

Accessibility in Hyku

Lessons and challenges from an accessibility journey

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Samvera & Hyku





NOTCH8

Who is Notch8?

Full stack web
consultancy,
specializing in Ruby
on Rails applications.
Active history with
Samvera, esp. Hyku.



What is
Samvera?

Samvera is an open-source digital asset management solution used by libraries, museums, universities, and other institutions.



What is Hyku?

Brings Samvera building blocks closer to a user-ready implementation.

Adds custom theming and multi-tenancy.



What is
HykuUP?

Notch8's hosted Hyku solution. Makes digital preservation attainable for organizations with limited budgets and IT resources.

Auditing Accessibility



Why Accessibility?

- **Social responsibility**
- **Increase and diversify user base**
- **Can benefit SEO**
- **Requirements for publicly-funded projects**
 - No easy rule-of-thumb to what organizations answer to what level of requirements

Why *Not* Accessibility?

- **Longer development timelines**
- **More work to do**
- **More work to manage**
- **= More impact to budget**
- **The needs of the many outweigh the needs of the few**

Accessible Features - Primary Targets

- **Color contrast**
 - Makes content and functionality perceivable for those with visual impairments
- **Logical structure**
 - Tab through a page in a way that makes sense for those who cannot use a mouse
- **Proper element tags**
 - Helps screen readers and other assistive tools make sense of the page

WCAG & VPAT



WCAG

- **Web Content Accessibility Guidelines**
- **Specific set of standards for accessibility**
- **Levels A, AA, or AAA**
- **No concrete pass fail; claim, backed by letter of conformance**

VPAT

- **Voluntary Product Accessibility Template**
- **Tool for auditing accessibility of application**
- **Grade individual features based on the level of support given to accessibility**

WCAG 2.0 - Four Principles of Accessibility

- **Perceivable** - UI elements must be presentable to users in ways they can perceive
- **Operable** - UI components and navigation must be operable
- **Understandable** - Information and the operation of UI must be understandable.
- **Robust** - Content must be robust enough that it can be interpreted by assistive technologies.

WCAG 2.0 Example

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.

[Understanding Guideline 1.1](#)

1.1.1 Non-text Content: 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.
(Level A)

[How to Meet 1.1.1](#)
[Understanding 1.1.1](#)

VPAT - Valid Responses

Supports - Criteria is satisfied adequately or a functional alternative is provided.

Partially Supports - Functionality exists but may be incomplete or not successful in all circumstances.

Does Not Support - Criterion is mostly or fully unsupported..

Not Applicable - Criterion is not relevant to the product.

Not Evaluated - The product has not been evaluated against the criterion. (Only an acceptable response in Level AAA)

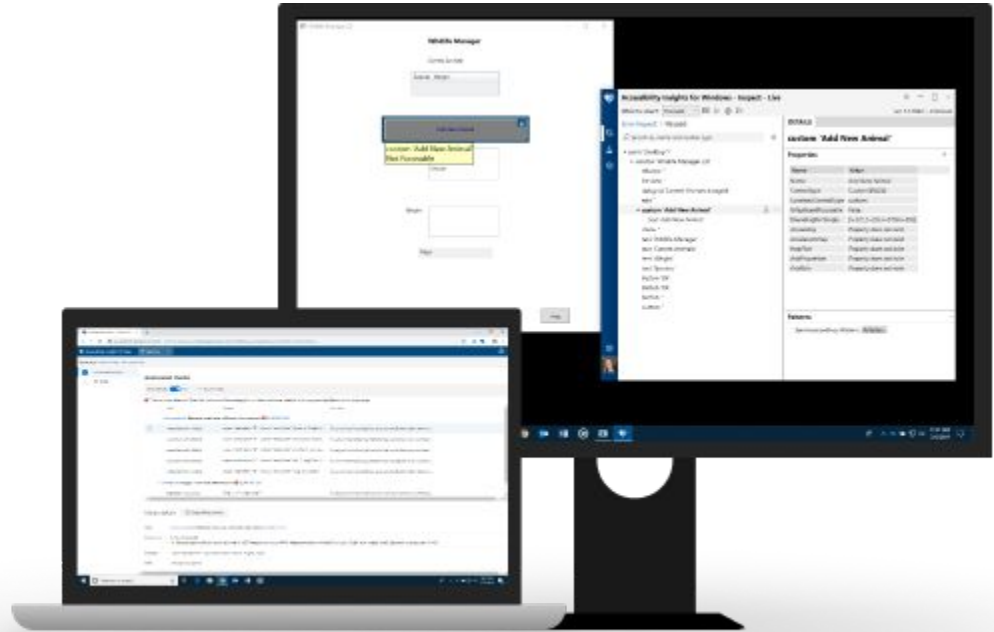
VPAT Example

Table 1: Success Criteria, Level A

Notes:

Criteria	Conformance Level	Remarks and Explanations
1.1.1 Non-text Content (Level A)	Partially Supports	Some images have no alt text, use a file name for alt text, or use alt text that duplicates link text.
1.2.1 Audio-only and Video-only (Prerecorded) (Level A)	Not Applicable	Feature not used in product
1.2.2 Captions (Prerecorded) (Level A)	Not Applicable	Feature not used in product
1.2.3 Audio Description or Media Alternative (Prerecorded) (Level A)	Not Applicable	Feature not used in product
1.3.1 Info and Relationships (Level A)	Supports	The site's content and its relationships can be programmatically determined
1.3.2 Meaningful Sequence (Level A)	Supports	Correct reading sequence can be programmatically determined

Audit Tools - Accessibility Insights for Web



VPAT in HYKU



The screenshot displays the public side of a Hyku instance. At the top, a blue header contains the Hyku logo and a user profile for 'Kevin@notch'. Below this is a navigation bar with links for 'HOME', 'ABOUT', 'HELP', and 'CONTACT'. A search bar is positioned to the right of the navigation, with the text 'Search Hyku Up' and 'Enter search terms'. The main content area features a 'Share Your Work' button, followed by a 'Featured Works' section with a 'Recently Uploaded' sub-section. A card for 'generic test work' is visible, showing a blue cube icon, the depositor 'test', and the keyword 'test'. Below this is a 'Save' button. To the right, there are 'Explore Collections' and 'Featured Research' sections, each containing a collection of three cubes and a 'test Collection' label. A 'View all collections' button is located at the bottom of this section. The footer is blue and contains the text 'A service of Salford University', 'Hyku v2.0', 'Copyright © 2019 Salford University', and 'Licensed under the Apache License, Version 2.0'. The URL 'test.hykuup.com/about?locale=en' is visible in the bottom left corner.

Hyku Example - Public Side

The screenshot shows the Hyku Admin Dashboard for user kevin@notch8.com. The main section is titled "Collections". At the top, there are tabs for "All Collections" and "Your Collections", with a "New Collection" button on the right. Below the tabs, there are filter buttons for "Visibility" and "Collection Type". A search bar is present with the text "Search Hyku Up" and a "Go" button. The main content is a table of collections:

Select	Title	Type	Visibility	Items	Last modified	Actions
<input type="checkbox"/>	[Redacted]	User Collection	Private	1	08/29/2019	Edit Delete
<input type="checkbox"/>	Kevin [Redacted]	Admin Set	Private	3	08/29/2019	Edit Delete

Hyku Example - Admin Dashboard

Elements must have sufficient color contrast



Rule name

color-contrast

Success criterion

WCAG 1.4.3

Path

.hidden-xs



Inspect HTML



Copy failure details



File issue

Fix the following:

- Element has insufficient color contrast of 2.19 (foreground color: , background color:  #173bff, font size: 10.5pt, font weight: normal). Expected contrast ratio of 4.5:1

 elements must be contained in a or



Rule name

listitem

Success criterion

WCAG 1.3.1

Path

ul[role="tablist"] > li:nth-child(2)



Inspect HTML



Copy failure details

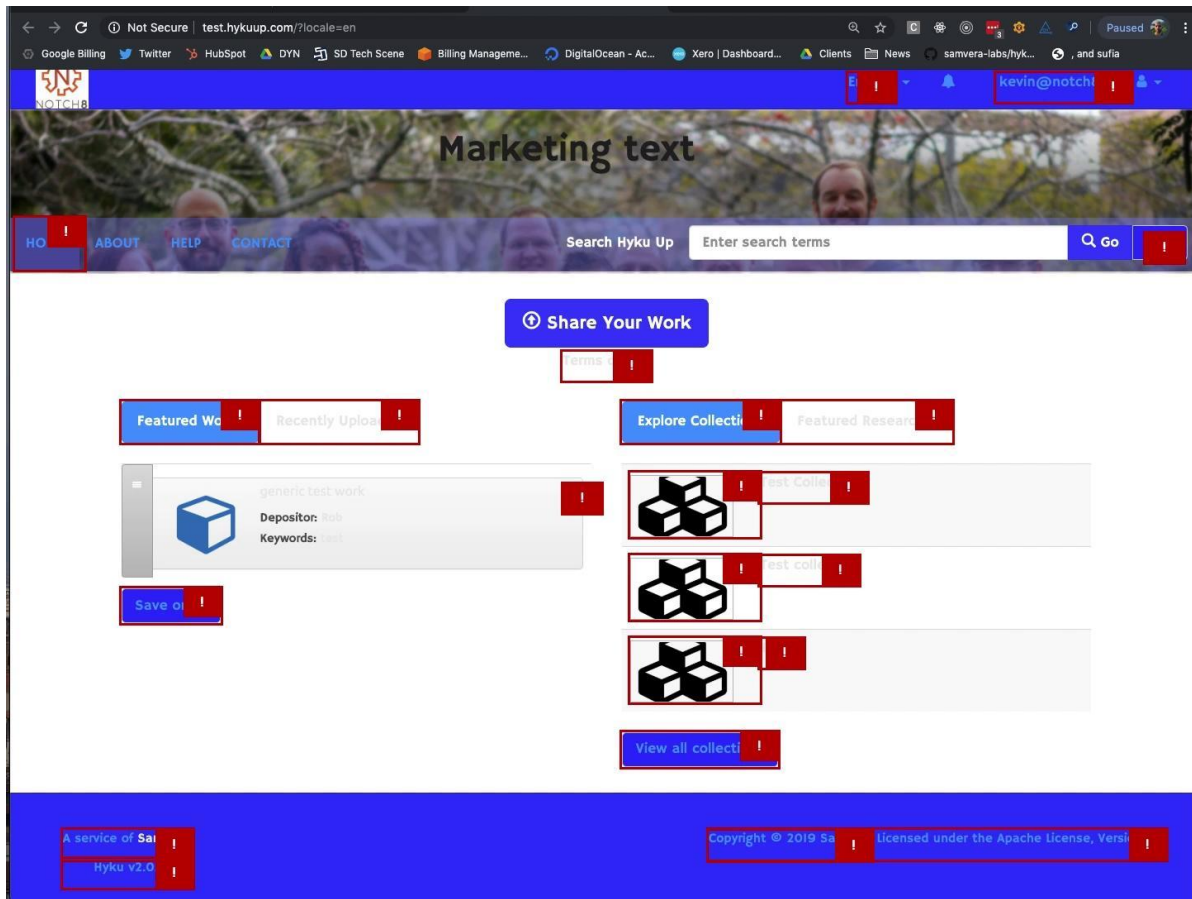


File issue

Fix the following:

- List item does not have a , or role="list" parent element

Accessibility Insights - List tags



Hyku - Accessibility Cheat

VPAT and Hyku

Table 1: Success Criteria, Level A

Notes:

Criteria	Conformance Level	Remarks and Explanations
1.1.1 Non-text Content(Level A)	Does not support	Most images user-input, but there is no generic alt-text type associated with the placement. Thumbnail icons have no alt-text.
1.2.1 Audio-only and Video-only (Prerecorded)(Level A)	Not applicable	Feature not used in this product.
1.2.2 Captions (Prerecorded)(Level A)	Not applicable	Feature not used in this product.
1.2.3 Audio Description or Media Alternative (Prerecorded)(Level A)	Not applicable	Feature not used in this product.
1.3.1 Info and Relationships(Level A)	Partially supports	Roles are used in many places; some format elements like list tags are missing
1.3.2 Meaningful Sequence(Level A)	Supports	Layout of content is logical and tab navigation runs in a logical flow.

There's no substitute
for manual testing.



Hyku Accessibility Wishlist

- **Alt-text solution**
 - Default alt-text
 - Ability to create/import alt-text when uploading image works
- **Clean-up of organizational tags (like list elements)**
- **Time and money to conduct a thorough audit and implement upgrades**
- ***What else...?***

References and Resources

Code4Lib Accessibility Page - <https://wiki.code4lib.org/Accessibility>

Presentations; University guidelines; How to write alt-text for artwork, etc.

W3.org & Section508.gov

Information on VPAT, WCAG, and the latest government accessibility standards

Notch8.com, HykuUP.com & Samvera.org

More information on Notch8 and Samvera digital repositories

References:

<https://www.appian.com/accessibility-conformance-report-vpat-508/>

<https://accessibilityinsights.io/docs/en/web/overview>

Thank you!



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