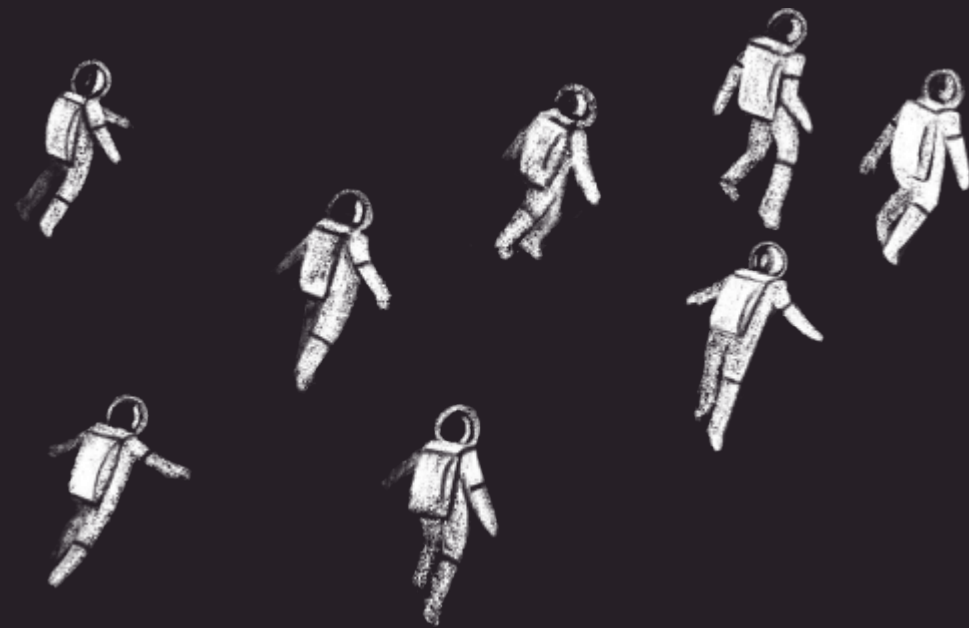
Michaela Blackham



Onward, together.

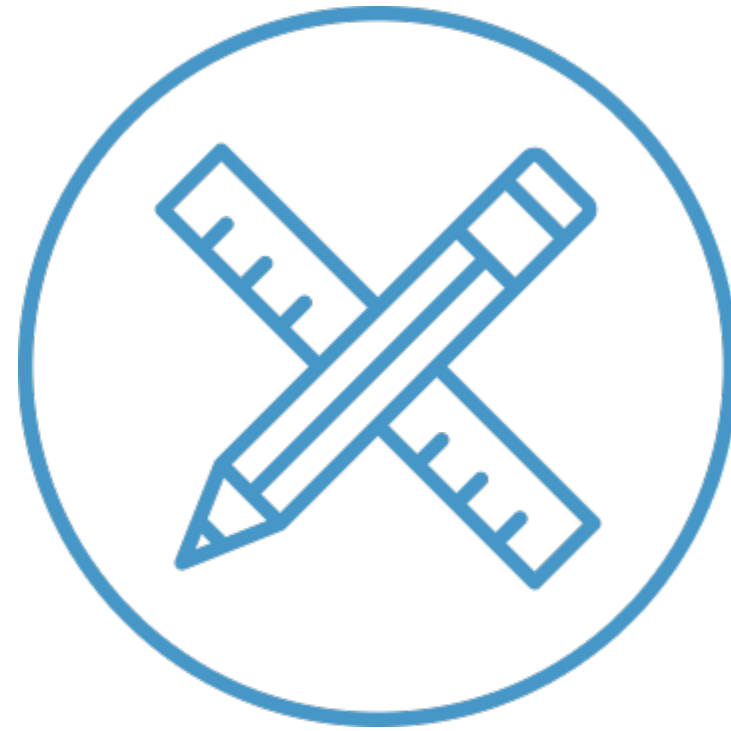
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Strategy



Design



Development



Stanford





Stanford



Work That Matters



work@aten.io

Intro to Web Accessibility

A Human-first Approach

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Accessibility & QA Specialist

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A Human-first Approach

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What is the problem?



61 million adults in the U.S.
live with some form of a
disability

-CDC, 2020

That's **1 in 4** adults

That's **1 in 4** potential users

What is Digital Accessibility?

Digital or web accessibility means that websites, tools, and technologies are designed and developed so that people with disabilities can use them.

**P
O
U
R**

Perceivable

Operable

Understandable

Robust

Perceivable

Operable

Understandable

Robust

Perceivable

Operable

Understandable

Robust

Perceivable

Operable

Understandable

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Perceivable

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Robust

What Guidelines

1. **WCAG** (Web Content Accessibility Guidelines)
2. **Section 508** of the Rehabilitation Act of 1973

WCAG

Web Content Accessibility Guidelines

1. These are the international guidelines for accessibility standards for the internet
2. Version 2.1 -> 2.2
3. Guidelines grouped by POUR
4. 3 levels - A, AA, AAA
5. Backwards compatible
6. Automated testing
7. Manual testing

Section 508

of the Rehabilitation Act of 1973

More than a Checklist

- Alternative Text for images
- “Skip to Main Content” link
- Captions on videos

1. Is the alt text accurate?
2. Does this actually work?
3. Are these accurate and correct?

Who needs an accessible website?



Everyone benefits from an
accessible website

Visual
Motor or Physical
Auditory
Cognitive

Visual

Motor or Physical

Auditory

Cognitive

VISUAL

What does this mean?

- Someone who is legally blind
- Someone with low, obstructed, or constricted vision
- My color blind father
- Our aging grandparents



Text

Artisanal kale

Search

How do I shoot web

Email

bootstrap@example.com

URL

https://getbootstrap.com

Telephone

1-(555)-555-5555

Password

.....

Date and time

08/19/2011, 01:45 PM

Text

Search

Text	Artisanal kale
Search	How do I shoot web
Email	bootstrap@example.com
URL	https://getbootstrap.com
Telephone	1-(555)-555-5555
Password
Date and time	08/19/2011, 01:45 PM

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Earlier this month we launched a redesign of the Commonwealth Fund's Health System Data Center, a platform for exploring state health system data through custom tables, graphs and maps. With interactive visualizations covering dozens of topics, roughly 100 indicators, and tens of thousands of individual metrics, the platform helps make underlying data actionable for advocates, policy makers, and journalists tackling healthcare system issues all over the country.

We used Drupal 8 to build the data center backend, and we used React and Highcharts to render its interactive charts and graphs. Drupal 8's flexible entity storage system made it a perfect fit for housing the data. Its capabilities for leveraging third-party APIs and JavaScript libraries made integrating with [React and Highcharts](#) far simpler than other alternatives.

We're all incredibly excited to see the Health System Data Center live. For us at Aten, this is the latest in a series of project launches dealing with data visualization. Along the way, we've been working on a collection of tools specifically tailored to the unique needs of data-intensive projects. Here are six Drupal 8 modules that help solve specific challenges when working with data. (Note that some of these are sandbox modules. While sandbox modules don't have official releases, you can still download the code, try them out, and of course, get involved in the issue queue!)

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VISUAL

What should I look for?

- Navigation
- Visual content
- Orientation & boundaries
- Contrast & size
- Peripheral Interaction



VISUAL

How is this solved?

- Design
- Keyboard navigation
- Screen readers



Visual

Motor or Physical

Auditory

Cognitive

MOTOR or PHYSICAL

What does this mean?

- Someone like my cousin Emily, with a disability from birth
- The wounded vet that uses prosthetics
- Someone with tremors or uncontrollable arm/hand movements
- Or even my niece, with a broken arm



MOTOR or PHYSICAL

What should I look for?

- Gesture alternatives & sensitivity touches
- Reach/orientation on mobile
- Non physical navigation
- Touch size/target size

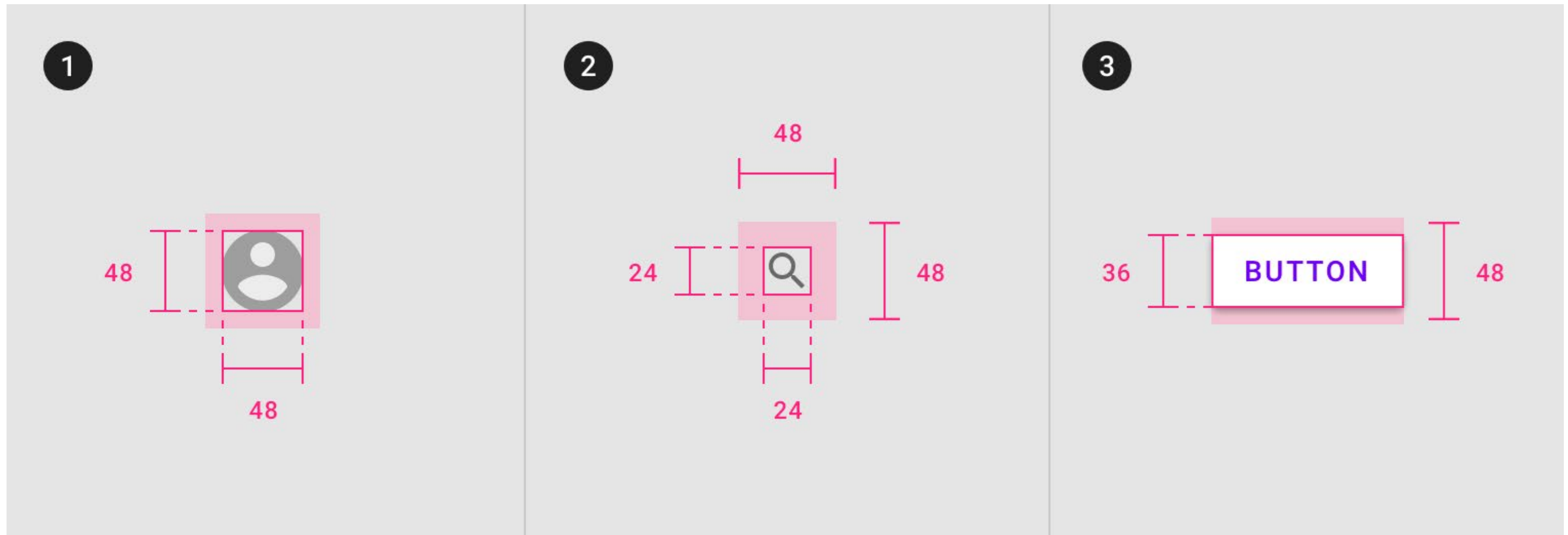


MOTOR or PHYSICAL

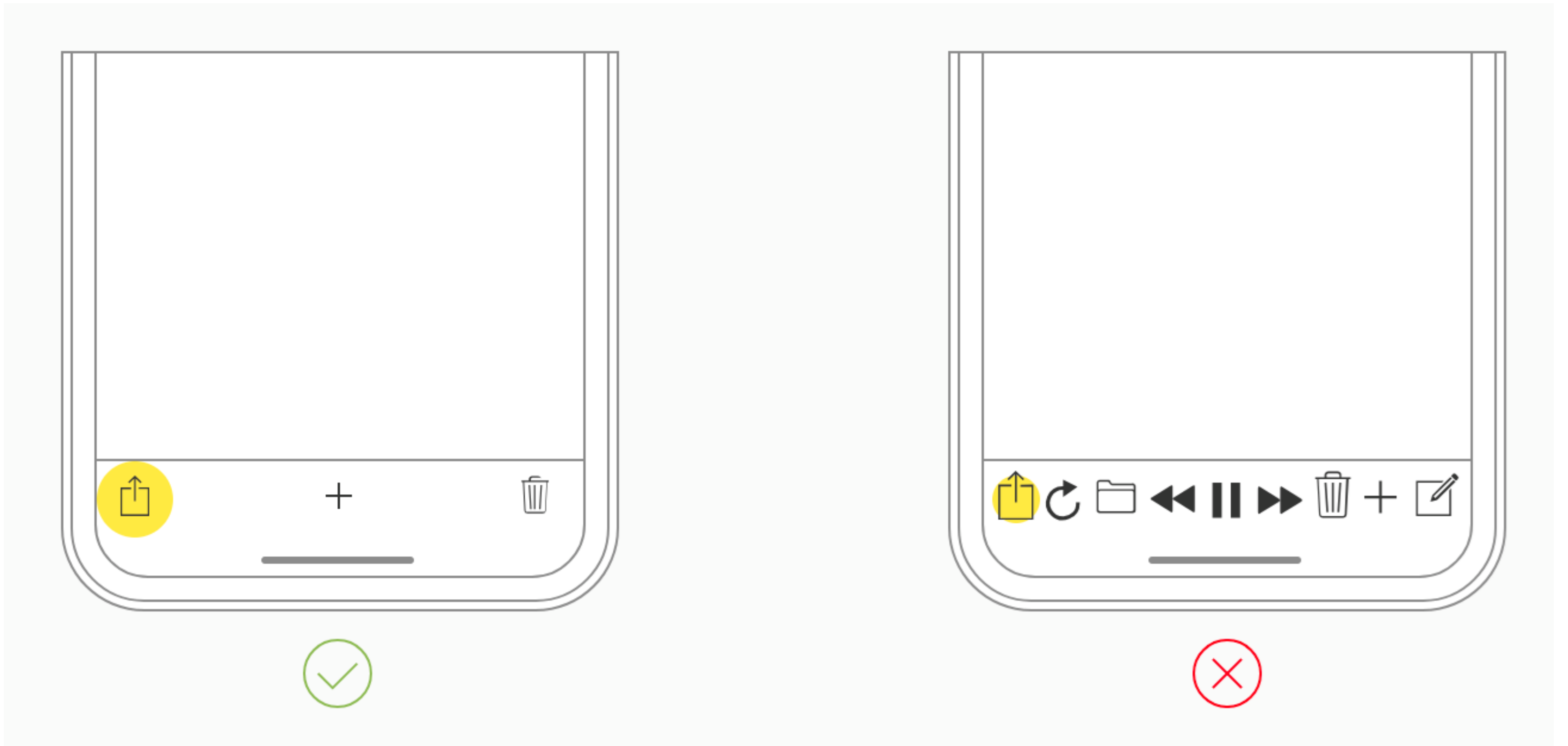
How is this solved?

- Great UX
- Keyboard or touch navigation
- Screen reader navigation
- Speech
- Eye trackers, tongue sensitivity clickers, etc





Screenshot from Google's Material Design Guidelines



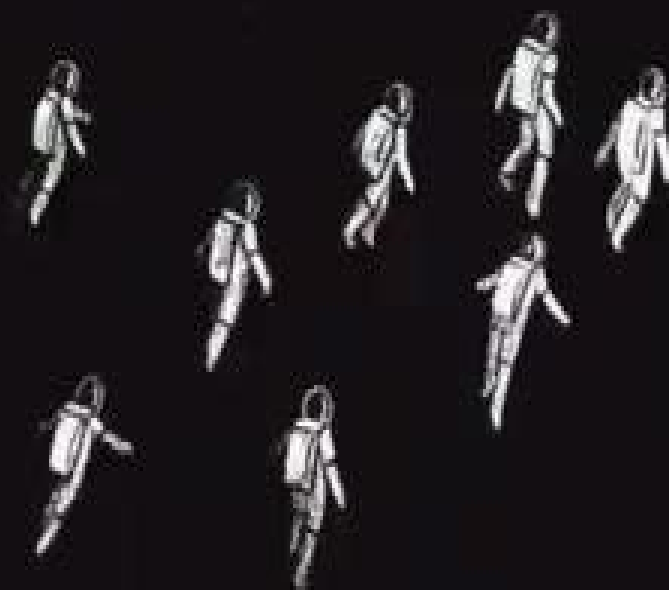
Screenshot from Apple's Human Interface Guidelines

Your mission shouldn't be held
back by ineffective technology
and design.

We're here to help.

LET'S TALK →

SEE OUR WORK



Visual
Motor or Physical
Auditory
Cognitive

AUDITORY

What does this mean?

- Someone who is hard of hearing or completely non hearing
- My grandfather, who wears a hearing aid



AUDITORY

What should I look for?

- Embedded videos & audio files
- Contact information



AUDITORY

How is this solved?

- Captions & transcripts
- Alternative communication



Visual
Motor or Physical
Auditory
Cognitive

COGNITIVE

What does this mean?

- Someone you know who may have Down Syndrome
- The little boy I babysit with autism
- Your brother or sister with ADHD
- Your friend or colleague, who may be dyslexic
- Me, with extreme motion sickness



COGNITIVE

What should I look for?

- Visual Density
- Memory gestures
- Distracting content
- Fonts
- Excessive movements



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500 Convertible
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ALFA ROMEO

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OVER 5000 HAPPY CUSTOMERS



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LIVE

The twitter pigeon is loading "LINGSCARS" LIVE + KICKING twitter feed... WAIT!

Received. Pls wait :)



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cookie: favourite biscuit=ouch tea
cookie: uses vaseline daily=very dry

Close (X)



Car Sales

>> ONLINE

Emma C

>> ONLINE

Ling V

Admin

- - Offline

Guy

- - Offline

Holly

- - Offline

Wai

- - Offline

Jan

Aftersales

>> ONLINE

Ling V

You can't find a car?

Apply for a CAR QUOTE



COGNITIVE

How is this solved?

- K.I.S.S.
- Clear and consistent layouts
- Smart color palettes
- Controllable interactions
- Subtle movements



But wait...



But wait...

What about those amazing accessibility plugins and overlays?



Your mission shouldn't be held back by ineffective technology and design.

We're here to help.

LET'S TALK →

SEE OUR WORK



MEDIAMATTERS
FOR AMERICA



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Accessibility Adjustments

 Reset Settings

 Statement

 Hide Interface

Search the online dictionary...



Choose the right accessibility profile for you

OFF

ON

Seizure Safe Profile

Eliminates flashes and reduces color



OFF

ON

Visually Impaired Profile

Enhances the website's visuals



OFF

ON

Cognitive Disability Profile

Assists with reading and focusing



OFF

ON

ADHD Friendly Profile

More focus and fewer distractions



OFF

ON

Blind Users (Screen-reader)

Use the website with your screen-reader



OFF

ON

Keyboard Navigation (Motor)

Use the website with the keyboard



Content Adjustments

 Content Scaling



Default





Readable Font



Highlight Titles



Highlight Links



Text Magnifier



Adjust Font Sizing



Default





Align Center

If it sounds too good to be true, then it probably is..



Issues with A11y Plugins

1. A majority of the guidelines in WCAG cannot be fixed or detected with automated tools alone
2. Screen reader users will use their own proprietary software
3. You need to customize your experience before you can even interact with the site
4. Every plugin is different and therefore includes a new learning curve
5. It takes focus away from screen readers if it's the first thing on the page
6. Too many options & customizations
7. Many users who require assistive tech have JS turned off

*“Website overlays high-jack the user experience, attempting to display the site in a way *it* thinks is helpful to me. Many overlays sit at the top of the page and continuously send audio announcements to the screen reader asking the user to engage the tool. These alerts constantly interrupt the audio when the webpage is being read.”*

– Mike Hess, Founder/Executive Director of Blind Institute of Technology

“Overlays trick product teams into thinking accessibility can be solved and put out of mind with just a few clicks. There is no substitute for making digital accessibility an embedded part of team culture”

– Mike Hess, Founder/Executive Director of Blind Institute of Technology

How can Aten help?



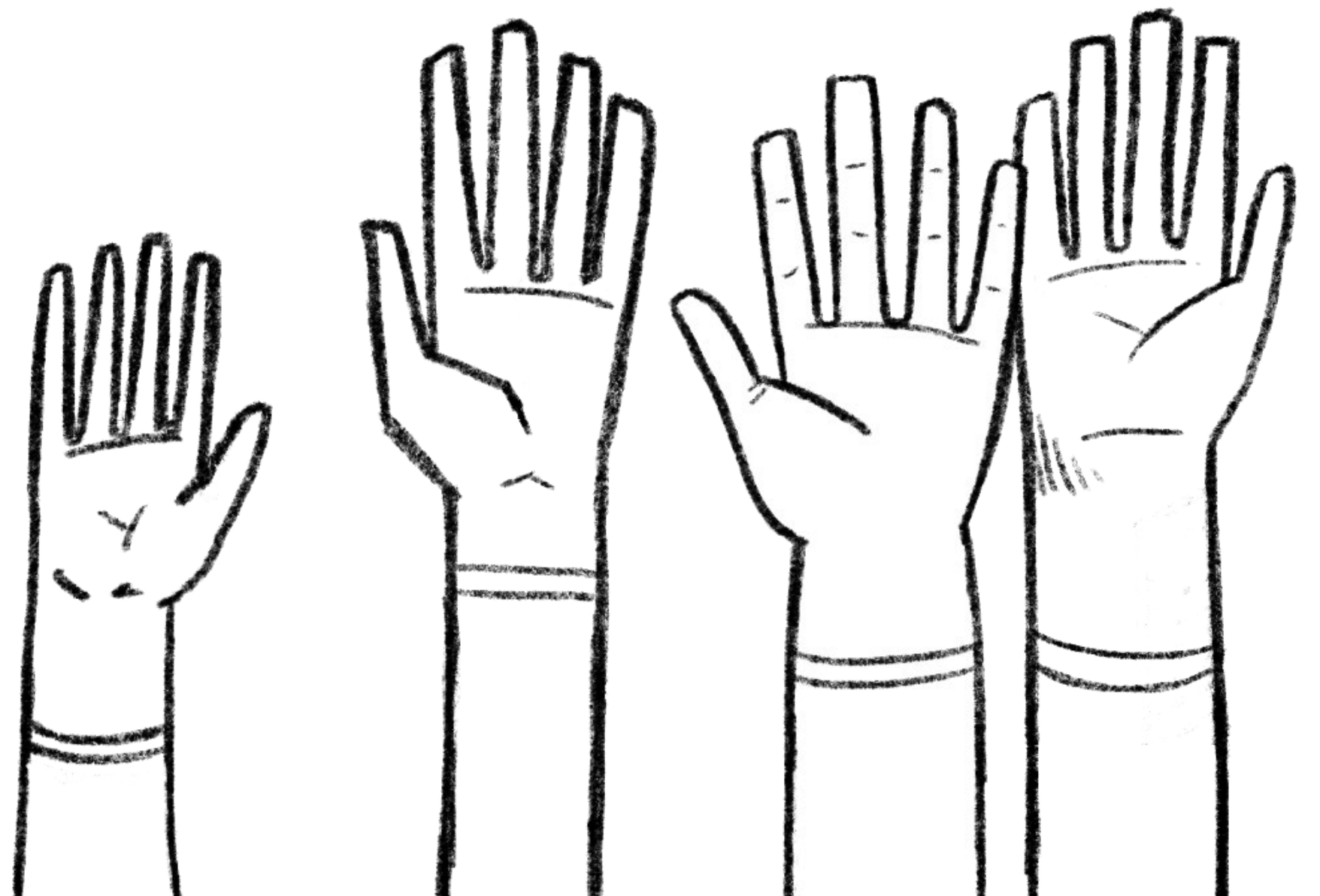
Colorado will be the first
state to require, **by law**,
website accessibility
standards: **HB21-1110**

Get in touch for a
free consultation of your
website's ADA compliance:
aten.io/accessibility

Past Related Webinars

- Creating Accessible Website Content: bit.ly/Accessible-Content
 - Performing an Accessibility Review of your Website: bit.ly/Accessibility-Review
 - Make Accessibility your Team's Priority - Q&A with Aten and BIT: bit.ly/Aten-BIT
 - An approach to Accessible Web Projects: bit.ly/Accessible-Web-Projects
-

Questions?



Thank You!

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