

High-level accessibility review – BTAA (Knowledge Unlatched)

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Contents

High-level accessibility review – Knowledge Unlatched	2
Knowledge Unlatched	3
Summary (top 3 problems for Knowledge Unlatched).....	3
Accessibility findings.....	3
1. Knowledge Unlatched Home page.....	4
2. Knowledge Unlatched Search Libraries	6
3. Paper Hive Media and Communications Collection page.....	7
4. Paper Hive The Digital Condition PDF	8
5. Knowledge Unlatched KU Journals page.....	9

Knowledge Unlatched

Summary (top 3 problems for Knowledge Unlatched)

This assessment covers portions of the Knowledge Unlatched application. The assessment revealed some problems with screen reader compatibility, resulting in screen reader users sometimes missing critical information needed to understand how to operate the features.

1. **Keyboard access inconsistency** – Multiple controls or calls to action in the pages are not made to be operated using only a keyboard. Sighted users who cannot use a mouse, as well as blind screen reader users will be unable to interact with these controls unless they are made to be keyboard compatible.
2. **Alternate modality on visual elements** – Visual elements such as images on the Image Galleries are not provided with meaningful and descriptive alternative text to allow non-sighted users to understand their purpose, what they're about or what they represent. This causes significant concerns to blind users who will therefore be unable to make sense of these visuals.
3. **Headings and landmarks not marked up consistently** – Headings used in the pages are not following a logical order. People who can see are able to quickly scan a page for headings and subheadings to understand the content and structure of a page. People who are blind do not have this ability if heading text is not marked in a way that screen readers can understand. Heading text and hierarchy must be identified semantically with heading markup.

Accessibility findings

Project wide issues

The issues presented in this section were identified in multiple pages and are recorded here to avoid repetition. These are applicable to each screen. Due to particularities, similar issues are still reported on a page per page basis, where applicable.

Automated findings using Axe

1. **SC 1.4.3** - Elements in pages must be provided with sufficient color contrast.
2. **SC 4.1.2** - Links must have discernible text announced by assistive technologies.

Issues found through automated testing come from the Axe plugin, an open source accessibility testing tool that is available for Firefox and Chrome. Details here: <https://www.deque.com/products/axe/>.

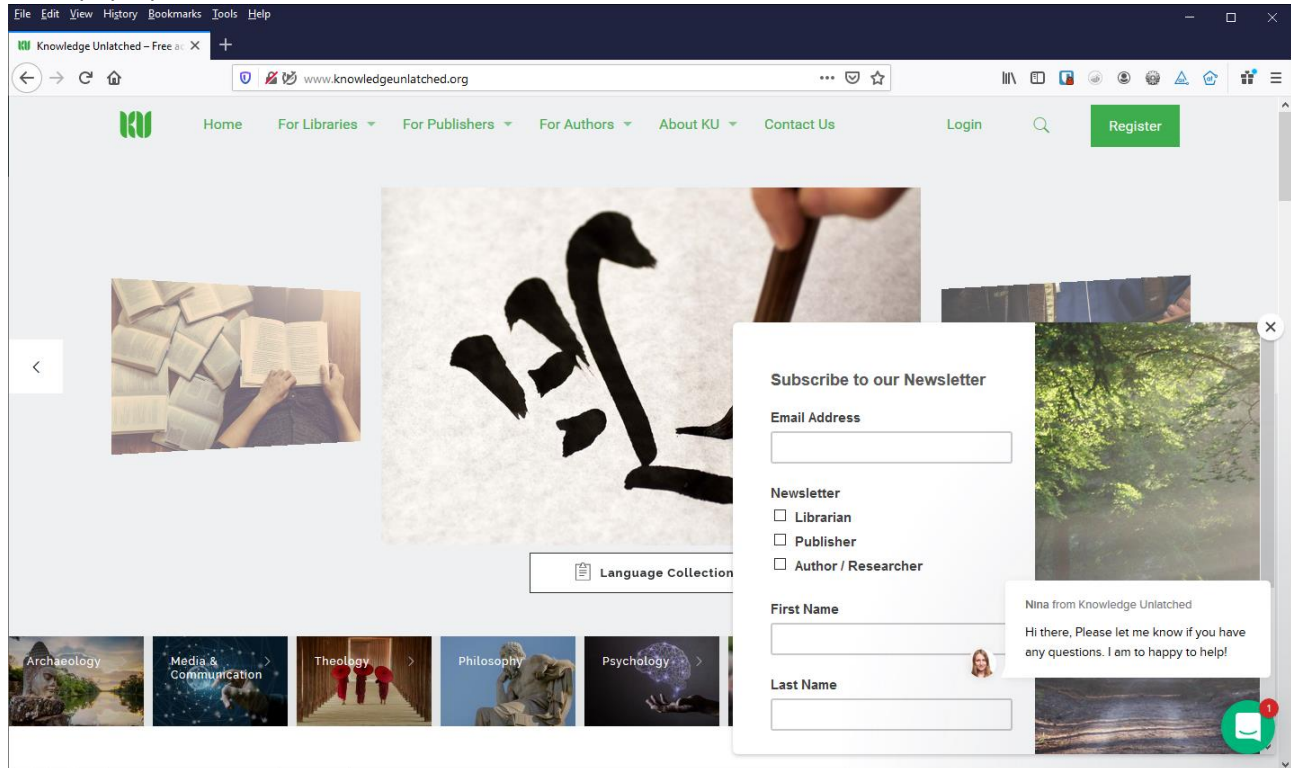
Additional manual findings using NVDA screen reader

1. **SC 1.3.1** – The heading structure of the pages' markup is skipping heading levels (except for the Journal page).

1. Knowledge Unlatched Home page

Source: <http://www.knowledgeunlatched.org/>

Test case: Test homepage, including menus, navigation, search boxes, links, images, header/footer, etc. There are lots of images that move/flip (like those for collections – i.e. Anthropology Collection) – and pop-ups



Automated findings using Axe

1. **SC 2.4.1** - Frames must have title attribute.
2. **SC 3.1.1** – Frame <html> element must have a lang attribute.
3. **SC 1.3.1** - Form elements must have labels.
4. **SC 1.4.4** - Zooming and scaling must not be disabled.

Additional manual findings using NVDA screen reader

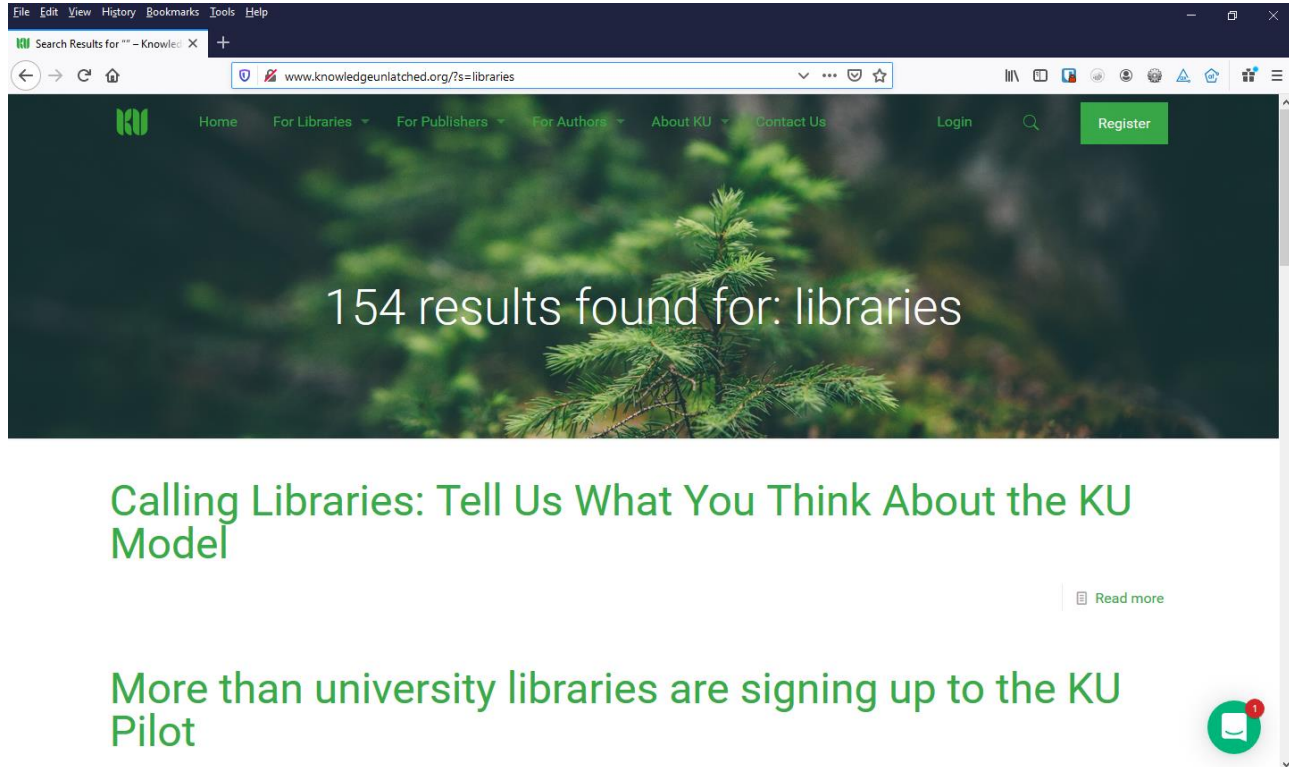
1. **SC 1.3.1** – Navigation lists are not marked up properly as using the menu role to overwrite the list grouping.
2. **SC 4.1.2** – Menu and sub menu states or existence are not conveyed to the screen reader user.
3. **SC 2.1.1** – Menu items with sub menus are not focused with the keyboard alone.
4. **SC 2.1.1** – The carousel uses mouse event handlers so the keyboard alone cannot focus elements.
5. **SC 4.1.2** – The carousel does not indicate the current selection to the screen reader.
6. **SC 4.1.2** – The carousel does not have a clear number of slides communicated to the screen reader.
7. **SC 2.4.7** – Keyboard focus is not visual.
8. **SC 1.1.1** – Active image links like the search button are missing alternative text for a screen reader.
9. **SC 2.4.4** – Multiple links have the same accessible link text “Learn More” but lead to different destinations and no immediate or visual context to differentiate them.
10. **SC 3.2.2** – Activating the submit button for registration takes the user to a new page even if the data has not been entered.

11. **SC 1.3.1** – Text is marked as a heading when visually it should not be a heading.
12. **SC 1.1.1** – Active image links like the social media icons are missing alternative text for a screen reader.
13. **SC 2.1.1** – Rotating images do not rotate with keyboard focus. Visually extra information stays hidden unless a mouse is used.
14. **SC 2.4.3** - Modals that are opened do not move focus from the button to the new modal without the user moving focus.

2. Knowledge Unlatched Search Libraries

Source: <http://www.knowledgeunlatched.org/?s=libraries>

Test case: Test “Search” (magnifying glass) in top – do a search for: libraries & test search results page.



Automated findings using Axe

1. **SC 1.4.4** - Zooming and scaling must not be disabled.

Additional manual findings using NVDA screen reader

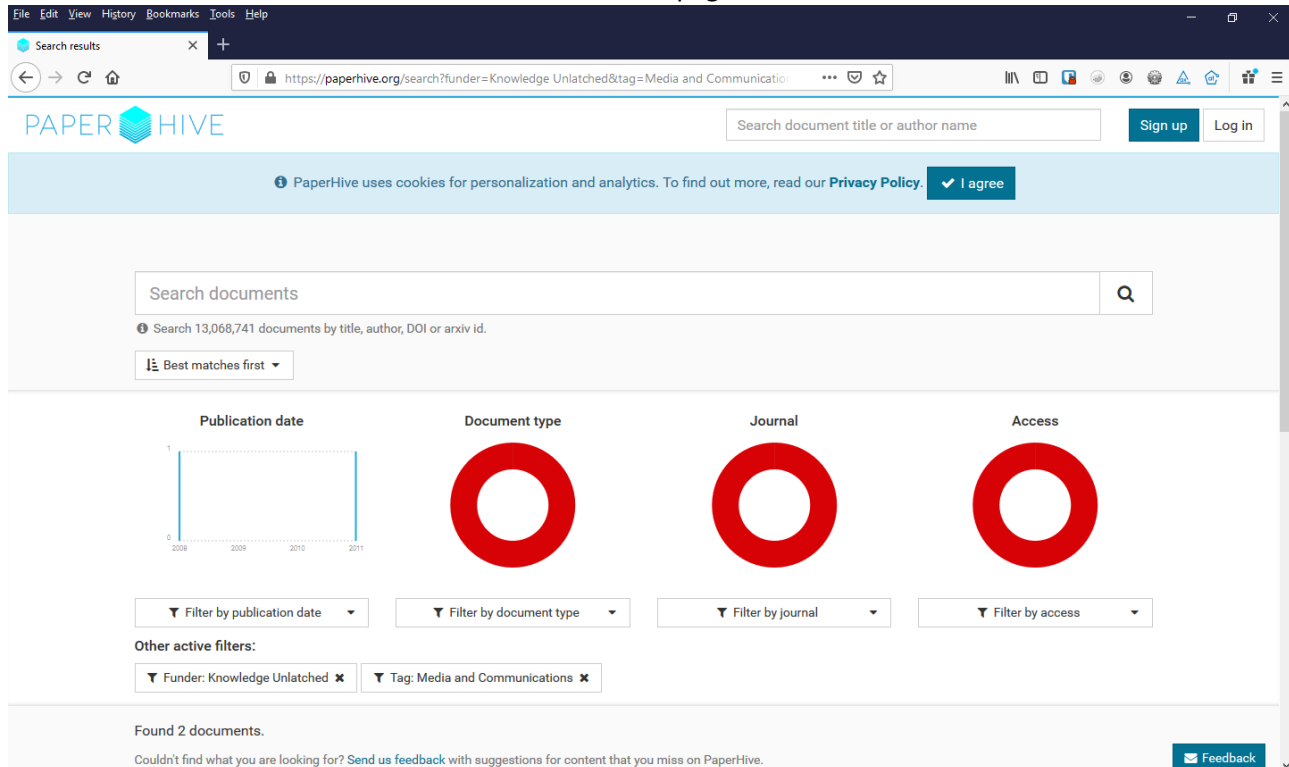
1. **SC 2.4.2** - The page title is missing the search term used.
2. **SC 1.3.1** – Navigation lists are not marked up properly as using the menu role to overwrite the list grouping.
3. **SC 4.1.2** – Menu and sub menu states or existence are not conveyed to the screen reader user.
4. **SC 2.1.1** – Menu items with sub menus are not focused with the keyboard alone.
5. **SC 2.4.7** – Keyboard focus is not visual.
6. **SC 1.1.1** – Active image links like the search button are missing alternative text for a screen reader.
7. **SC 2.4.4** – The link text “Read more” is used repeatedly with no context for the different articles that open on using the read more link.
8. **SC 2.4.3** - Modals that are opened do not move focus from the button to the new modal without the user moving focus.
9. **SC 1.1.1** – Active image links like the social media icons are missing alternative text for a screen reader.
10. **SC 1.3.1** – Pagination links for result pages are not given a clear label that they are pagination links for the screen reader user.

3. Paper Hive Media and Communications Collection page

Source:

<https://paperhive.org/search?funder=Knowledge%20Unlatched&tag=Media%20and%20Communications>

Test case: Test Media and Communications Collection page



Automated findings using Axe

1. **SC 4.1.2** – aria-hidden elements must not contain focusable elements.
2. **SC 4.1.2** – Buttons must have discernible text announced by assistive technologies.
3. **SC 4.1.1** - IDs of active elements must be unique.
4. **SC 1.1.1** - Images must have alternate text.
5. **SC 1.3.1** - Form elements must have labels not placeholder text.

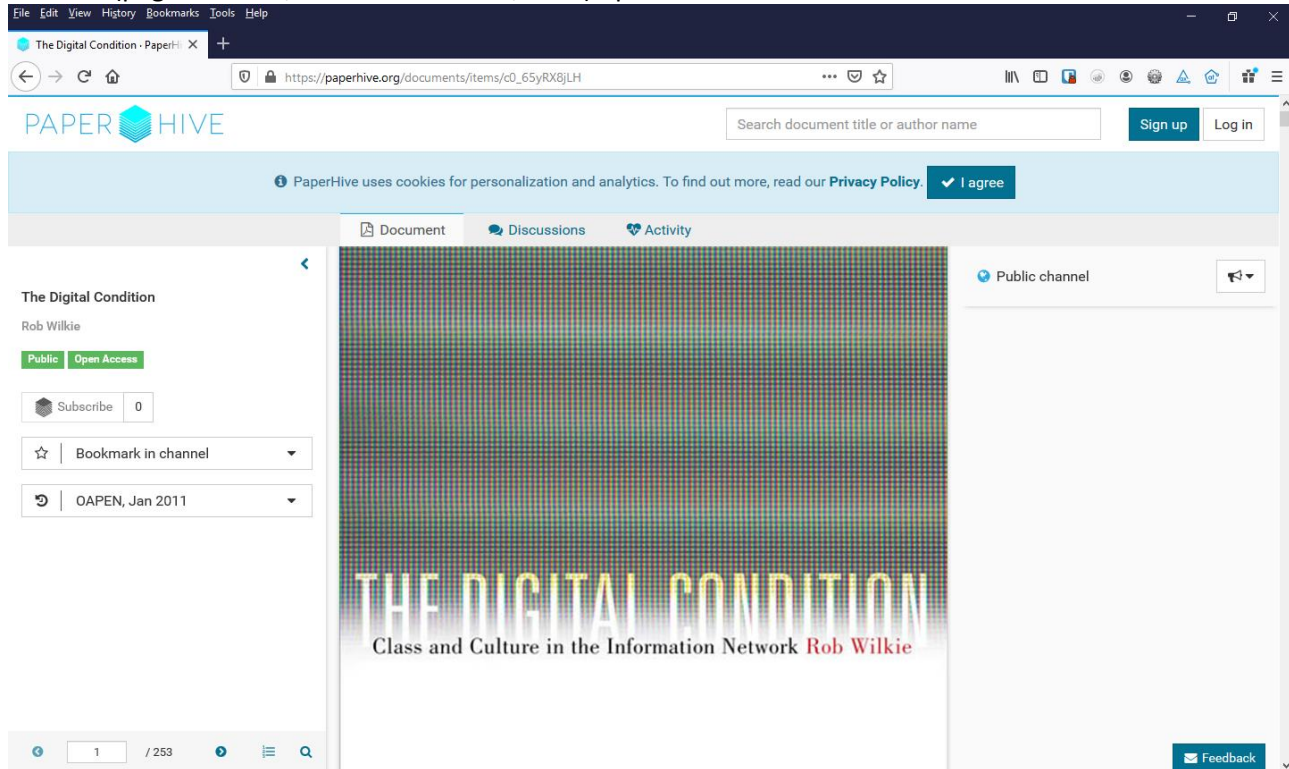
Additional manual findings using NVDA screen reader

1. **SC 1.1.1** – Complex SVG images of the graphs indicating available filters do not have an appropriate label.
2. **SC 1.3.1** – Owning group labels are not associated to fields, like the active filters.
3. **SC 1.3.1** – Owning associations are not grouped to convey visual associations to a screen reader user, like the document details.

4. Paper Hive The Digital Condition PDF

Source: https://paperhive.org/documents/items/c0_65yRX8jLH

Test case: Test an e-book (The Digital Condition) via the Paper Hive platform, are both the PDF and the reader (page advance, search within text/book) options accessible?



Automated findings using Axe

1. **SC 4.1.2** – aria-hidden elements must not contain focusable elements.
2. **SC 1.3.1** - Certain ARIA roles must contain particular children.
3. **SC 4.1.2** – Buttons must have discernible text announced by assistive technologies.
4. **SC 4.1.1** - IDs of active elements must be unique.
5. **SC 1.1.1** - Images must have alternate text.
6. **SC 1.3.1** - Form elements must have labels not placeholder text.
7. **SC 1.3.1** - and must only directly contain , <script> or <template> elements.
8. **SC 1.3.1** - elements must be contained in a or .

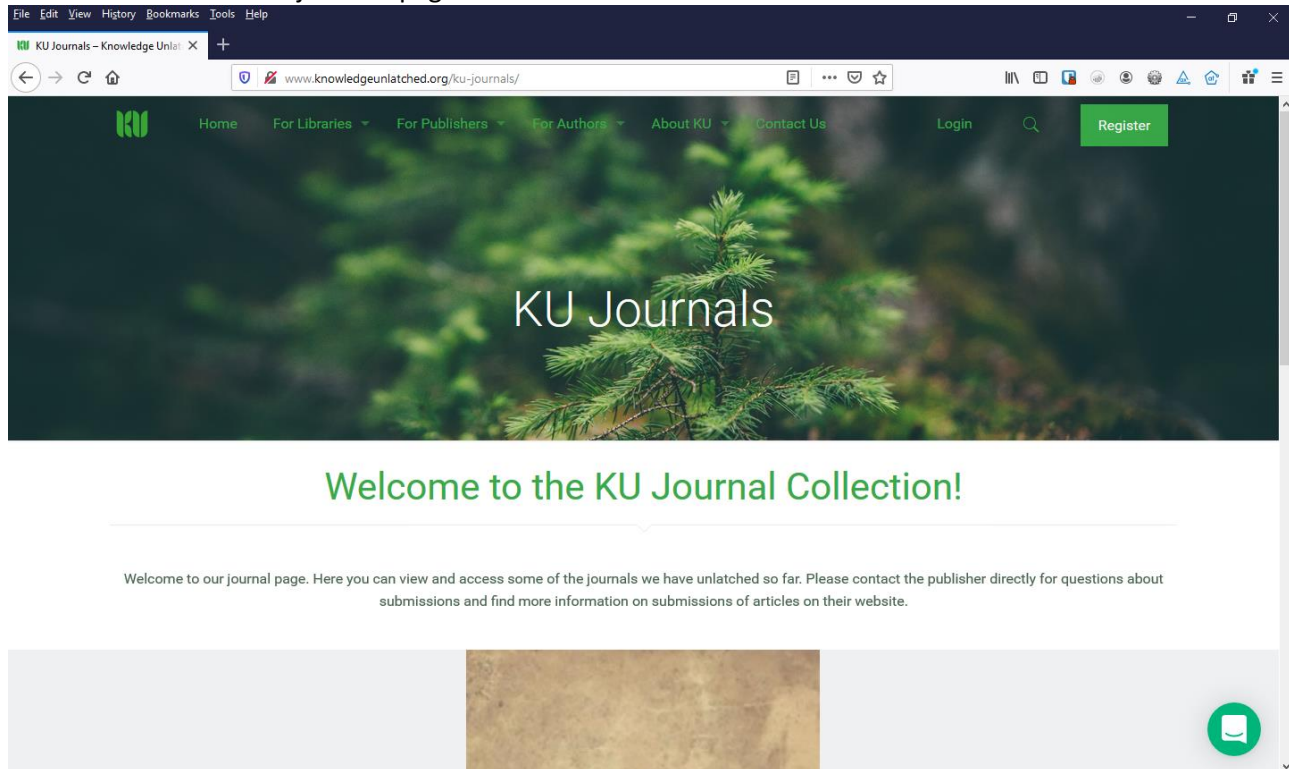
Additional manual findings using NVDA screen reader

1. **SC 4.1.2** – The tablist/tabpanel structures are not conveyed as such to screen reader users.
2. **SC 4.1.2** – Switching from one tabpanel to the next is not announced to screen reader users.
3. **SC 1.3.1** – Character encoding cannot be resolved in the PDF.
4. **SC 4.1.2** – PDF is not tagged or structured correctly.
5. **SC 3.1.1** – PDF primary language is not defined.
6. **SC 2.4.2** – PDF has not got an appropriate title assigned.
7. **SC 1.1.1** – Images in the PDF are not given text alternatives.
8. **SC 1.4.5** – Images of text in the PDF should be styled text.
9. **SC 1.3.1** – Visual relationships are not given programmatically for a screen reader user to hear.
10. **SC 2.1.1** – The pagination and search options for the PDF cannot be used by the keyboard alone.

5. Knowledge Unlatched KU Journals page

Source: <http://www.knowledgeunlatched.org/ku-journals/>

Test case: Test the KU journals page.



Automated findings using Axe

1. **SC 1.4.4** - Zooming and scaling must not be disabled.

Additional manual findings using NVDA screen reader

1. **SC 1.3.1** – Navigation lists are not marked up properly as using the menu role to overwrite the list grouping.
2. **SC 4.1.2** – Menu and sub menu states or existence are not conveyed to the screen reader user.
3. **SC 2.1.1** – Menu items with sub menus are not focused with the keyboard alone.
4. **SC 2.1.1** – The carousel uses mouse event handlers so the keyboard alone cannot focus elements.
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9. **SC 1.1.1** – Active image links like the social media icons are missing alternative text for a screen reader.
10. **SC 2.4.3** - Modals that are opened do not move focus from the button to the new modal without the user moving focus.