

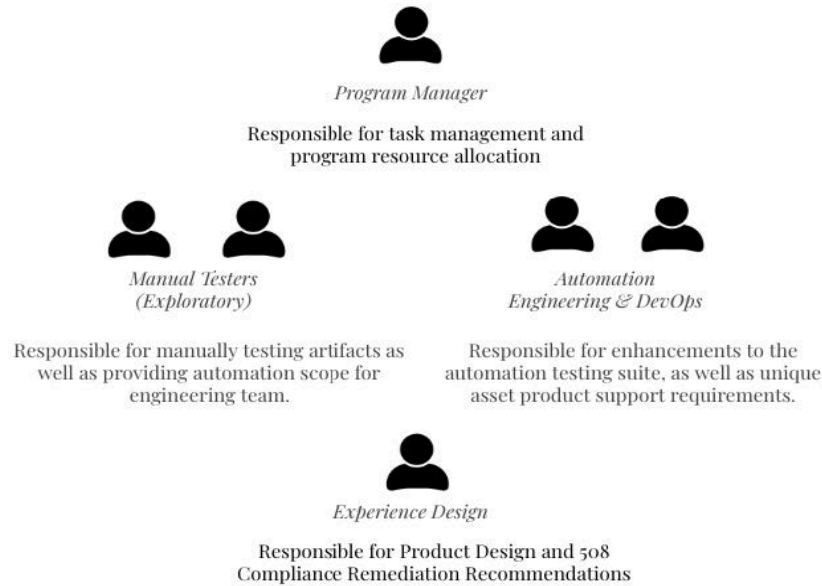
myA11y Playbook

Whitespace

Program Support Branch (PSB) 508 Team

April 2023

Overview



Our goal is to leverage modern 508 assessment compliance services by providing Section 508 Management Support, WCAG 2.0 Compliance Validation, Subject Matter Expert (SME) Advising, Automated Testing, and other Section 508 activities required.

Our assessment team is composed of a Program Manager, Automation Specialists, Testers, Engineers and User Experience Designer that all specialize in 508 oriented software delivery.

Approach to Automation

The approach is based in automation through practices that are grounded in data driven analysis combined with a hybrid user acceptance testing strategy that provides a unique offering of services and software that strategically targets opportunities for better user engagement through enhanced 508 compliance validation and governance.

The delivery model is able to leverage Automation Engineers and Trusted Tester experience developing, testing, and deploying software to provide a fit for purpose solution that can be deployed across the enterprise.

Our automation uses a combination of W3C standards and Open-Source Products that are used to create a consistent method of evaluation of accessibility standards throughout various mediums of content display.

We leverage the assessment techniques defined within WCAG 2.0 and published by W3C. These techniques outline the industry accepted guidelines for accessibility which we verify through a series of automation techniques and tests.

What is myA11y?

MyA11y aims to automate the analysis and reporting of 508 compliance for an organization's collection of web assets.

At the core of myA11y, there is the 508 Reporter. The reporter is a standalone runner that is built using NodeJS and can be ran from the command line or executed from another NodeJS application.

It takes a url, and performs 508 analysis on the web asset at that url. Any issues it finds, it takes note of:

- The element in violation
- The 508 violations
- The violation level
- The severity of the violation
- A screenshot of the element in violation
- A few other data points such as references to documentation of the specific violation, which normally includes solutions to fixing.

In addition to the 508 Reporter, myA11y has a UI and backend service. Both combine to present the web UI element, presenting and quantifying the results of the violation reports the 508 Reporter produces.

Scoring Methodology

To provide consistency throughout our various automation frameworks and tools, we also leverage a consistent mapping of High, Medium, Low to communicate end-user impact based on a given accessibility violation.

High - the application is certain that the issue fails the success criteria.

Medium - the application is somewhat certain that the issue potentially fails the success criteria (manual testing to validate)

Low - the application recommends these as optional actions to being more accessible.

Within our process, we have set our default behavior to specify a page as a failure if we have identified High or Medium issues on a given page. This behavior is customizable to only include High or to even reduce the severity of a given issue based on client needs (ie High -> Medium, or Medium -> High, etc.). Note that a page is considered failed, if at least 1 such issue (Medium or High) exists, lows have been included for informational purposes. To help with rapid diagnostics and resolution, we have also included site wide analysis that aims at finding common issues that once resolved will provide issue resolution throughout a given website.

Tip: We score based on the success criteria for 508 compliance.

Remediation Recommendations

For each issue found automatically myA11y provides a link to a related recommendation in w3.org and Deque University axe rules resources.

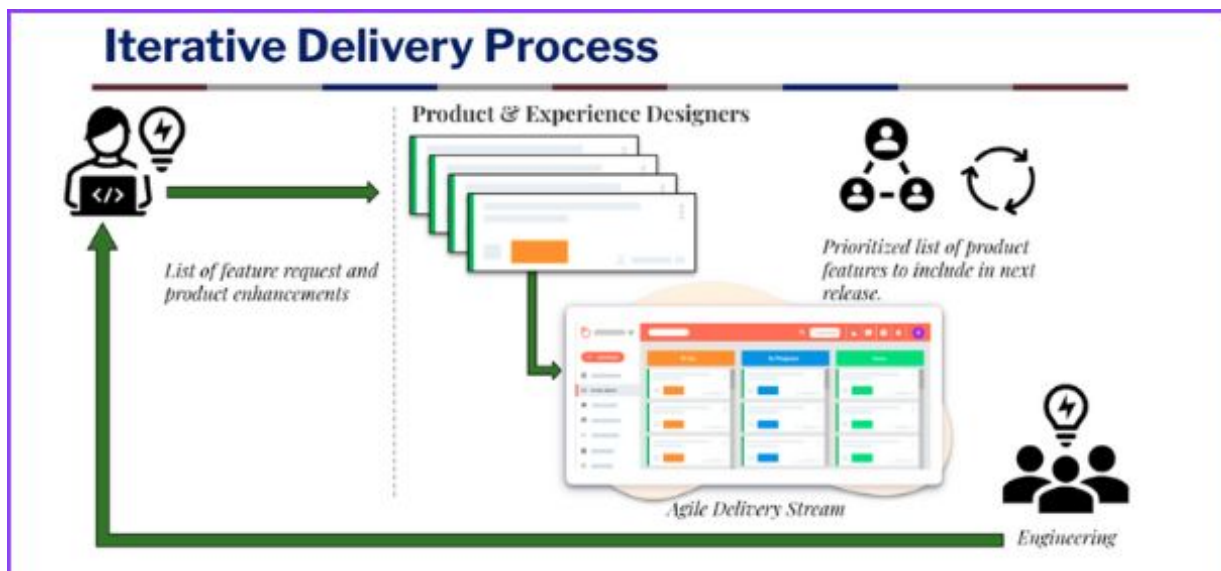
Most Recent Assessment

Id	Severity	Category	Description
▼ 8493d	High	Perceivable	<p>Page Component</p> <p><code>#ctl02_alertBox > div > h2</code></p> <p>Heading tag found with no content. Text that is not intended as a heading should not be marked up with heading tags.</p> <p>Recommendation</p> <ul style="list-style-type: none">https://www.w3.org/TR/WCAG20-TECHS/H42

Enhancing Through Iteration

Our Product Owner alongside with the automation engineers and 508 testers brainstorm product enhancements to improve myA11y.

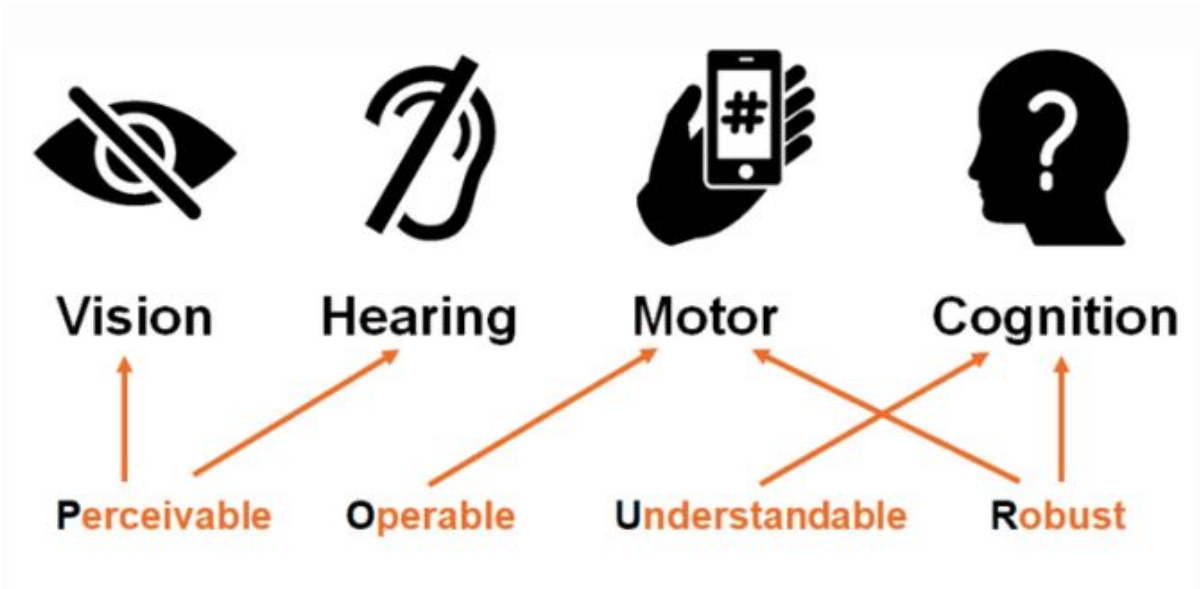
The list of product features is then prioritized for our engineers to develop and be included in future releases.



Standards & Guidelines

Our toolkit consists of a combination of W3C standards and Open Source Products used to create a method of evaluation of accessibility standards.

These standards align with the principles of P.O.U.R.



Source: <https://otis.libguides.com/accessibility/pour>

P.O.U.R

Perceivable

- Provide text alternatives for non-text content
- Provide captions and other alternatives for multimedia
- Create content that can be presented in different ways, including by assistive technologies, without losing meaning
- Make it easier for users to see and hear content

Operable

- Make all functionality available from a keyboard
- Give users enough time to read and use content
- Do not use content that causes seizures
- Help users navigate and find content

Understandable

- Make text readable and understandable
- Make content appear and operate in predictable ways
- Help users avoid and correct mistakes

Robust

- Maximize compatibility with browsers and user tools

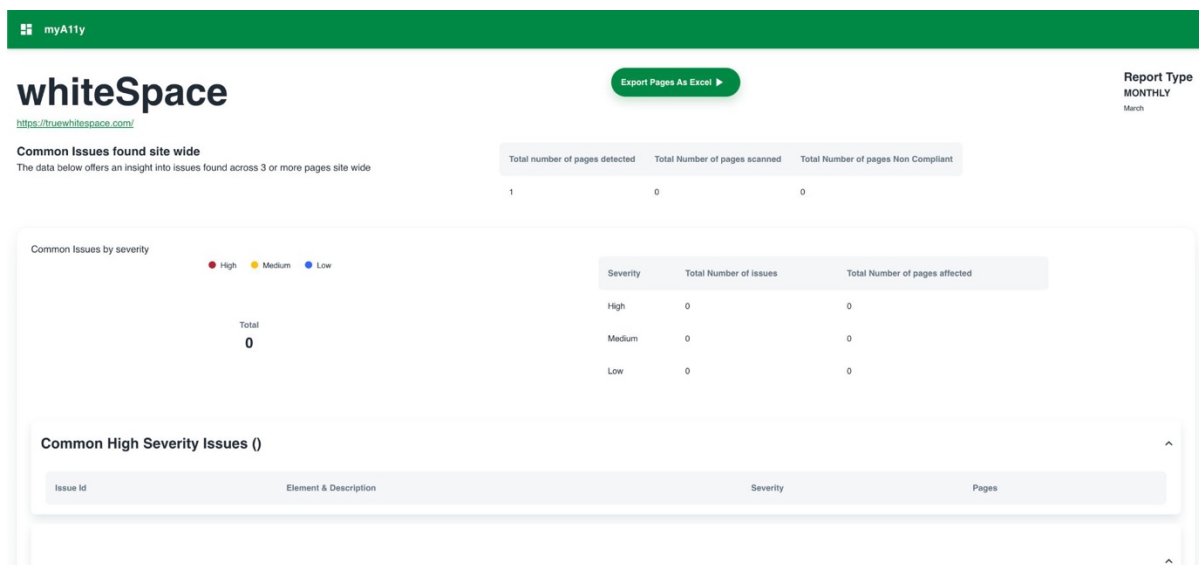
Source: <https://otis.libguides.com/accessibility/pour>

Reporting

Project (website) Report - contains information on the whole project(website) which includes common issues by severity (high, medium, low).

It has the total number of pages detected, total number of pages scanned and total number of pages non compliant.

Will include common high and medium severity issues along with the web pages containing the issues.



Reporting

Detailed Excel Reports - an extraction of the project report in excel format including the following:

- URL
- Issue ID
- Element Path
- Description
- Severity
- Category
- Recommendation

The "description" column is for nontechnical users of the report. It is a short explanation of the issue using plain language.

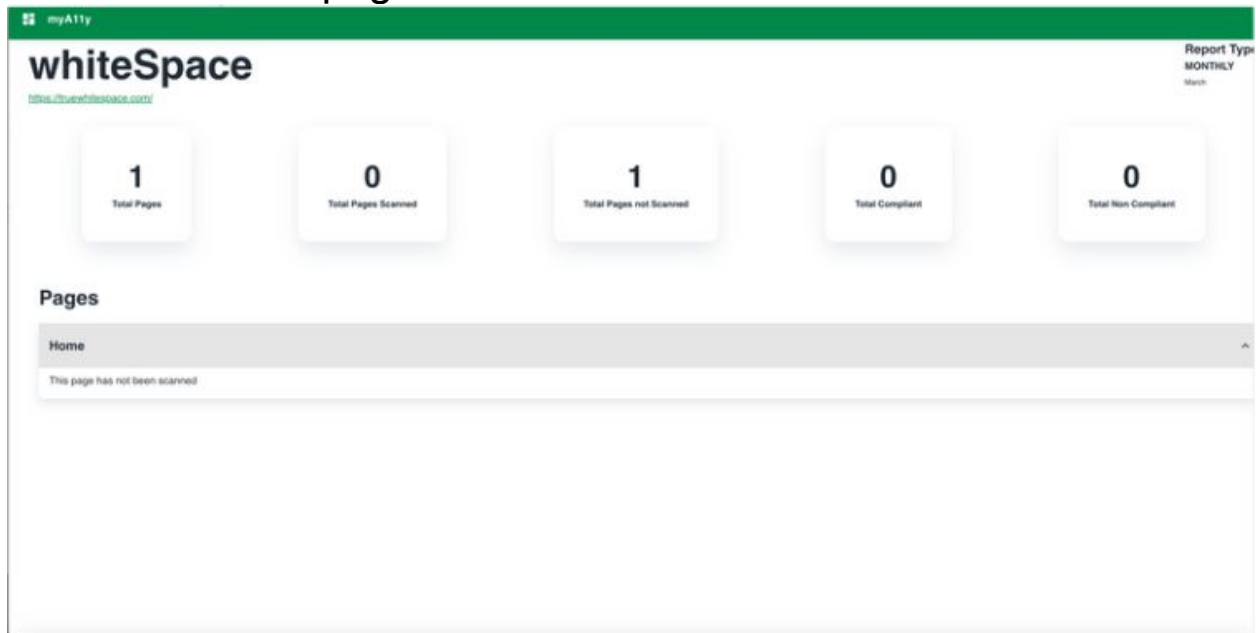
"Element path" column gives technical users the ability to quickly navigate to the element within given page. The "Recommendation" column will take users to www.w3.org that further describes the particular issue.

url	issueID	elementPath	description	severity	category	recommendation
https://tricare.mil/rss/BenefitUpdatesFeed	815d6b37df591089d98112b5fa2bdf93238d7780b2410763a7abfc1d23088c26	html > head	A title should be provided for the document, using a non-empty title element in the head section.	High	Operable	https://www.w3.org/TR/WCAG20-TECHS/H25
https://tricare.mil/rss/BenefitUpdatesFeed	daca9c38dd38f1e179904b25d5977b480	html	The html element should have a lang or xml:lang	High	Understandable	https://www.w3.org/TR/WCAG20-TECHS/H57
https://tricare.mil/rss/BenefitUpdatesFeed	27ce280965422bc7b7098454ffc56fdb3f7		Check that the content is ordered in a meaningful	Low	Perceivable	https://www.w3.org/TR/WCAG20-TECHS/G57

Reporting

Page Report - contains total number of pages, total pages scanned, total pages not scanned, total compliant and total non compliant.

It also lists each page with the issues it has.



Reporting

The Quarterly Assessment

- Websites Tested
- Total Pages Scanned
- Total Pages in Violation
- Total Violations Across all Pages
- Issues Found Manually
- Common issues by Severity(High, Medium, Low)
- Manual Test Results

Data shown in graphic is mock data only

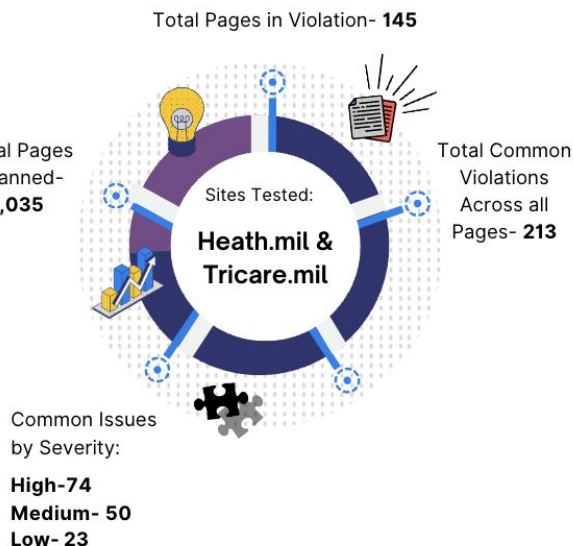
DHA SECTION 508 COMPLIANCE MONTHLY PROGRESS REPORT

508 Violation Scan Quarterly Results

This report is a progress analysis from
January 1 - March 31st, 2023
and includes:

- Websites Tested
- Total Pages Scanned
- Total Pages in Violation
- Total Violations Across all Pages
- Issues Found Manually
- Common Issues by Severity
- Manually Test Results

Number of Pages Tested Manually	144
Number of Global Issues Found from Manual test *not covered by myA11y	7
Number of False Positive Issues that Found via myA11y (excluding color contrast & landmark issues)	5
Number of Non-Global Issues Found from Manual Test (not covered by myA11y)	4

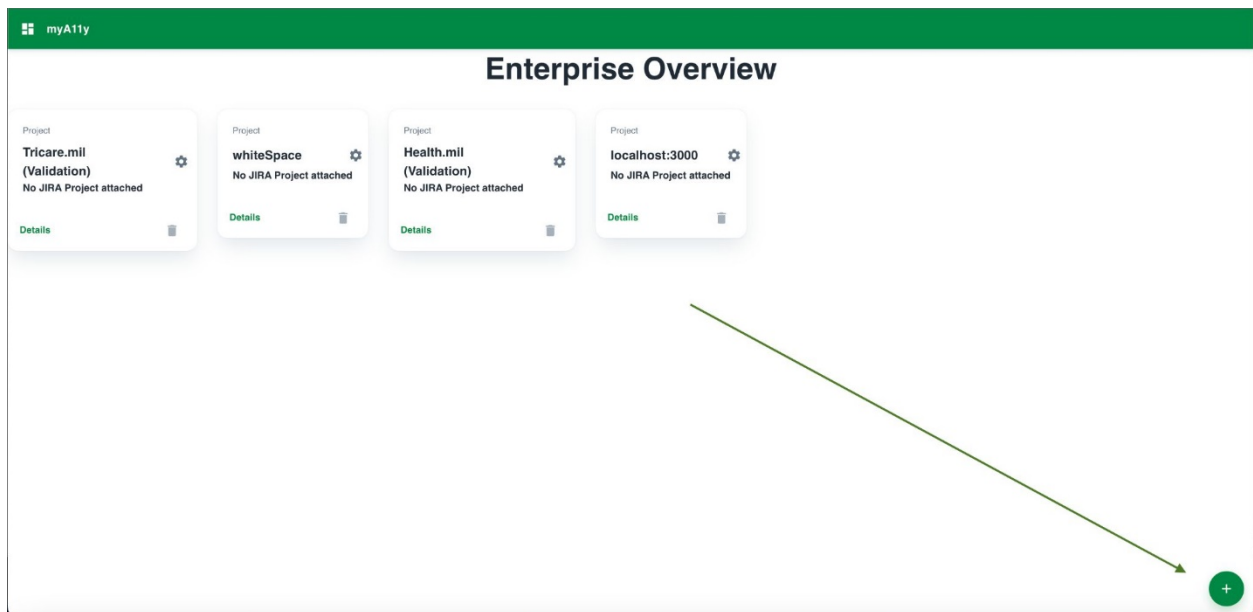


The Features of mya11y

- Intelligent Detecting
- Detailed Report & Statistics
- Automated Scan Generation
- Exporting & Collaboration Capabilities

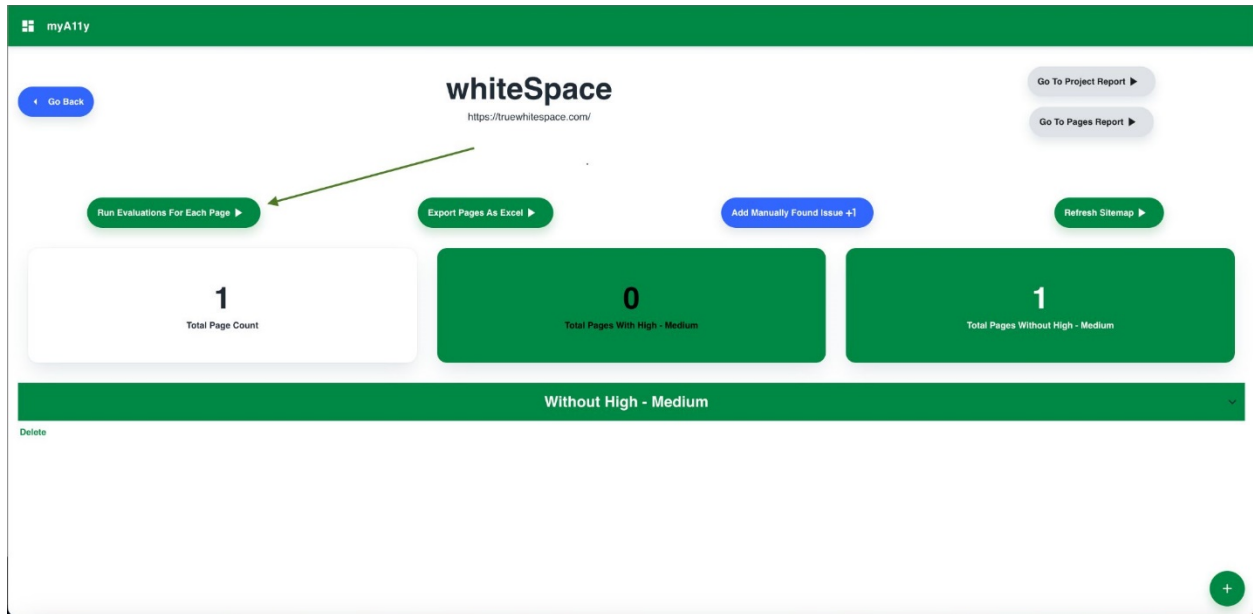
Creating First Test Project & Evaluation Scan

Simply get started by creating your project and automatically start the evaluation for your created project.



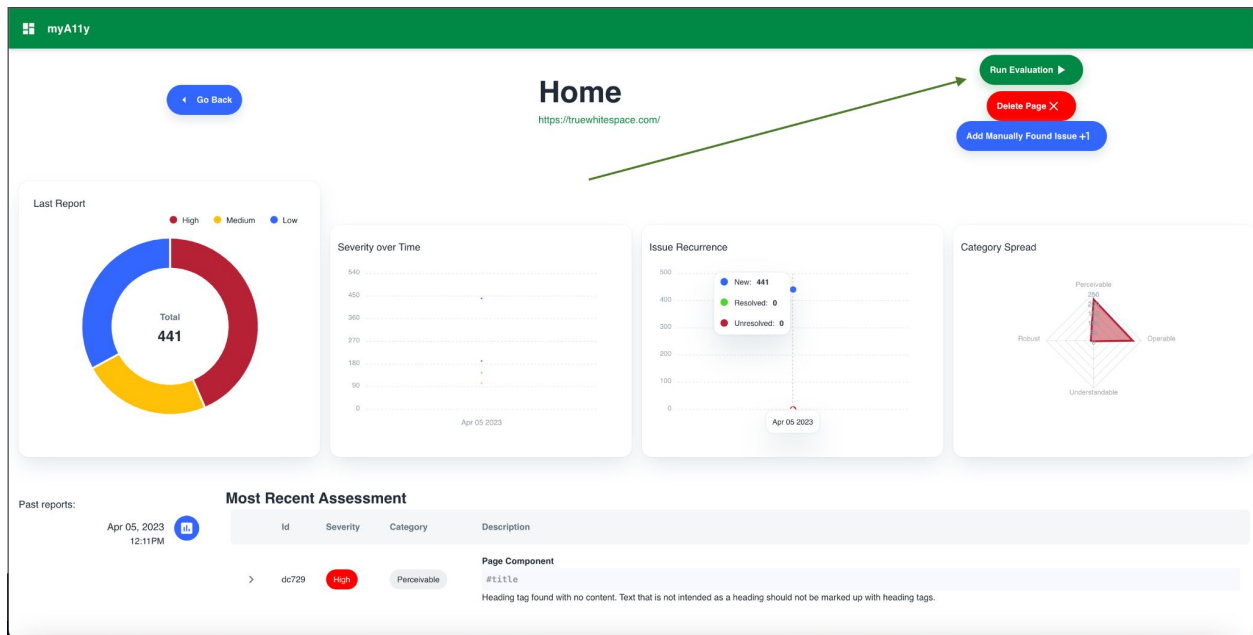
Run an Evaluation for All Pages

This feature allows you to scan an entire website.



Run an Evaluation for One Page

This feature allows you to scan a specific page.



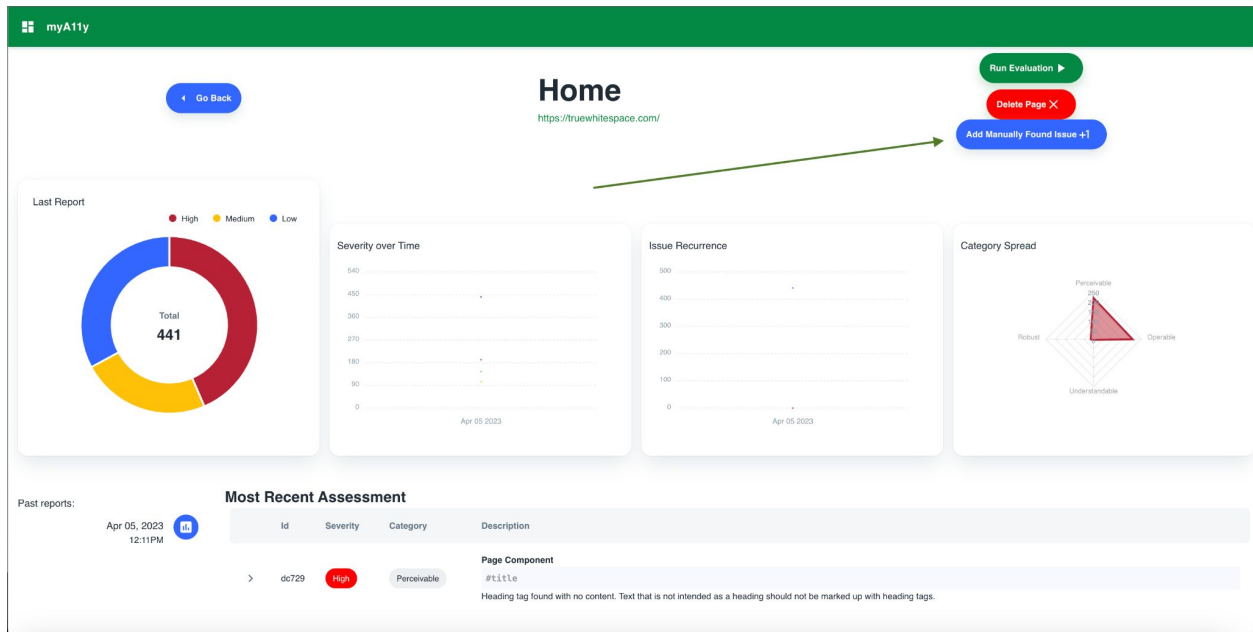
Adding a Manually Found Global Issue

Adding global manual issues will give you the ability to generate a consolidated list of issues within a report.

The screenshot displays the myA11y web application interface for a project named 'whiteSpace' (URL: https://truewhitespace.com/). The interface includes a green header bar with the 'myA11y' logo. Below the header, there are several action buttons: 'Go Back' (blue), 'Run Evaluations For Each Page' (green), 'Export Pages As Excel' (green), 'Add Manually Found Issue +1' (blue, highlighted with a green arrow), and 'Refresh Sitemap' (green). On the right side, there are buttons for 'Go To Project Report' and 'Go To Pages Report'. The main content area shows three summary cards: 'Total Page Count' with a value of 1, 'Total Pages With High - Medium' with a value of 1 (highlighted in red), and 'Total Pages Without High - Medium' with a value of 0. Below these cards is a red bar indicating 'With High - Medium' issues. At the bottom left, there is a 'Delete' link, and at the bottom right, there is a green circular button with a plus sign.

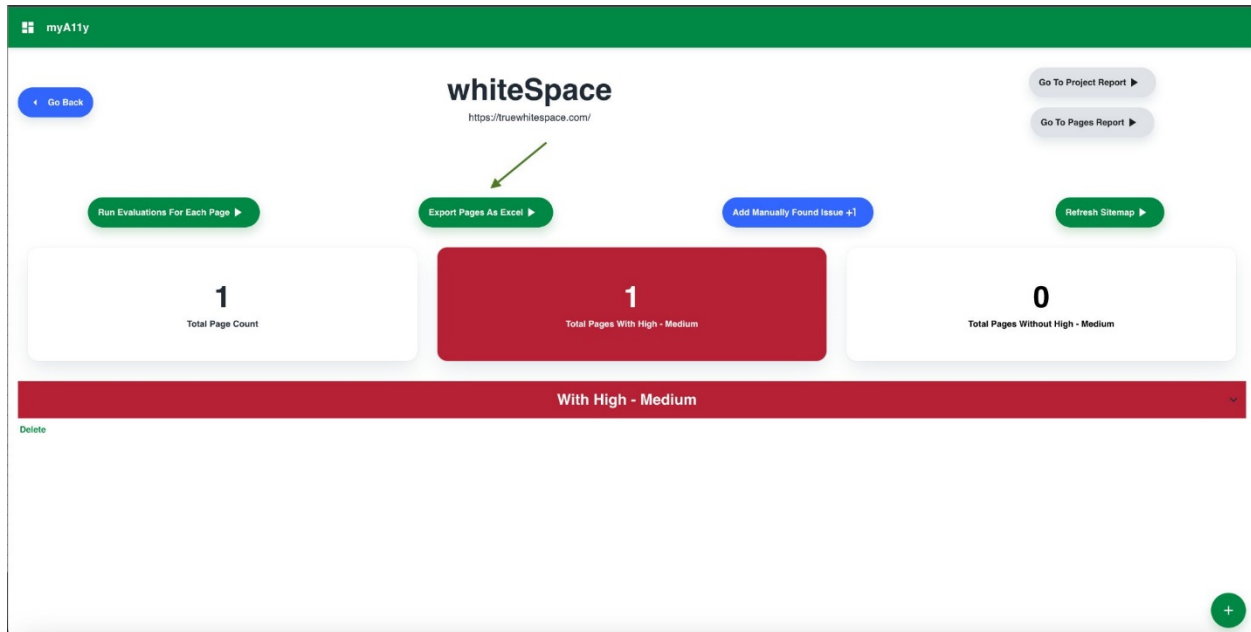
Adding a Manually Found Issue

This allows you to generate a report on manual issues found on a given page.



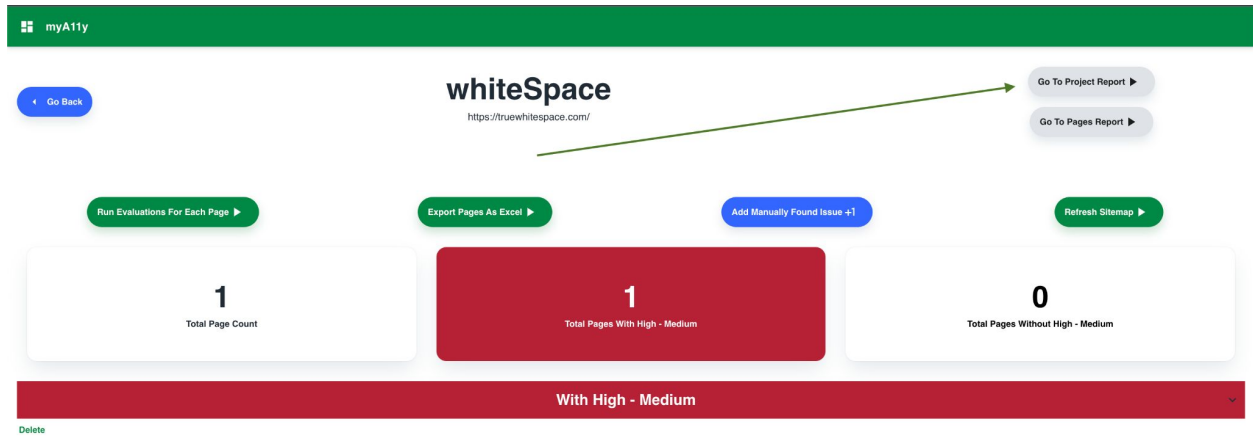
Exporting Your Test Results

If you need to see your results in excel format, this feature allows you to export the results.



Viewing a Project Report

This feature allows you to get detailed information on the whole project(website) evaluated/scanned.



Informational Graphs & Types

myA11y features various graph types that work to provide the user with visuals and statistics into what issues their product could improve upon.

Severity Over Time Graph

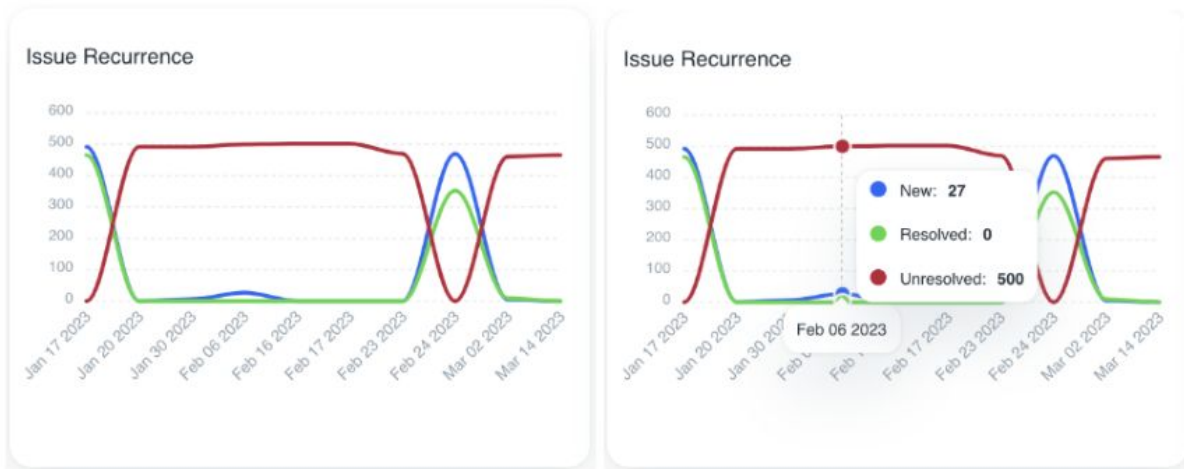
This graph shows change in the number of issue severities over the dates tested.

Colors shown in the graph represent different severities.



Issue Recurrence Graph

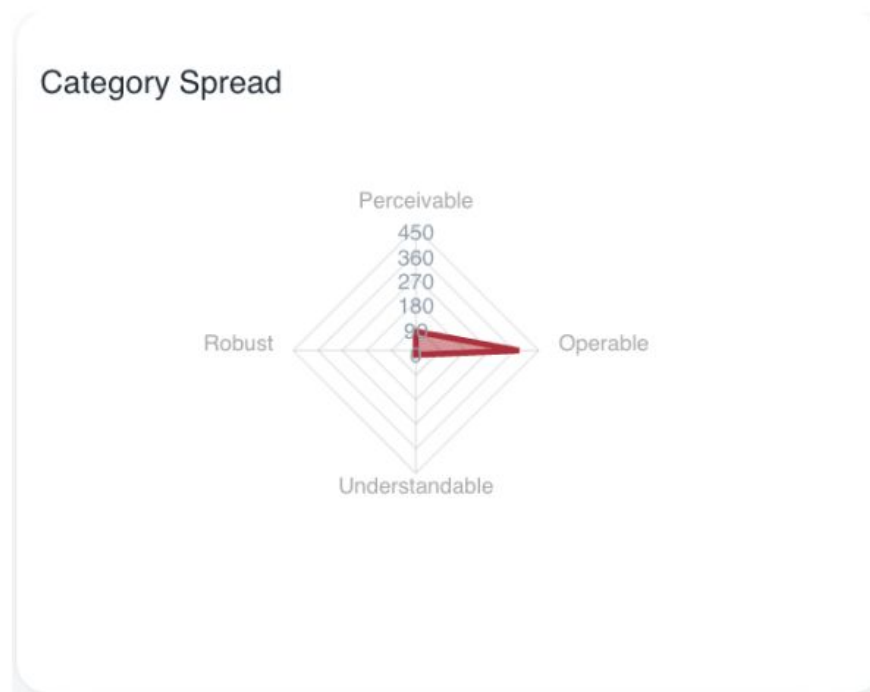
This graph shows the recurrence of the issues found. Red represents unresolved issues, green represents resolved issues, and blue represents newfound issues.



Category Spread Graph

This graph shows a spread of the type of issues that are found, whether they are Perceivable, Operable, Robust, or Understandable.

The “red” will spread out according to the type of issues found.



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Wrap Up

So, what do you need to get started?

It's simple...

Provide us with a website URL and let us know if you want to test the entire site or only certain pages. We'll take care of the rest!

Thank you!