

Beyond WCAG Compliance: Next Steps in your Website's Commitment to Digital Inclusion

WordPress Accessibility Meetup

December 7, 2023

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Kalamuna

Introductions

01

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Agenda

01 Introductions

02 Principles

03 Site Auditing & Remediation

- + Automated Scanning Tools
- + User Testing
- + Usability/Heuristic Analysis
- + Remediation & Prioritization

04 Design & Development Practices

05 Governance

06 AI

07 In Conclusion & Resources

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Principles

02

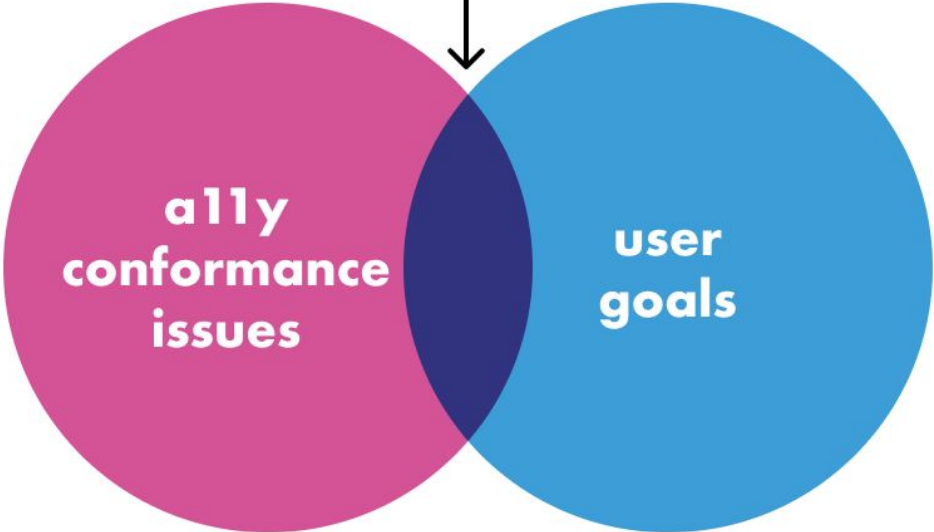
“

Inclusion is an organisational effort and practices in which different groups or individuals having different backgrounds are culturally and socially accepted and welcomed, and equally treated.

From GlobalDiversityPractice.com

**Compliance does not
guarantee usability**

**what
matters
most**



Site Auditing & Remediation

03

Types of Analysis

Automated Scanning



User Testing



Usability (Heuristic) Analysis



1. Automated Scanning

Page Evaluation Browser Extensions

The following apply to the entire page:

WAVE web accessibility evaluation tool powered by **WebAIM**

Styles: OFF ON

Details

- Summary Details Reference Order Structure Contrast
- 9 Errors
 - 2 X Missing form label
 - 1 X Empty form label
 - 6 X Empty button
- 1 Contrast Errors
 - 1 X Very low contrast
- 15 Alerts
 - 1 X Suspicious alternative text
 - 2 X Long alternative text

Kalamuna

Menu

The following apply to the entire page:

DevTools **axe-core 4.7.1** Sign up / Sign in start new scan

Overview Guided Tests

Test Name

Test URL


<https://www.kalamuna.com/>

| | | |
|--------------|-----------------------|---|
| TOTAL ISSUES | AUTOMATIC ISSUES..... | 4 |
| | GUIDED ISSUES..... | 0 |
| 4 | Critical..... | 0 |
| | Serious..... | 2 |
| | Moderate..... | 0 |
| | Minor..... | 2 |

Best Practices:

Issues: Total Issues 4

- [id attribute value must be unique](#) 2
- [Frames must have an accessible name](#) 1
- [<svg> elements with an img role must have an alternative text](#) 1

People are at the  of everything we do

We design and build websites with purpose. Our team of seasoned experts puts technology at the service of great causes and the people who champion them.

Site-wide Scanning Tools

The image displays two overlapping screenshots of website scanning tools. The background screenshot shows the 'Content Audit' interface for 'kalamuna.com', featuring a 'Content Quality Score' of 93% and progress bars for 'Crawlability' and 'Indexability'. The foreground screenshot shows the 'DCI score dashboard' for 'kalamuna.com', which provides a detailed breakdown of four key metrics: Digital Certainty Index (88.2/100), Quality Assurance (96.9/100), Accessibility (86.2/100), and SEO (81.5/100). Each metric includes a score, a change indicator, and a button to 'Improve score'.

Content Audit (Background)

- Current Project: kalamuna.com
- Content Quality Score: 93%
- Crawlability: [Progress bar]
- Indexability: [Progress bar]

DCI score dashboard (Foreground)

Site: Live Site

| Metric | Score | Change | Action |
|-------------------------|------------|--------|---------------|
| Digital Certainty Index | 88.2 / 100 | + 0.7 | Improve score |
| Quality Assurance | 96.9 / 100 | + 4.9 | Improve score |
| Accessibility | 86.2 / 100 | + 0.0 | Improve score |
| SEO | 81.5 / 100 | - 0.3 | Improve score |

Fix this issue and reach 90.1 points: [Mobile speed](#)

Fix this issue and reach 98.2 points: [Broken links on level 2 pages](#)

Review this potential issue to reach up to 87.8 points: [Do these links \(in the same context\) go to the same page?](#)

Fix this issue and reach 87.3 points: [Mobile speed](#)

Automated Scanning Cautions

- + A single tool will not find all of the issues
- + Only 30-60% of issues can be identified automatically
- + Time-intensive checklists needed to review remaining criteria
- + Takes a lot of effort to make all the warnings go away
- + Compliance does not ensure usability
- + Don't put too much stock in a score

2. User Testing

User Testing Process

- + Determine high priority user stories / journeys
- + Have real-life people try to accomplish those tasks
- + Find users who use accessibility tools or require accessible features on a regular basis
- + Get feedback about how easy or difficult it is to achieve a goal

User Testing Services



UsableNet AQA

Team
Kalamuna

User testing summary
Mar 25, 2022 - 6:28 am - Kalamuna - User Testing

1.3. Task completion

The table below shows the number of users who completed the task requested by each user journey.

| USER JOURNEY |  COMPLETED |  NOT COMPLETED | SUCCESS (%) |
|--------------|---|--|-------------|
| Task 1 | 4 users | 0 users | 100% |
| Task 2 | 4 users | 0 users | 100% |
| Task 3 | 4 users | 0 users | 100% |
| Task 4 | 4 users | 0 users | 100% |
| Task 5 | 3 users | 1 user | 75% |

Example User Journey

User journey description

User can navigate to the How to Apply page and follow the instructions

Starting URL

<https://mysite.org>

Instructions

1. You have spent some time on the web site, learning fun facts about the company, and now you wish to find out how to apply for yourself and your friends. You go to the How to Apply page where you can find all the info you are looking for. You are interested in "Procedure and Checklist" information.
2. Task is considered completed once user reviews page related to the Procedures and Checklist.

User Testing Feedback

1.4. High priority recommendations

USER JOURNEY

RECOMMENDATION

Task 2

UsableNet User Tester 3 quote:

- The "Programs" menu element was inconsistent in behavior. There were instances where JAWS would navigate to the "Development Grants" page when the "Programs" menu was entered upon, and there were instances when the keyboard did not interact with the element.
 - When doing a search for one of the films on the "Development Grants" page, When selecting by a contributor, while the film that had the contributor was displayed in the results, there were additional films that were displayed that did not have that individual involved. This test was done several times with similar results.
-

Volunteer Testers

- + Some organizations may try to offload accessibility testing onto their users.
- + Adds additional burden on users who are already having trouble using your site.
- + Mission-driven organizations can ask for volunteers who support the goals and want to help.
- + Compensate testers, particularly if you are a for-profit organization.

3. Usability/Heuristic Analysis

“

Heuristic evaluation involves having a small set of [expert] evaluators examine the interface and judge its compliance with recognized usability principles (the "heuristics").

— Jakob Nielsen, November 1, 1994

Example Heuristic Worksheet Item

Contrast and size allows text to be read clearly

Review common pages to find different text styles and foreground/background color combinations. Ensure there is enough contrast between foreground and background colors. Identify small text that is less legible, where contrast becomes even more important. Hover over links and buttons to see if those styles provide enough contrast.

Positive findings

- + Body text, links, and menu items are very readable

Urgent issues discovered

- + Page title cannot be read clearly on photo background

Issues discovered

- + Photo caption font size is 10px which can be hard to read for some users

Categories for Heuristic Accessibility Review

- + Visual Perception
- + Mouse Navigation
- + Keyboard Navigation
- + Mobile Navigation
- + Screen Reader Navigation
- + Voice Navigation
- + Robustness
- + Cognitive Considerations

Heuristic Analysis Pros & Cons

Pros

- + Efficient
- + Focused on usability
- + Finds issues with features that are compliant but not usable
- + Can use automated tools, but does not depend on them

Cons

- + Requires expert knowledge
- + Requires multiple reviewers to catch the most issues (2-4)
- + Not comprehensive
- + Less focused on legal compliance

Learn to use accessibility tools yourself

- + Tab through a webpage using a keyboard!
- + Try a screen reader (NVDA + Windows / VoiceOver + Apple)
- + You might not catch every issue, but you can find some obvious ones!

Prioritization & Remediation

Why prioritization is important

- + Limited time and resources mean you can't fix everything
- + There is no end to the accessibility issues/improvements that you can find
- + There may be major roadblocks for some users
- + Some user journeys may be more frequent or important than others
- + Quick wins

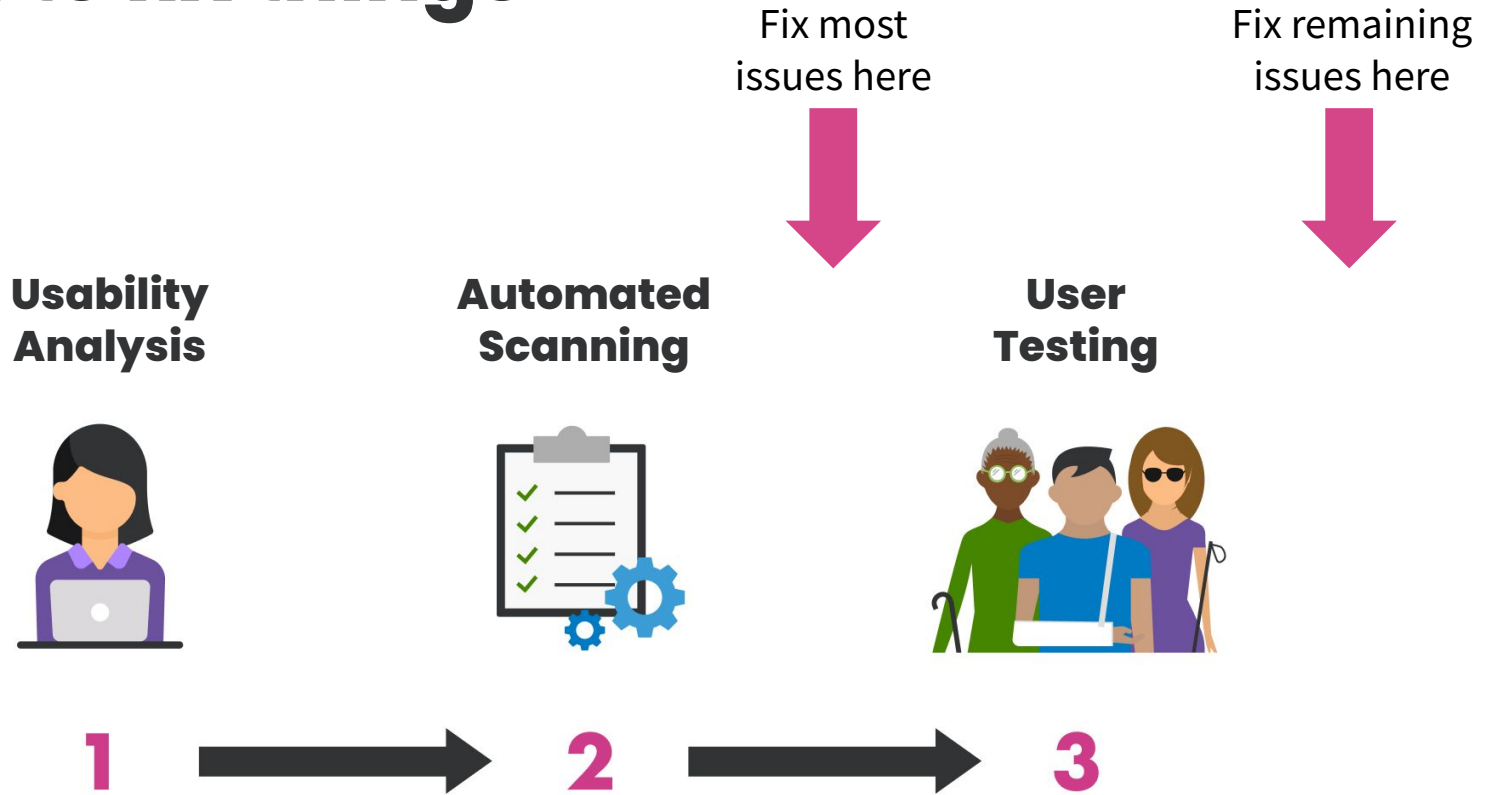
Prioritizing Issues and Fixes

| ID | Issue Type | Issue Name | Issue Description | Effort Estimation (1: Easy, 5: Hard) | Time Estimation (Hours) | Priority (1: high, 5: low) | Task owner | Notes |
|----|--------------------------|---------------------------------------|---|--------------------------------------|-------------------------|----------------------------|-------------------|--|
| 1 | Visual | Light Blue Links | Light Blue links on white background do not meet contrast standards | 1 | 1 | 5 | Kalamuna | |
| 5 | Visual | Text in Logo | The logo's text is too small to read under readability guidelines | 1 | 1 | 5 | Kalamuna | |
| 6 | Visual | Footer Text | 12px as a base size for footer text may be uncomfortable to read for some users | 1 | 1 | 5 | Kalamuna | |
| 9 | Visual | Organization Logos | Organization logos on the supporter page should have indication that they are targetable and interactable | 2 | 1.5 | 5 | Kalamuna | |
| 28 | Screen Reader Navigation | News Headings | The news headings should be more informative than the date of the content | 1 | 1 | 5 | Kalamuna | |
| 29 | Screen Reader Navigation | News H2s | The news cards headings are H2s despite the section title being an H2 | 1 | 1 | 5 | Kalamuna | |
| 30 | Screen Reader Navigation | News Links | News links lead to the main news page with articles instead of the article itself | 2 | 2 | 5 | Kalamuna | |
| 41 | Mobile Navigation | Email and Tel Links | The Email and Telephone areas should have interactable links | 1 | 1 | 5 | Kalamuna | |
| 3 | Visual | White Photo Text | The white text over the main photo is out of contrast on some images | 1 | 1 | 3 | Kalamuna | |
| 7 | Visual | Orange Hover State | The orange hover state on white is likely too close to contrast guidelines to read for some users | 1 | 1 | 3 | Kalamuna | |
| 10 | Visual | Partner Headings | On the partners page, the partner heading implies clickability | 2 | 1 | 3 | Kalamuna | |
| 13 | Visual | Mobile Logo | The mobile logo of the site should retain the name as to not provide a different experience. It also has a relatively low target area. | 1 | 1 | 3 | Kalamuna | |
| 14 | Visual | How to Apply | The how to Apply button is out of alignment on mobile | 1 | 1 | 3 | Kalamuna | |
| 21 | Screen Reader Navigation | News Navigation | The news navigation visually hides posts, but screen reader user still must navigate filtered items | 4 | 4 | 3 | Kalamuna | |
| 25 | Screen Reader Navigation | Film Search Results | Film search results has no response on an empty query. | 4 | 4.5 | 3 | Kalamuna | |
| 26 | Screen Reader Navigation | News Image Alt Tags | Many news images lack alternative information | 1 | 1 | 3 | Kalamuna + Client | Are there any technical issues stopping Client from adding the alt text? |
| 31 | Screen Reader Navigation | How to Apply H1s | The how to apply page has multiple H1s | 1 | 0.5 | 3 | Kalamuna + Client | |
| 33 | Screen Reader Navigation | Rough Cut Retreat Alt Text | The images on the rough cut retreat page lack alternative text | 1 | 1 | 3 | Client | |
| 34 | Screen Reader Navigation | Picture of a Black Star Film Festival | Some alternative text, like "Picture of a Black Star Film Festival" is repetitive as the assistive technology announces that the source is an image twice. Consider auditing alt text for redundant context | 1 | 0.2 | 3 | Client | |
| 36 | Screen Reader Navigation | Hero Alt Context | Consider adding credits to the alternative text of the hero images | 1 | 0.25 | 3 | Kalamuna + Client | |
| 38 | Screen Reader Navigation | No External Link Indication | Screen readers require a little extra context for external links | 3 | 3 | 3 | Kalamuna | |
| 39 | Mobile Navigation | Link Indication | The mobile nav should signify to the user visually which items are links and which open navigation sections | 2 | 2.5 | 3 | Kalamuna | |
| 42 | Robustness | Hero Fallback | When the hero image doesn't load, the hero text is unreadable due to being white on white content | 1 | 1 | 3 | Kalamuna | Probably just give the image area a black or off-black background |

Common high-priority issues

- + Keyboard focus visibility / traps
- + Site navigation
- + “Mobile” navigation does not work on small desktop screens
- + Missing HTML regions for screen reader users
- + Poor heading structure for screenreader users
- + Pop-ups and banners that don't work
- + Text in images

When to fix things



Design & Development Practices

04

Discovery

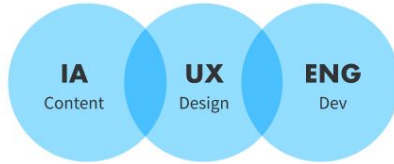


Define it here

Deal with it here



Design + Implementation



Delivery + Support



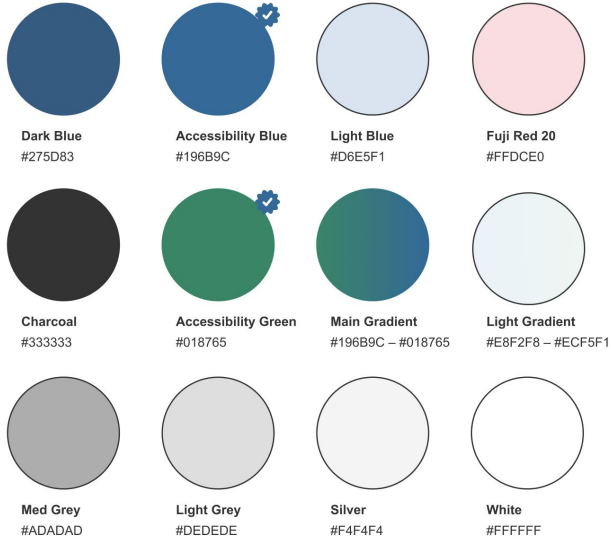
Don't leave it till here!

Design Principles


- + Design with usability in mind from the start
- + Define criteria that the site will meet (often WCAG AA)
- + Document & validate design choices
- + Graceful degradation / Progressive enhancement
- + Strategies for motion reduction
- + In-browser prototypes for ultimate testability

Color me accessible

COLOR



ⓘ Check "Contrast Matrix" page to see contrast ratios and applicable pairings

 Adjusted accessibility color

Brand Guide Blue #1E83BE

[Accessibility Sample #196B9C](#)

| | | | | | | | | | |
|-------------------------------------|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------|
| #333333 Hue Saturation Lightness | 1.79 Fail | 2.18 Fail | 2.80 Fail | 5.63 AA | 9.97 AAA | 9.39 AAA | 9.83 AAA | 11.49 AAA | 12.63 AAA |
| #275D83 Hue Saturation Lightness | 1.79 Fail | 1.22 Fail | 1.22 Fail | 3.14 AA Large | 5.56 AA | 5.24 AA | 5.48 AA | 6.41 AA | 7.05 AAA |
| #196B9C Hue Saturation Lightness | 2.18 Fail | 1.22 Fail | 1.22 Fail | 2.58 Fail | 4.57 AA | 4.31 AA Large | 4.51 AA | 5.27 AA | 5.79 AA |
| #018765 Hue Saturation Lightness | 2.80 Fail | 1.22 Fail | 1.22 Fail | 2.01 Fail | 3.56 AA Large | 3.35 AA Large | 3.51 AA Large | 4.10 AA Large | 4.51 AA |
| #ADADAD Hue Saturation Lightness | 5.63 AA | 3.14 AA Large | 2.58 Fail | 2.01 Fail | 1.77 Fail | 1.67 Fail | 1.75 Fail | 2.04 Fail | 2.24 Fail |
| #FFDCE0 Hue Saturation Lightness | 9.97 AAA | 5.56 AA | 4.57 AA | 3.56 AA Large | 1.77 Fail | 1.67 Fail | 1.75 Fail | 2.04 Fail | 2.24 Fail |
| #DEDEDE Hue Saturation Lightness | 9.39 AAA | 5.24 AA | 4.31 AA Large | 3.35 AA Large | 1.67 Fail | 1.67 Fail | 1.75 Fail | 2.04 Fail | 2.24 Fail |
| #D6E5F1 Hue Saturation Lightness | 9.83 AAA | 5.48 AA | 4.51 AA | 3.51 AA Large | 1.75 Fail | 1.67 Fail | 1.75 Fail | 2.04 Fail | 2.24 Fail |
| #F4F4F4 Hue Saturation Lightness | 11.49 AAA | 6.41 AA | 5.27 AA | 4.10 AA Large | 2.04 Fail | 1.67 Fail | 1.75 Fail | 2.04 Fail | 2.24 Fail |
| #FFFFFF Hue Saturation Lightness | 12.63 AAA | 7.05 AAA | 5.79 AA | 4.51 AA | 2.24 Fail | 1.67 Fail | 1.75 Fail | 2.04 Fail | 2.24 Fail |

Design for Developer Needs

- + Hover and active states
- + Keyboard / screen reader focus order
- + Layouts across screen sizes
- + Clear heading levels
- + Visually-hidden headings for sections/menus
- + Icon alt/hidden text
- + All form elements and common html elements

Development Principles

- + HTML5 elements with implicit roles rather than ARIA attributes
- + Leverage <details> elements for expandable elements
- + Pay extra attention to navigation and page structure
- + Computers are not good at ensuring accessibility (overlays / AI)
- + Use code that is proven to be accessible, like Drupal
- + Do not trust common libraries to be accessible

Sustainable Content Editing

- + Define sections for proper heading structure
- + H2 section headings as required fields
 - Checkbox to optionally visually-hide section titles
- + Restrict the WYSIWYG to H3s and below
- + Insert images via the media library
- + Make ALT text required

Governance

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Governance Characteristics

Education

- + Create pathways to knowledge that empower everyone (avoid silos)
- + Reinforce peer support

Accountability

- + Buy-in from the top is key
- + Champions
- + Policy that reinforces culture
- + Enshrine accessibility in your content governance processes

Content Governance Tips

- + Emphasize plain language
 - a. Tools like Hemmingway can help you visualize this
 - b. Flesch-Kincaid testing reports on the reading grade level of your content
 - c. 8th grade reading level reaches 80% of Americans
- + Write for inclusivity
- + Gatekeeping for posting inaccessible PDFs
- + Guides and documentation for crafting meaningful ALT text and more
- + Deploy an automated monitoring solution that reports on changes
- + Invest in manual vs automated translation whenever possible

Artificial Intelligence

06

AI won't solve your ALT text problem

- + Lacks emotion
- + Missing context
- + DAMs, CMS, Word: systems starting to bake this in

AI won't solve your ALT text problem



<https://bit.ly/3SWM6kh>

Human:

A fashionable person with styled white hair wearing bright makeup and dark blue clothing walks in front of a brick building.

AI:

A person in a garment.

AI won't solve your ALT text problem



Human:

Large pink flowers with green leaves and thorny stems digitally manipulated into the side profile of a statue against a black background.

AI:

A close-up of a flower.

<https://bit.ly/3SWM6kh>

AI won't solve your ALT text problem



<https://bit.ly/40Q1TU9>

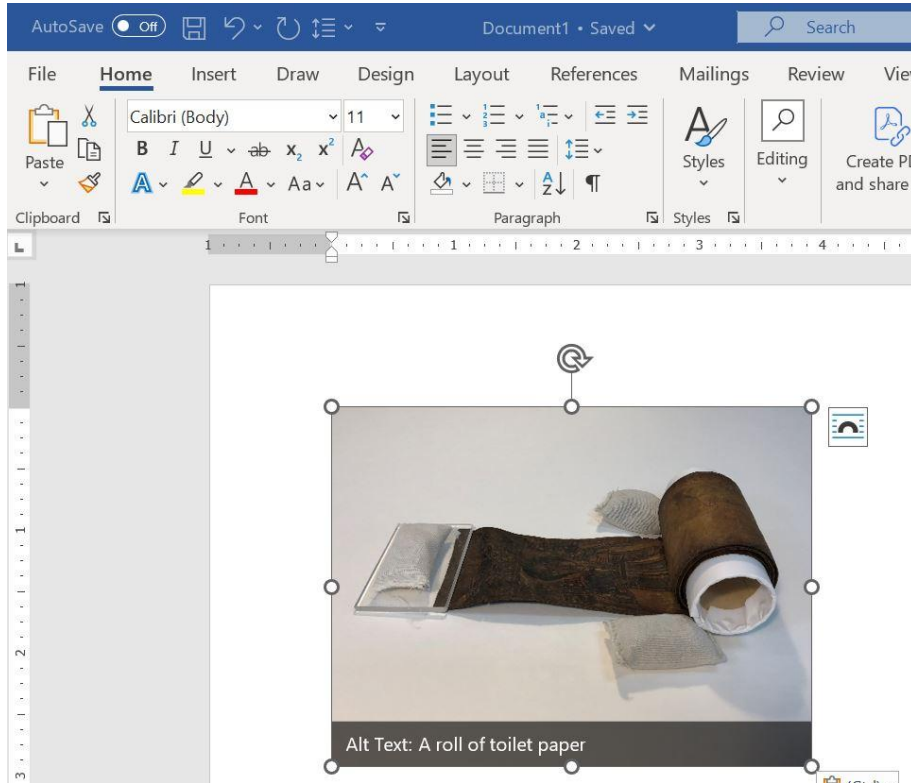
Human:

Steve Jobs at Macworld 2008 unveiling the new Macbook Air.

AI:

Man in front of crowd

AI won't solve your ALT text problem



Human:

Rare 18th Century Ethiopic scroll presented partially unfurled from its archival storage.

AI:

A roll of toilet paper

<https://bit.ly/3sLoHb1>

In Conclusion & Resources

07

In Conclusion

- + Incorporate accessibility throughout your redesign process
- + No one testing method is better than another; multiple are needed
- + Every automated test is different, but all are verbose
- + Heuristic analysis helps reveal usability-focused issues
- + User testing is ideal with specialized organizations
- + Prioritize and address accessibility issues once found
- + Content governance is foundational
- + AI can't solve all your problems

Helpful Resources:

Captioned video demo of how the previous VaccineFinder.org website passes automated tests, but fails screenreader and keyboard navigation

bit.ly/a11y-vfd

(9 minute long, captioned video)



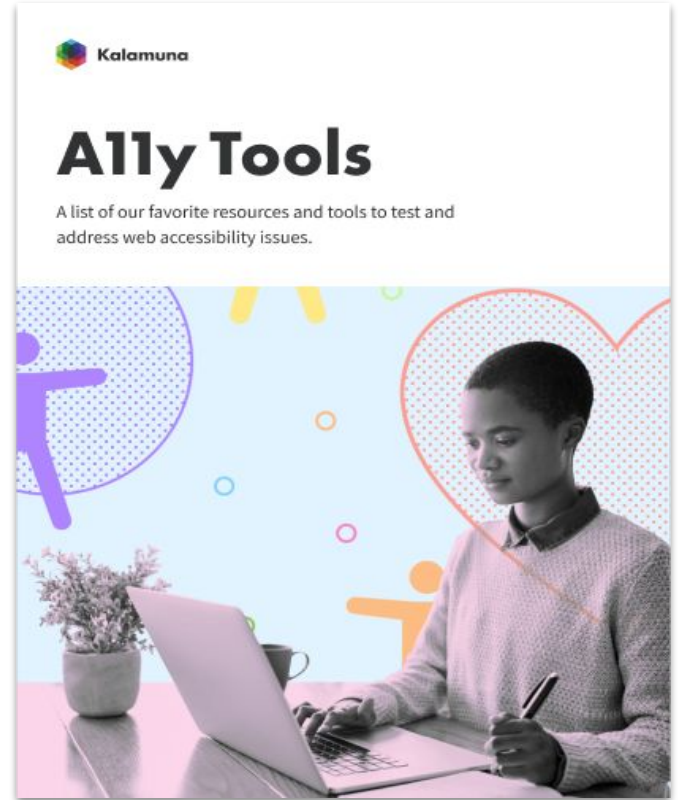
A screenshot of the VaccineFinder.org website. The browser address bar shows "vaccinefinder.org/find-vaccine". The page has a navigation bar with "Home", "Find Vaccine", and "FAQ". A "VISIT MEDFINDER" button is in the top right. The main content area displays search results for "Flu Shot (Adult-only Egg free), Hepatitis A (child), HPV (9-valent), and Japanese Encephalitis" near Florida, United States within 25 miles. A list of seven locations is shown, including Walmart Supercenter #4262, MinuteClinic, Walmart Supercenter #2843, Sumter County Health Dept.-Wildwood Family Planning Clinic, Emmanuel Christian Health Center, Sam's Club Pharmacy-4998, and Walmart Neighborhood Market #4565. A map on the right shows the geographic distribution of these locations. A callout box for the Sumter County Health Dept.-Wildwood Family Planning Clinic indicates that one of the vaccines searched for is currently provided: HPV (9-valent). A text box at the bottom of the screenshot reads: "Click search for a vaccine, and on the left, we've got a list of results."

Helpful Resources

PDF of our favorite tools to test and address web accessibility issues

hello.kalamuna.com/a11y-tips

(link to download the PDF)



Helpful Resources

Blog post

[kalamuna.com](https://www.kalamuna.com)



Free Figma Plugins for Accessibility Design



Crispin Bailey

Director of Design & UX



Eugene Park

Senior UX/UI Designer

Questions

08

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Thank you :)