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Intro to Accessibility: Accessibility for UXers

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Image: accessible parking spots, March 2022 ([source](#))

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You may care but how do you also get others to care?

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The Goal

- Orient you to the accessibility space and how it is integral to what we do as UXers.
- Give you resources to continue to expand your accessibility knowledge.
- Answer any questions you have.

My path to becoming an accessibility UXR



Research Assistant

Cognitive Science at
University of
California - Santa
Cruz



Samuel Merritt
University



Graduate Student

Samuel Merritt
University +
Additional Paid
Researcher



Occupational Therapy

Clinical experience -
Specialized in Cognition
and Older Adults



UX Researcher

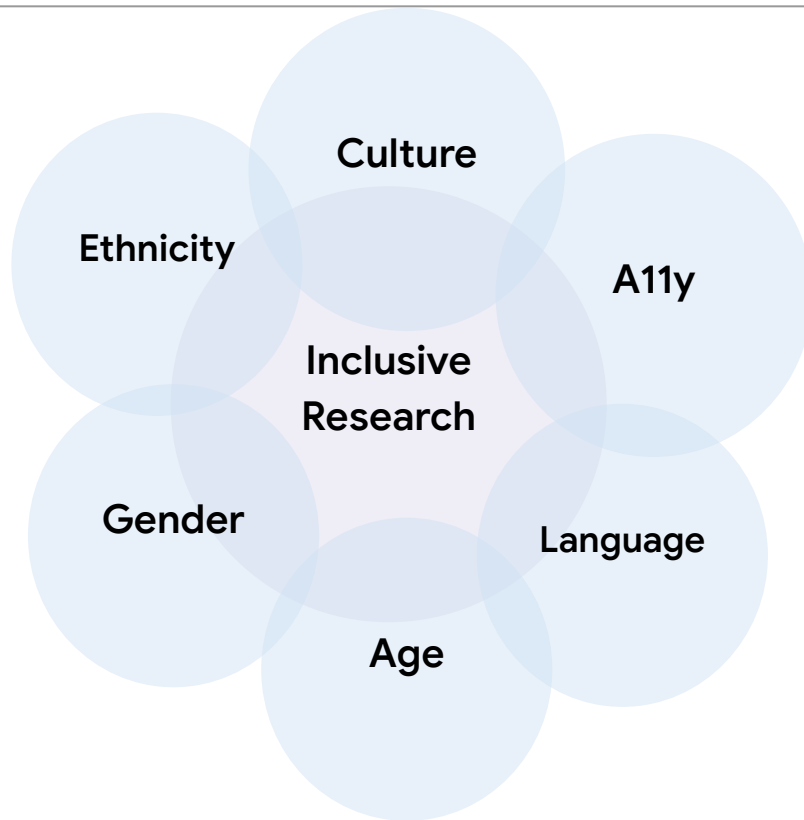
Contractor for a
central accessibility
team at Google

Defining Digital Accessibility

Inclusive Research & Accessibility (a11y)

Inclusive Research

Inclusive design refers to the design approach that recognizes the **full range of human diversity**.



Technical accessibility

Web Content Accessibility Guidelines (WCAG)

Sets technical accessibility of digital products.

[WCAG Quick reference](#)

Making Content Usable for People with Cognitive and Learning Disabilities (COGA)

Sets guidelines on designing and researching for individuals with cognitive and learning disabilities.

[Content Usable](#)

Who are these standards aimed to help?

Everyone but especially the following user groups



Vision

Blind
Low Vision
Color Blind



Hearing

Deaf
Hard of Hearing



Motor

Missing limbs
Arthritis
Tremors
Cerebral palsy



Cognitive

Dementia
ADHD
Dyslexia



Speech

Non-Verbal
Stuttering
Omissions
Substitutions

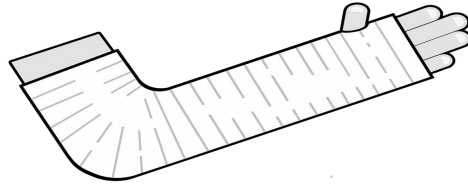
Why Care about Accessibility?

Accessibility affects everyone

Permanent



Temporary



Situational



When you design for **accessibility**, you design for **everyone**



Label

tw|o

one, two, three, five

two, four, six

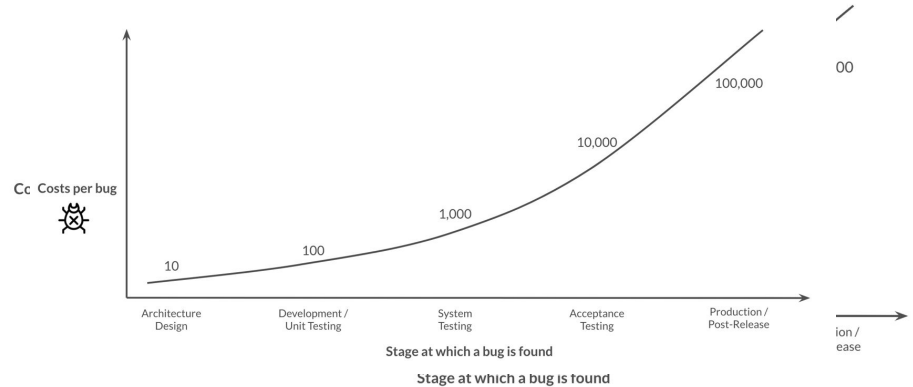
twelve, fourteen

There is also financial reasons to care

Increase in cost

Building in accessibility saves money as each stage the product moves forward, the more it cost (time and resources) to address those issues.

The [rule of 10](#) speaks to the idea that each phase the product moves forward to, the cost to fix it increases 10 fold.



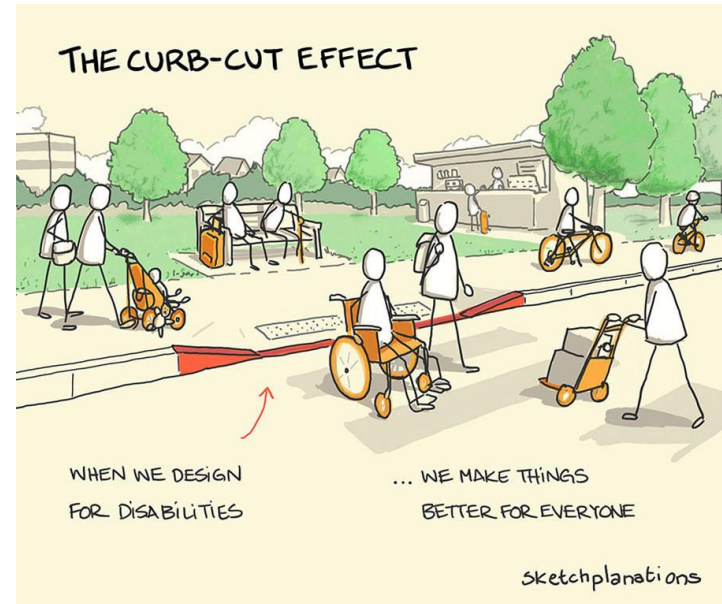
Pushes forward innovation

Creatively comes out with constraints

Curb Cut Approach: These principles apply to users with and without accessibility needs. Designing for populations with the most constraints often benefits more than the original population it was designed for.

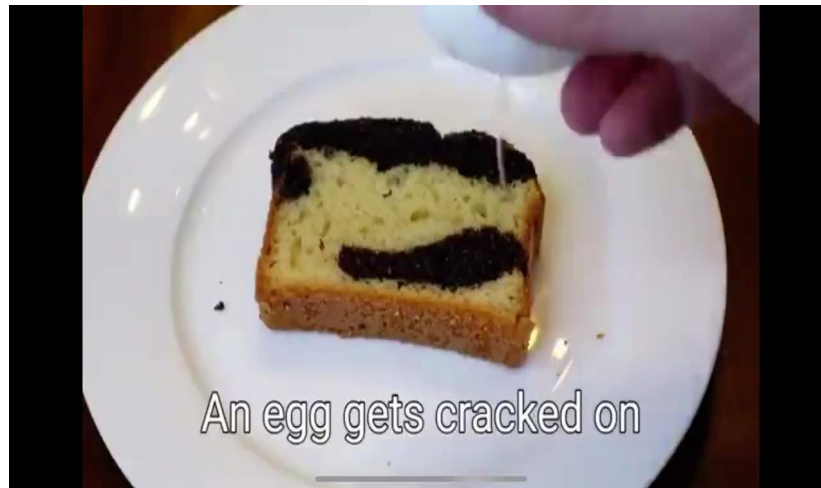
E.g. How do we make a product based on sound, such as a youtube video or movie in a theater accessible to those who are Deaf or hard of hearing?

Closed Captioning was originally created so that the deaf and hard-of-hearing could watch television. But today, people watching football games in loud bars or watching the news while at the gym benefit from captioning.



Start building it in

Why aim to build it in from the beginning?



Metaphor to understand why is it easier to build accessibility rather than try and add it after [0:30].

Build accessibility into your designs/research

Design

- Annotate your designs to communicate with the engineer and team how you expect the users to navigate through and the architectural hierarchy of the product.
- Use build in within Figma.
 - e.g. [contrast checker](#)
- Educate yourself on accessibility considerations so you are not creating an inaccessible product accidentally.
 - [Resources later in the deck](#)

Research

- Start by including 1-2 participants with accessibility needs.
 - You don't need to be an expert to include their perspective into the research.
- Advocate when designs may cause issues
 - E.g. is there enough contrast? What are the users goals within the product and are they easy to complete with assistive technology?
- Users who use assistive technology are the expert, aim to understand why, not just what they are doing with assistive technology

Expanding your Accessibility Knowledge

Different assistive technologies you can practice



Vision

Screen Reader
Magnification
Large font
Color modification
Dark mode



Hearing

Closed captions
Haptic feedback



Motor

Switch access
Voice control
Eye gaze
Wheelchair
Alt. Keyboard



Cognitive

Speech to text
Text to speech
Voice Assistants
Large font



Speech

Voice Assistants
Large text
Magnification
Communication device

Resources

Learn the foundation

- [WCAG](#)
 - Same content broken down differently
 - [The a11y project](#)
 - [Inopia accessibility not-checklist](#)
- [COGA](#)
- [Digital A11y cheat sheets](#)
- Learn how to use assistive technology
 - [iOS voiceover cheat sheet](#) or [video tutorial](#)
 - [Android screen magnification](#) or [video tutorial](#)
 - [Voice control](#) or [voice access](#)
- Learning from people with disabilities
 - [Carrie on Accessibility](#)
 - [The Blind Life](#)
 - [Squirmy and Grubs](#)
 - [Zach Anner](#)

Resources

What does this foundation look like?

Example: Learn Assistive Technologies

- This is my main recommendation. There are so many resources, learn the basics.
- The onus is not on people with disabilities to teach you. Meet them with knowledge, which as researchers can allow you to do better probing during moderated sessions.



Swiping/Flicking



Explore by touch



Rotor Controls

Resources

What does this foundation look like?

Example: Non-Text Content

- Non-text content can be
 - Decorative
 - Serves a purpose
- Decorative items should be ignored by assistive technology to not clutter the experience just as an non-a11y user would not get information from the image, we want the same experience for a11y users
- Non-text that serves a purpose need an ARIA label so users know what the function is.

Guideline 1.1 – Text Alternatives

Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.

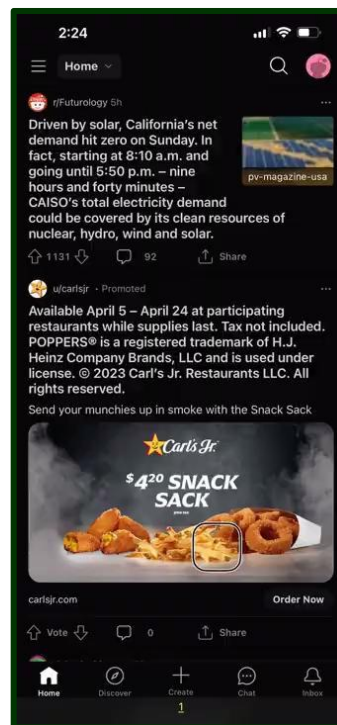
1.1.1 Non-text Content — Level A

All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below. [Show full description](#)

Understanding 1.1.1

[Show techniques and failures for 1.1.1](#)

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Resources

What does this foundation look like?

Example: Headings

- Headings go from H1-H6
- This creates the hierarchy and makes content more easily accessible and quicker to navigate
- There is information architecture for all products so thinking about this and how sighted users get visually prompted with headings and that these should be semantically coded as well
 - If you have slight variations in heading styles across the app that are all H1, does your engineer know which styles are H1 versus H2, H3, etc?

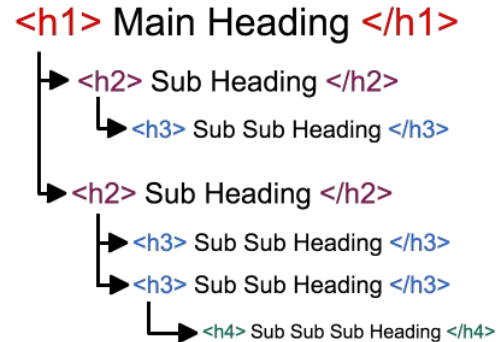
2.4.6 Headings and Labels — Level AA

Headings and labels describe topic or purpose.

[Show techniques and failures for 2.4.6](#)

Understanding 2.4.6

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Resources

Resources to deepen your knowledge

- [Accessibility annotating your UX designs](#)
- Quantitative accessibility research ([QuantCon 2023](#))
 - My team and I will be presenting quite a few talks this year
- [Deque archived 2023 axecon talks](#)
 - A few favorites
 - [Redesigning for Cognitive Ease](#)
 - [Beyond Compliance: Best Practices for Designing Inclusive Products](#)
- [Microsoft Cognitive Toolkit](#)
- [Medium article on accessibility](#)
 - E.g. [A Practical Guide to Inclusive Research](#)
- [Figma Accessibility resources](#)

Resources

Misc resources

- [Accessible Tables](#)
- [How to write good alt text](#)
- [Alt text for complex images](#)
- [Nielsen & Norman a11y](#)
- [Testing accessibility - Android](#)
- [Make your site more accessible](#)

Accessibility is a mindset, not a check box.

“Something you either hear, read, or say a lot is that: accessibility is a program, not a project. A marathon, not a sprint. A journey, not a destination. A process, not a feature. A mindset, not a checklist. It makes sense. But what does that really mean?

It means that accessibility is not a one-time effort or a box to check off - it's an ongoing commitment to creating inclusive experiences and environments. It requires a shift in mindset, moving from compliance to a core value that drives innovation, creativity, and belonging.”

Lulia Alexandra Brehuescu
[Global Accessibility Adviser at Sanofi](#)

Accessibility is a mindset, not a check box.

How do you know if a product is "accessible"?

- Building in accessibility is continuous. Products are always changing.
- Bare minimum have technical accessibility.
 - *This does not mean you will have usable product but it is technically the bare minimum you can do [also for legal reasons it is important to at least hit the minimum].*
- Conduct research with individuals with disabilities.
 - Within your normal research cycle or a specific study.

Thank you



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