



Agile ORLANDO JULY 24-28 2023

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Sukriti Chadha

Agile Accessibility



Agile ORLANDO
JULY 24-28 **2023**

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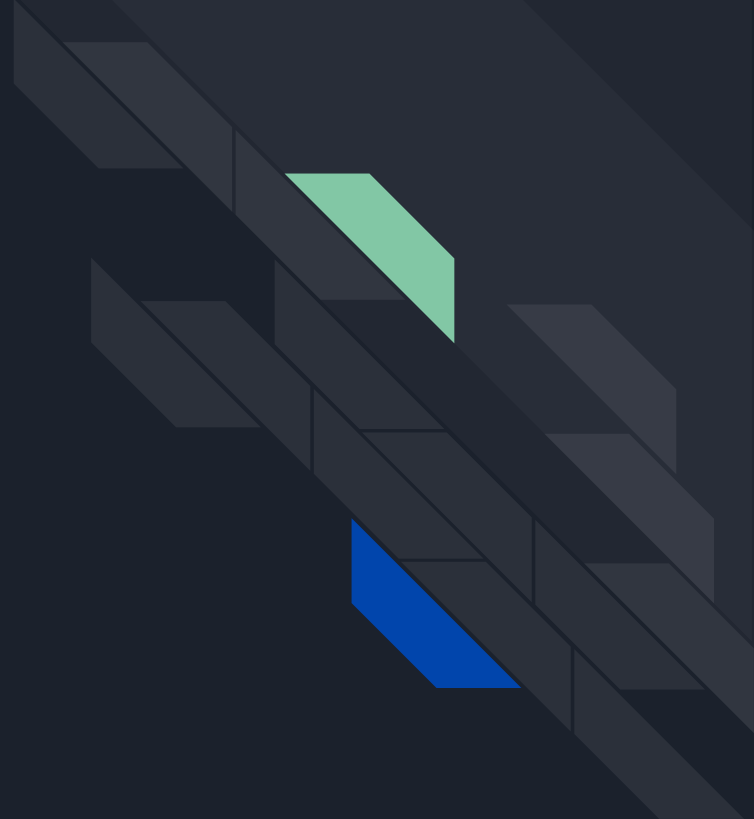
Agenda

- Digital Accessibility Basics
- Why Accessibility
- Examples
- Agile Product Lifecycle
- Beyond Compliance Example
- Q&A

Speaker: Sukriti Chadha

<https://www.linkedin.com/in/sukriti-chadha/>

Digital Accessibility Basics



What is a disability?



What is Accessibility?
What is Inclusion?



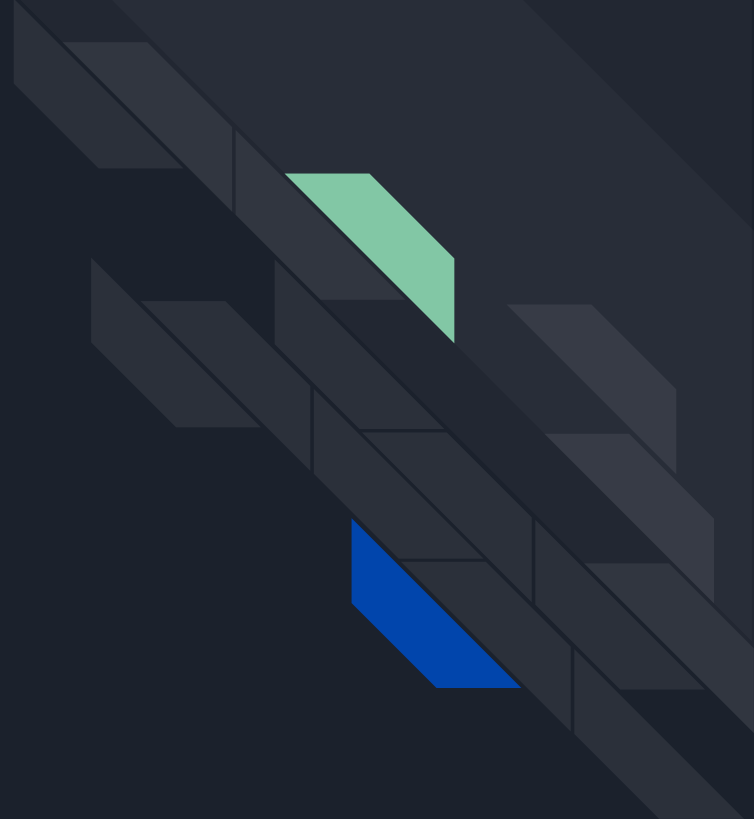


A 60-foot long ramp that looks like a maze and visually takes up the entire front of the house, with unnecessary turns leading up from a street to the door of a house



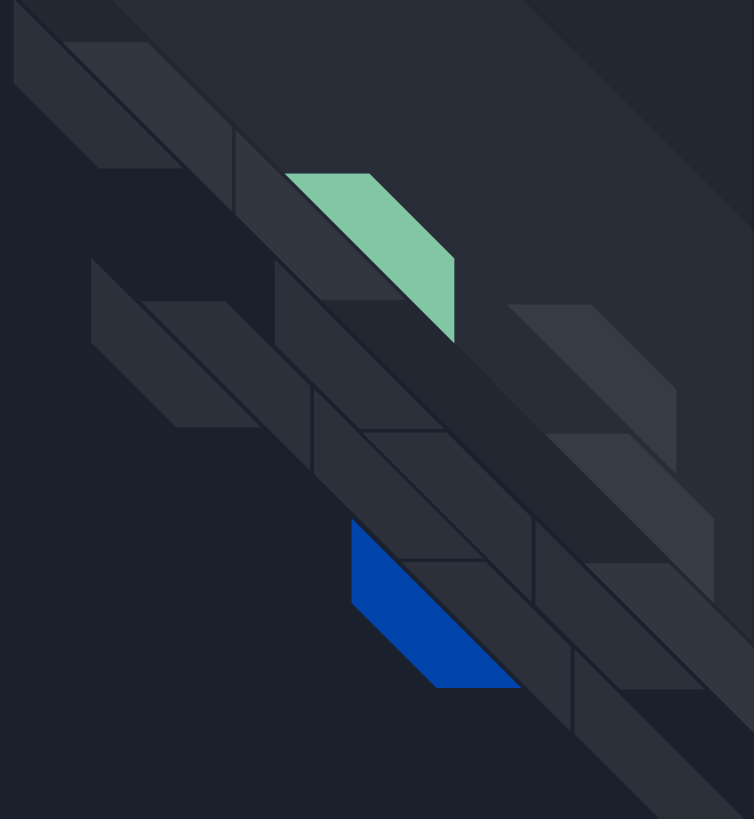
A ramp leading from street level to the door of a house,
with side rails and one turn

Why Accessibility?



1B+

People in the world live with some form of disability including

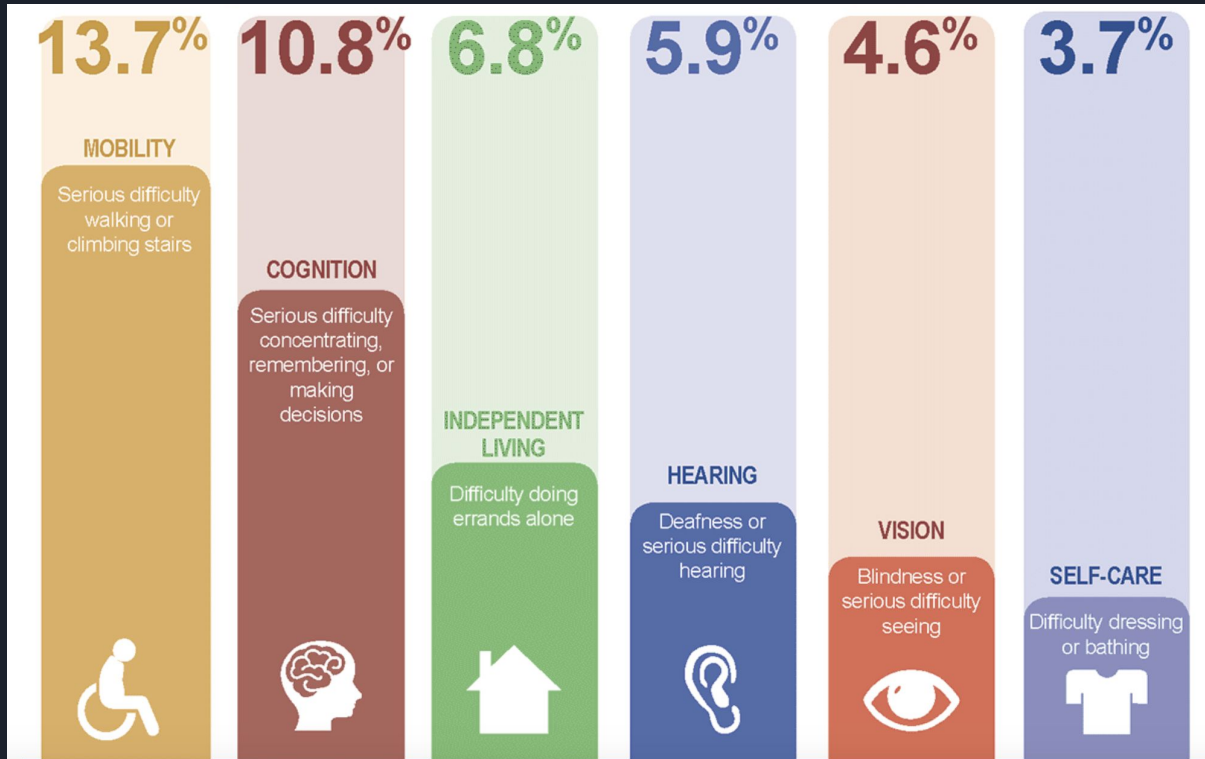


26%

Of US adults live with a disability



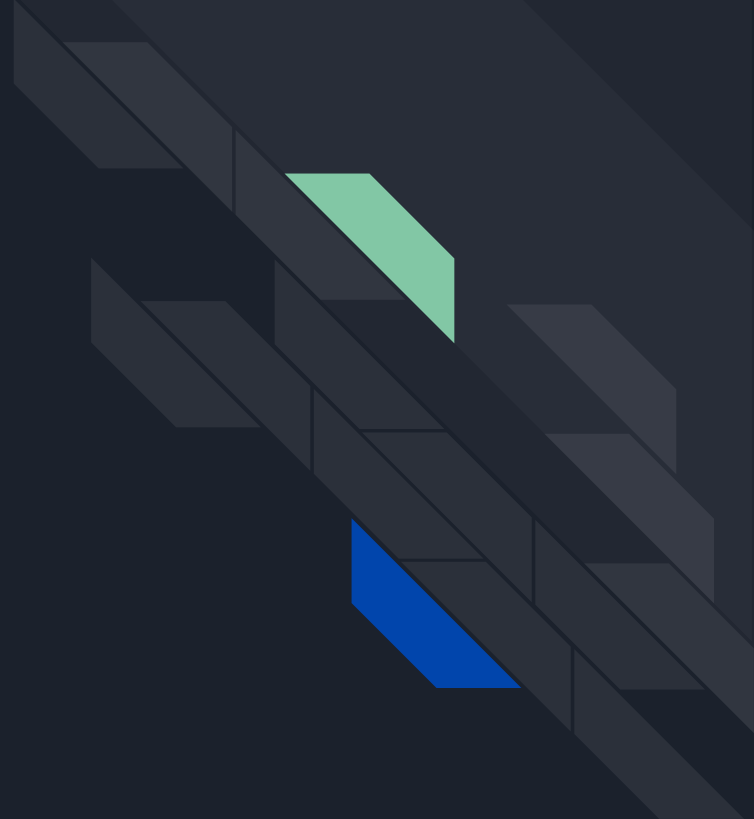
Distribution of functional disability types



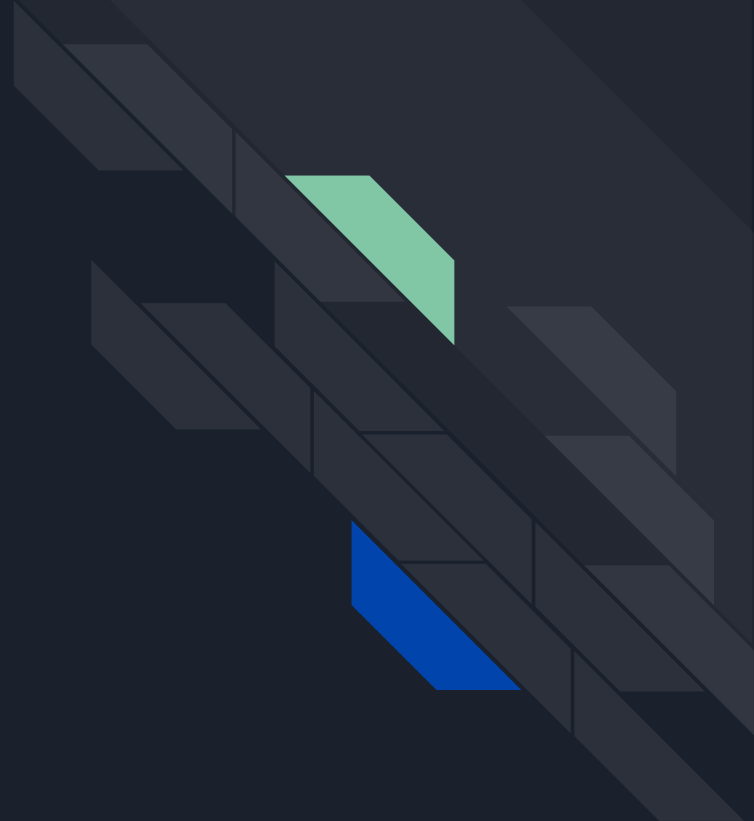
Distribution of functional disability types in the US: 13.7% mobility, 10.8% cognition, 6.8% independent living, 5.9% hearing, 4.6% vision and 3.7% self-care

97%

Of the world's top 1M websites fail even the most basic accessibility checks



Legal and Compliance Landscape

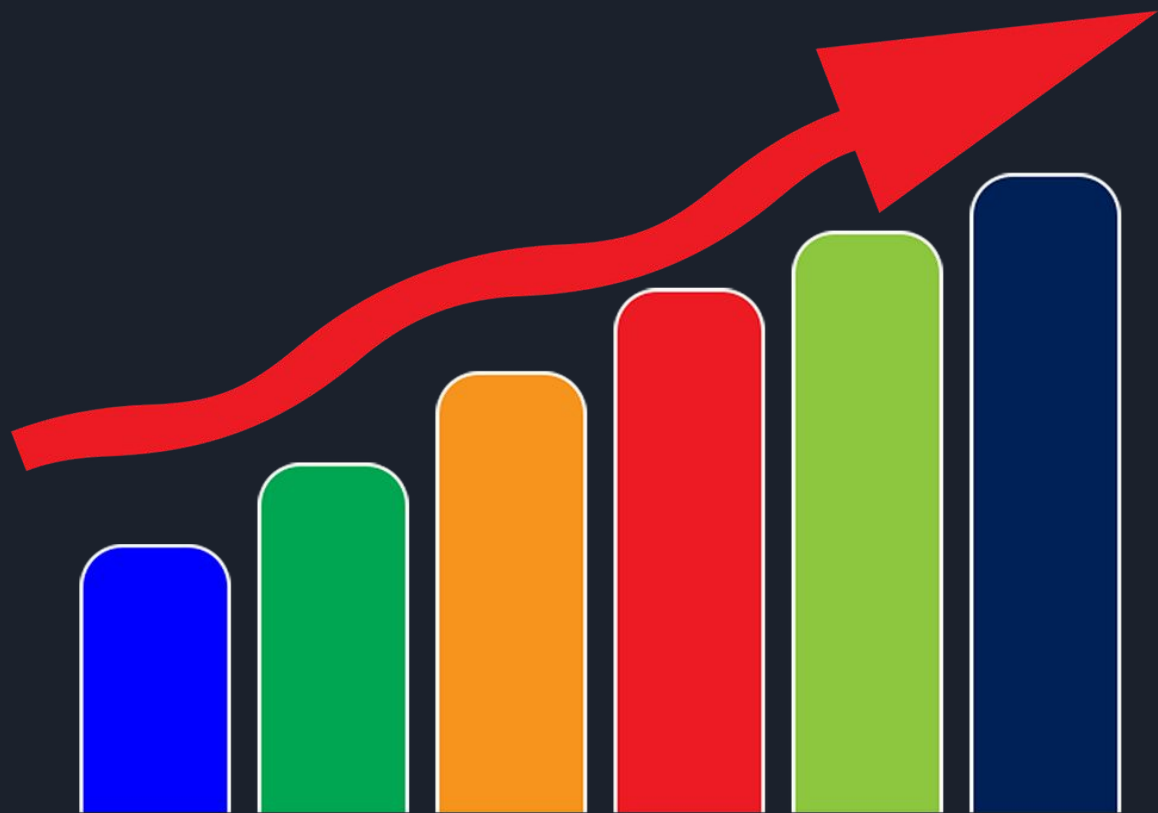


Regulatory Frameworks

1. ADA
2. WCAG (A, AA, AAA)
3. Section 508
4. CVAA
5. EU Web Accessibility Directive
6. European Accessibility Act
7. Accessible Canada Act



Between 2019 and 2022, 12% increase in lawsuits



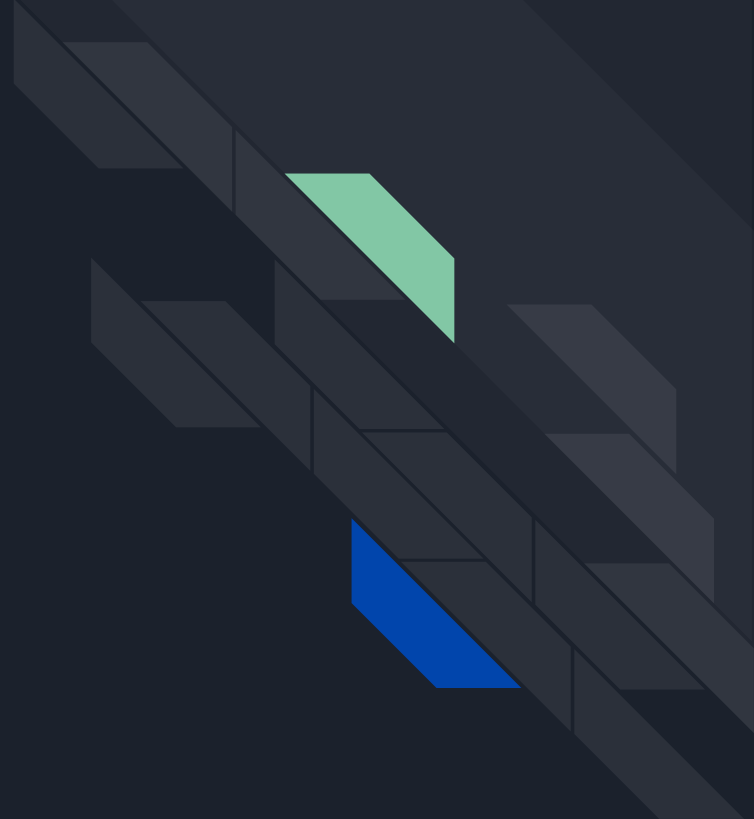


User funnel with 15%
hollowed out

“The U.S. Department of Labor’s Office of Disability Employment Policy categorizes persons with disabilities as the third-largest market segment in the U.S., after Hispanics and African-Americans. The discretionary income for working-age persons with disabilities is \$21 billion—greater than that of the African-American and Hispanic segments combined”

- 2018 Accenture Report

Challenges



Prioritization

Impact = (People reached X Impact on each person) - (People excluded X Impact on each person)

CS and other tech programs don't teach a11y

Know-how

Measuring impact

Different/ overlapping user needs


Design-only focus

Tech outpacing guidelines



Mobile Specific Challenges






By 2025, 72% of all internet users
will solely use smartphones to access
the web

Predicted by World
Advertising Research Center



- 
- Limited documentation and guidelines
 - Last mobile WCAG guidelines published in 2015
 - Fragmentation
 - Types of device (watches, tablets, operating systems)
 - Sizes
 - Supporting different orientations
 - Release cycles and long-tail adoption
 - Consideration for multiple sensors and output devices

Practical Examples



Social Media



#thisisthebestproductever >
#ThisIsTheBestProductEver



A side-by-side comparison of a Spotify playlist page with the shuffle setting turned off and on respectively. The shuffle button turns green with a dot on the bottom when on



Community Resources / Retreats / Vermont Writers' Group Retreat

Private Writing Retreat - Burlington, VT



Sponsored by Vermont Writers' Group

Overview

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mi scelerisque sodales risus dui. Vestibulum suspendisse nulla eget turpis sagittis. Diam maecenas aliquet aliquam eleifend. Nulla turpis congue elit proin. Vel aliquet nisl, velit rhoncus nec justo, erat interdum fames.

Ut at ultrices velit eu pretium bibendum maecenas ultricies. Fermentum eu, scelerisque sed eu sagittis. Non mattis sed neque quis cum ultrices mauris. Sit nisl luctus justo eu urna etiam

📅 Dates

9/1/21-9/30/21



Application Deadline

8/15/21



Spots Available

20

Webpage with an image in current focus



Mobile app screen with images of furniture, with sale items and departments as subcategories

fiction writing

Sort: Relevancy

12 results



The Best Novels of 2021

Today's hottest fiction writers weigh in on the novels they can't



10 Tips for Kickstarting Your Novel

Tap into time management techniques to get your novel moving



fiction writing

Sort: Relevancy

12 results



The Best Novels of 2021

Today's hottest fiction writers weigh in on the novels they can't get enough of



10 Tips for Kickstarting Your Novel

Today's hottest fiction writers weigh in on the novels they can't get enough of

Two mobile app screens. One on the left with large text size, where images don't scale with the text, causes elements to overlap, making it unreadable. One on the right, where the rest of the content scales with enlarged text

DOW J	0.51%
NASDAQ	1.73%
S&P 500	0.72%
AAPL	1.33%
GOOG	1.54%
YAHOO	0.57%
FTSE	0.05%
GDAXI	0.65%

Home Reports Search Profile

List of financial stocks where a positive movement is shown by a green background and negative movement by a red background



Interview: Kay James
50 views | July 28, 2021

Related videos



Interview: Ryan Jacobs
25 views | July 15, 2021



Interview: Kay James
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Related videos



Interview: Ryan Jacobs
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Two mobile screens with video: one with small, and one with enlarged captions

Enter payment info

Pay by credit card

1111 2222 3333 4444

|

Exp.

CVV

Zip

Stakes: for the next 90 days, you will be charged \$5 for each day you do not hit 300 words. Once you hit agree, you may not edit this goal.

I agree

Enter payment info

Pay by credit card

Card number

1111 2222 3333 4444



Cardholder name

May Cardholder



Exp.

1/23



CVV

111



Zip

10000



Stakes: for the next 90 days, you will be charged \$5 for each day you do not hit 300 words. Once you hit agree, you may not edit this goal.

I agree

Side-by-side comparison of 2 payment screens. On the left, is a screenshot of a credit card payment screen where the hint “cardholder name” disappears upon focus. On the right, is a screenshot of a credit card payment screen with the hint “cardholder name” visible as the user types

We'd love to hear from you!

How was your recent writing retreat experience?

Tell us your thoughts!

Submit

OR



Call now



Chat now



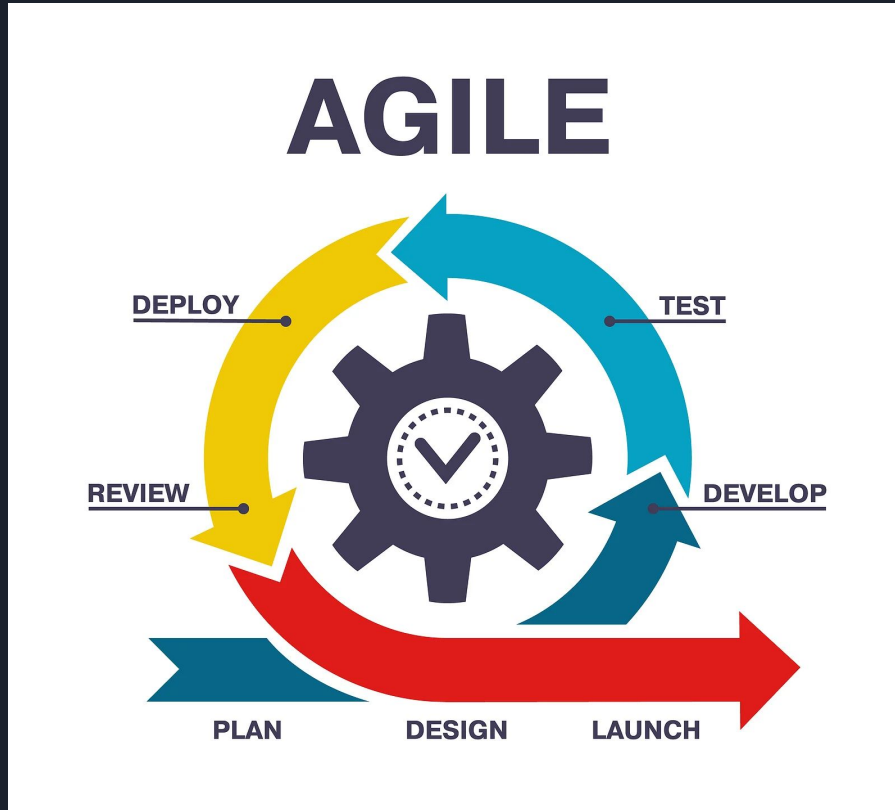
Email us

Screenshot of a feedback screen with options to call, chat or email

Embedding Accessibility in the Agile Product Lifecycle



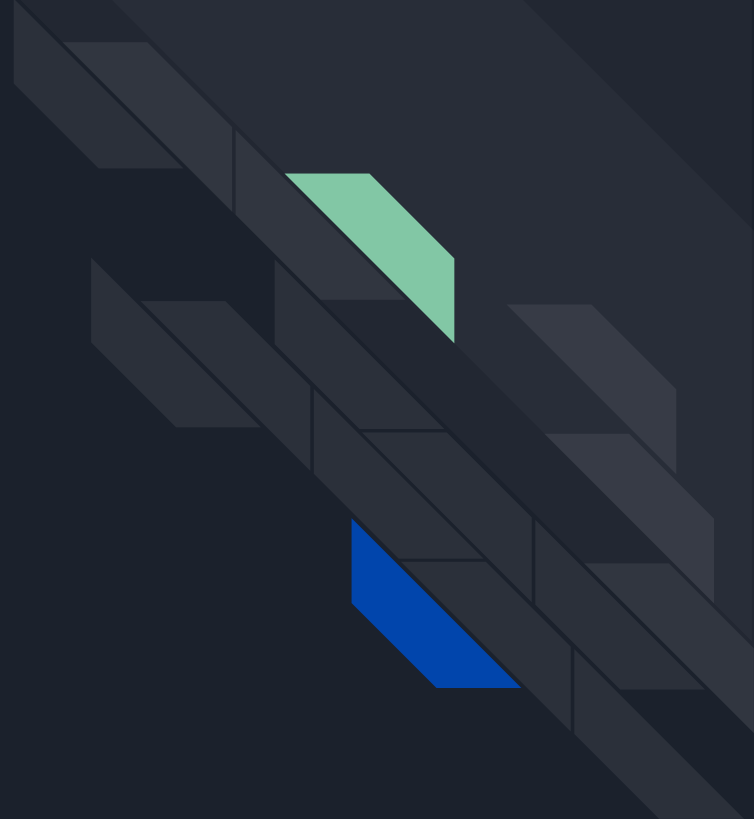
Why working on just design is ineffective




The agile product development lifecycle with

1. Planning
2. Design
3. Development
4. Testing
5. Deployment
6. Review

Who is responsible?
Who is accountable?





Planning

When writing user stories, consider different user needs and make sure everyone can complete the core action. Prioritize user flows and measuring engagement

Design

Primarily visual elements should have labels, mocks consider different states such as text sizes, contrasts, error states and focus order

Development

Including provisions for alt text, captions, and the needs defined in the previous two cases. Write test cases where possible

Testing

Cover as many cases as possible with automated testing, and ensure manual testing for higher-level checks that automated testing can't cover

Deployment

Reporting and assigning failed tests to respective teams. Failing builds for tests deemed to cover key user flows

Review

Conducting user studies with people with lived experience, and having ways to to collect feedback, and a process to triage and assign fixes to responsible teams

Manual and Automated Testing



Assistive technology examples



- Auditory
 - a. Hearing aids
- Visual
 - a. Voice assistants
 - b. Screen readers
- Motor
 - a. Single-switch access
 - b. Eye-tracking
 - c. Voice recognition
- Mobility
 - a. Wheelchairs
 - b. Scooters
 - c. Walkers
- Cognition
 - a. Memory Aids
 - b. Speech Recognition

Learning from contextual or temporary disability



Mobility

Holding a baby, driving, cooking

Cognitive

Stress, lack of sleep

Hearing

Noisy streets, home

Visual

Glare, dark rooms

Speech

In a meeting, different language

Web Tool for Automated Testing: Example

The screenshot shows a web browser window with the URL `shop.polymer-project.org`. The page content includes a 'SHOP' header, a 'Men's Outerwear' section with a 'SHOP NOW' button, and a 'Ladies Outerwear' section. The Lighthouse audit results are displayed on the right side of the browser window.

Metric	Score
Performance	94
Accessibility	100
Best Practices	93
SEO	100
Progressive Web App	0

Legend: 0-49 (Red), 50-89 (Orange), 90-100 (Green)

Performance (Score: 94)

Metric	Value
First Contentful Paint	0.9 s
Speed Index	2.4 s
Time to Interactive	4.1 s
First Meaningful Paint	1.8 s
First CPU Idle	3.4 s
Max Potential First Input Delay	130 ms

View Trace

Values are estimated and may vary. The performance score is based only on these metrics.

The screenshot shows the Lighthouse Accessibility report. The report displays a score of 94 for Accessibility. The report text states: "These checks highlight opportunities to improve the accessibility of your web app. Only a subset of accessibility issues can be automatically detected so manual testing is also encouraged."

Contrast — These are opportunities to improve the legibility of your content.

- ▲ Background and foreground colors do not have a sufficient contrast ratio.

Names and labels — These are opportunities to improve the semantics of the controls in your application. This may enhance the experience for users of assistive technology, like a screen reader.

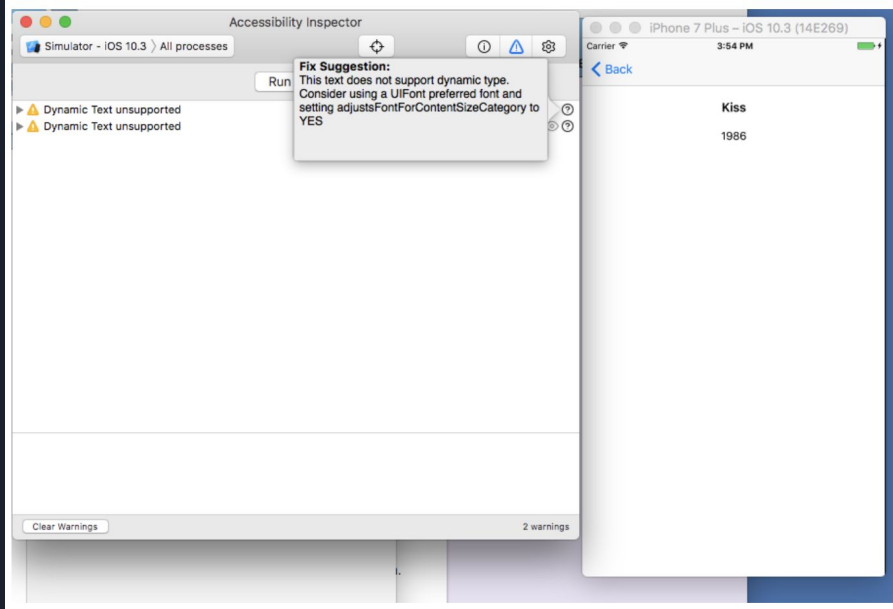
- ▲ `<frame>` or `<iframe>` elements do not have a title
- ▲ Links do not have a discernible name

Additional items to manually check (10) — These items address areas which an automated testing tool cannot cover.

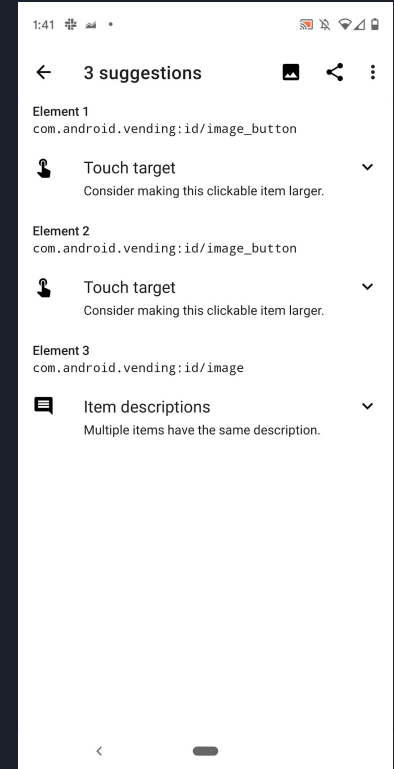
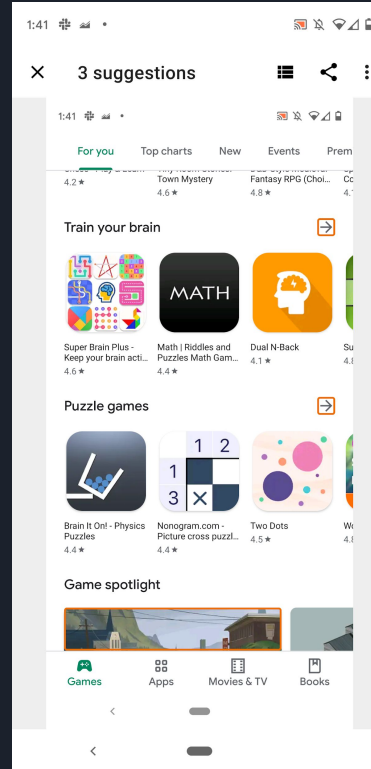
Example of Lighthouse on a website, and the resulting report

Mobile Automated Testing Tools Examples

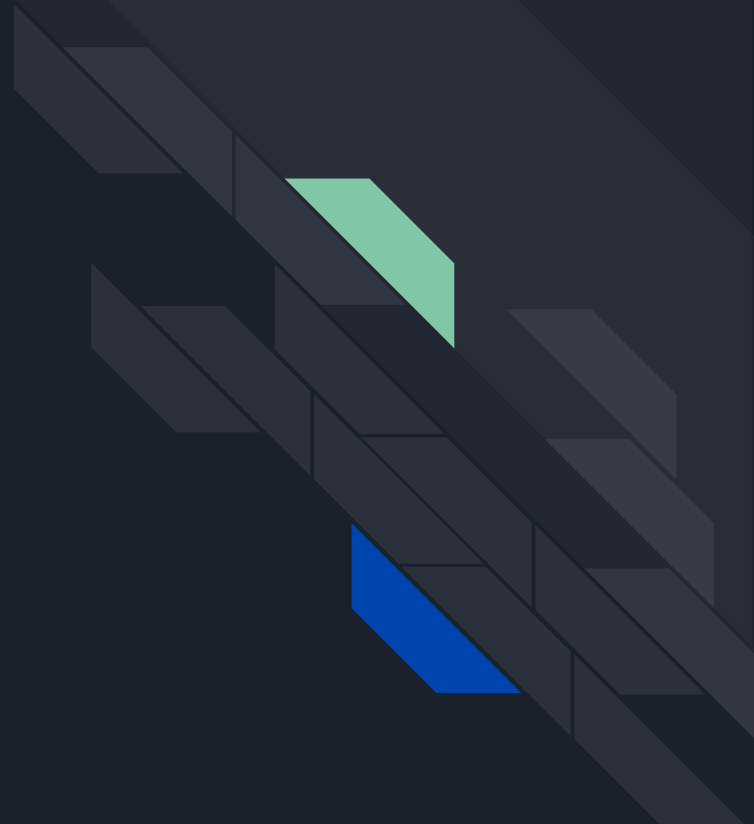
iOS Accessibility Inspector (XCode)



Android Accessibility Scanner



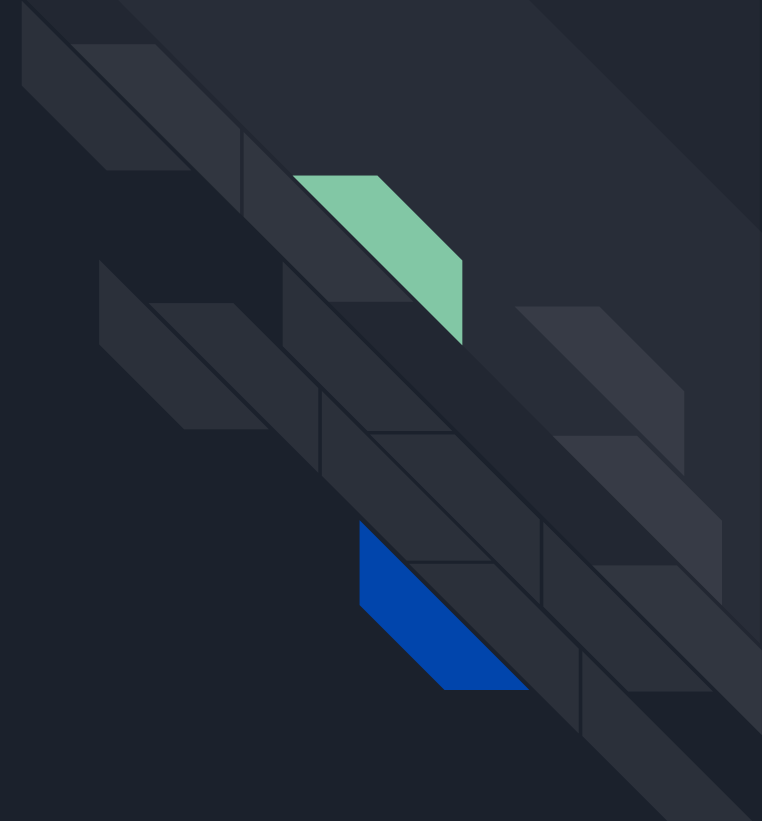
Formalizing AIY

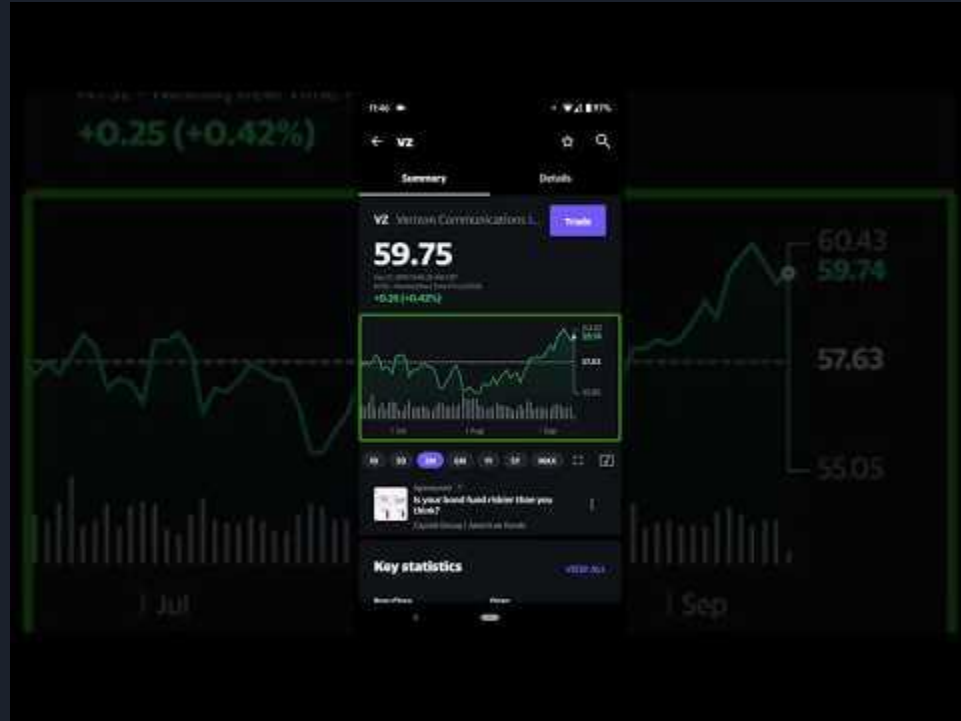




- Employee Onboarding
- Centralized Accessibility Team
- Clear rubric to prioritize and triage issues
- Part of hiring, promotions and employee evaluations

Real-world example Beyond Compliance



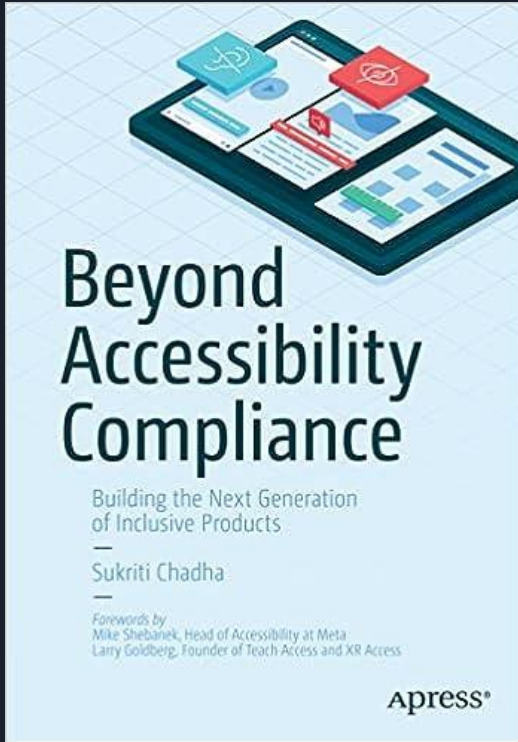


<https://developer.yahoo.com/blogs/612790529269366784/>

- Full screen chart
- Personalization
- Focus order of the buttons
- Points of interest
- Haptic feedback

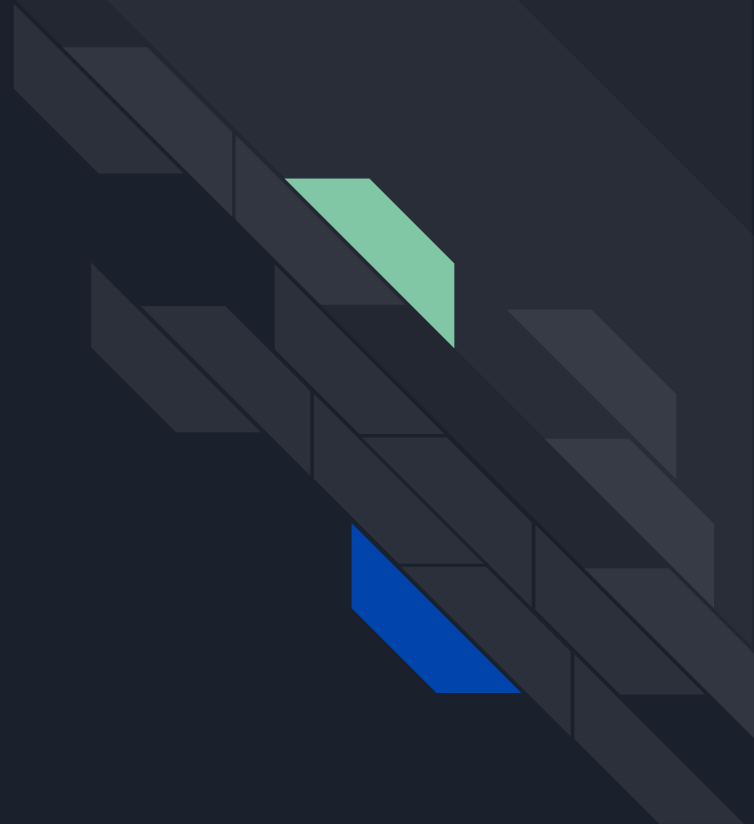


Expanded Overview in Book



<https://www.amazon.com/Beyond-Accessibility-Compliance-Generation-Inclusive/dp/1484279476>

Q&A



Thank you!





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JULY 24-28

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