# WCAG 2.0 A and AA Requirements

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| **Name of Product** | **SciVal** |
| **Date Last Updated** | **January 16, 2020** |
| Completed by | Jay Nemchik (Digital Accessibility Team, Dayton) |
| **Document Description** | This document rates SciVal according to the W3C WCAG 2.0 A and AA requirements. |
| **Contact for More Information** | Ted Gies Principal User Experience Specialist [ted.gies@elsevier.com](mailto:ted.gies@elsevier.com) [accessibility@elsevier.com](mailto:accessibility@elsevier.com?subject=Accessibility%20and%20ScienceDirect) |
| **Testing Tools and Methods** | **Hands-on keyboard operation Firebug/Code inspection Firefox Web Developer Toolbar (removing style sheets) JAWS 18 on Mozilla Firefox 63 and MS IE 11 on Windows 10 NVDA screen reader v2019.2.1 Wave Extension**  **Color Contrast Analyzer W3C WAI Pages** Elsevier Accessibility Checklist: <http://romeo.elsevier.com/accessibility_checklist/> |
| **Document Sections** | The review document below includes all WCAG 2 A and AA checkpoints and is organized into 6 logical sections:   * Visuals * Keyboard * Headings and Structure * Labeling * Multimedia * Usability |
| **Pages Covered** | Header, Footer, Homepage, Select Panel, Overview, Benchmarking, Collaboration, Trends, Reporting. |
| **Note from W3C on Conformance** | <https://www.w3.org/TR/UNDERSTANDING-WCAG20/conformance.html> **"If there is no content to which a success criterion applies, the success criterion is satisfied." Criteria with no applicable content will be marked as "Supports (N/A)"** |
| **Notes/Terminology** | **"AT" stands for Assistive Technology such as screen readers, voice input, etc.** |

| **WCAG 2.0 Success Criterion** | **Level** | **Evaluation** |
| --- | --- | --- |
| 1.1.1: Non-text Content | A | Partially supports |
| 1.2.1: Audio-only and Video-only (Prerecorded) | A | Supports (N/A) |
| 1.2.2: Captions (Prerecorded) | A | Supports (N/A) |
| 1.2.3: Audio Description or Full Text Alternative | A | Supports (N/A) |
| 1.2.4: Captions (Live) | AA | Supports (N/A) |
| 1.2.5: Audio Description | AA | Supports (N/A) |
| 1.3.1: Info and Relationships | A | Partially supports |
| 1.3.2: Meaningful Sequence | A | Partially supports |
| 1.3.3: Sensory Characteristics | A | Supports |
| 1.4.1: Use of Color | A | Partially supports |
| 1.4.2: Audio Control | A | Supports (N/A) |
| 1.4.3: Contrast (Minimum) | AA | Partially supports |
| 1.4.4: Resize text | AA | Partially supports |
| 1.4.5: Images of Text | AA | Supports |
| 2.1.1: Keyboard | A | Partially supports |
| 2.1.2: No Keyboard Trap | A | Supports |
| 2.2.1: Timing Adjustable | A | Partially supports |
| 2.2.2: Pause, Stop, Hide | A | Supports (N/A) |
| 2.3.1: Three Flashes or Below Threshold | A | Supports (N/A) |
| 2.4.1: Bypass Blocks | A | Partially supports |
| 2.4.2: Page Titled | A | Supports |
| 2.4.3: Focus Order | A | Partially supports |
| 2.4.4: Link Purpose (In Context) | A | Partially supports |
| 2.4.5: Multiple Ways | AA | Partially supports |
| 2.4.6: Headings and Labels | AA | Supports |
| 2.4.7: Focus Visible | AA | Partially supports |
| 3.1.1: Language of Page | A | Supports |
| 3.1.2: Language of Parts | AA | Supports (N/A) |
| 3.2.1: On Focus | A | Supports |
| 3.2.2: On Input | A | Supports |
| 3.2.3: Consistent Navigation | AA | Supports |
| 3.2.4: Consistent Identification | AA | Supports |
| 3.3.1: Error Identification | A | Supports |
| 3.3.2: Labels or Instructions | A | Partially supports |
| 3.3.3: Error Suggestion | AA | Supports (N/A) |
| 3.3.4: Error Prevention (Legal, Financial, Data) | AA | Supports (N/A) |
| 4.1.1: Parsing | A | Supports |
| 4.1.2: Name, Role, Value | A | Partially supports |

## WCAG 2.0 Checkpoints

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| Visuals | | |
| **WCAG 2.0**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.1.1: Non-Text Content](http://www.w3.org/TR/WCAG20/#text-equiv-all) (A) Provide text alternatives for non-text content (e.g. images) | Partially supports | Most icons and non-text content include text equivalents.  **Exceptions:**  Collaboration: The Co-authored publications per country/region part of the map does not have an alternative and is not captured in the data table version. |
| [1.3.3: Sensory Characteristics](http://www.w3.org/TR/WCAG20/#content-structure-separation-understanding) (A) Do not rely on sensory characteristics of components such as shape, size, visual location, orientation, or sound | Supports | Content does not rely on sensory characteristics. |
| [1.4.1: Use of Color](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-without-color) (A) Color is not used as the only visual means of conveying info | Partially supports | Color is not used as the only means of conveying information for most content.  **Exceptions:**  Footer: The cookies link used in the footer is non-underlined text and have a color that is the same as the surrounding Copyright text. This link text requires a contrast of at least 3:1 between it and the adjacent Copyright text. |
| [1.4.3: Color Contrast (Minimum)](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-contrast) (AA) Text has enough contrast with the background (4.5:1 for small text and 3:1 for large text) | Partially supports | Most text has enough contrast with its corresponding background.  **Exceptions:**  Overview: The light gray text in the Add to Reporting popup does not have enough contrast at 2.96:1.  Benchmarking: The light gray "Metrics will replace Publication Year" text does not have enough contrast at 1.73:1. The "View list of Scopus Sources…" text does not have enough contrast at 2.96:1. |
| [1.4.4: Resize Text](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-scale) (AA)  Text can be enlarged up to 200% without loss of functionality. | Partially supports | Users can resize browser text to 200% without loss of functionality.  **Exceptions:**  Select Panel: When a second panel is opened (Advanced Search, Define new, etc.), its content can be cut-off to such a degree that it can become unusable. |
| [1.4.5: Images of Text](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-text-presentation) (AA) Text is used rather than images of text, except where the presentation of text is essential, such as logos | Supports | No images of text are used other than for Logos or essential presentation. |
| [2.3.1: Three Flashes or Below Threshold](http://www.w3.org/TR/WCAG20/#seizure-does-not-violate) (A) No more than three flashes in a 1-second period, or the flashes are below the defined thresholds | Supports (N/A) | No flashing content exists. |
| Keyboard | | |
| **WCAG 2.0**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.3.2: Meaningful Sequence](http://www.w3.org/TR/WCAG20/#content-structure-separation-sequence) (A)  The correct reading sequence can be programmatically determined | Partially supports | The correct reading sequence is logical with the DOM order matching the visual order in most areas.    **Exceptions:**  Overview: The ASJC and Data Sources popups need to immediately follow the activating elements in the DOM.  Benchmarking: The ASJC and Data Sources popups need to immediately follow the activating elements in the DOM.  Collaboration: The ASJC and Data Sources popups need to immediately follow the activating elements in the DOM.  Trends: The Data Sources popup needs to immediately follow the activating element in the DOM. |
| [2.1.1: Keyboard](http://www.w3.org/TR/WCAG20/#keyboard-operation-keyboard-operable) (A)  All functionality is available from a keyboard, except for tasks such as drawing | Partially supports | Some content is keyboard operable. Several custom areas do not have proper keyboard support.  **Exceptions**:  Select Panel: Defining new groups/people etc. requires drag and drop, which is not keyboard operable.  Overview: The h5-index icon cannot be reached by keyboard. The "Back to top level" button within the big SVG graph cannot be reached by keyboard. There are extra links under Research Topics that only appear on mouse hover that cannot be reached by keyboard. The publication share popup cannot be activated by keyboard. The Wheel graph with bubbles cannot be reached or interacted with by keyboard.  Benchmarking: Users cannot add available metrics properly in the Add Metrics dialog since it requires drag and drop. The popup that appears on mouse hover for the "View List of Scopus Sources…" cannot be displayed by keyboard. The entity options for each chart line cannot be reached by keyboard (color picker, hide/show name, visibility).  Collaboration: The dots on the map can be reached by keyboard, but do not show the popup and cannot be activated. Users cannot pan the map with the keyboard. The Countries checkboxes within the dropdown cannot be check or unchecked with the keyboard.  Trends: The dots on the various map views can be reached by keyboard, but do not show the popup and cannot be activated. Users cannot pan the map with the keyboard. The tooltips on the keyphrases section do not display on focus.  Reporting: There are several entity options that only appear on hover and cannot be accessed via keyboard. Drag and drop is required to add things to a report which is not currently possible with the keyboard. |
| [2.1.2: No Keyboard Trap](http://www.w3.org/TR/WCAG20/#keyboard-operation-trapping) (A)  The user can use the keyboard to move through page elements and is not trapped on a particular element | Supports | No keyboard traps exist on any page. |
| [2.4.3: Focus Order](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-focus-order) (A)  Users can tab through the elements of a page in a logical order | Partially supports | Tab order is logical on the site in most areas. Focus management works properly for most modal windows.  **Exceptions:**  Homepage: The Overview, Benchmarking, etc. links should only have one tab-stop.  Overview: The ASJC and Data Sources popups need to immediately follow the activating elements in the DOM.  Benchmarking: The ASJC and Data Sources popups need to immediately follow the activating elements in the DOM. The Add Metrics dialog does not properly trap focus when tabbing forward.  Collaboration: In the collaboration modal, the "Add to Panel" can be tabbed to even when disabled.  Trends: The Data Sources popup needs to immediately follow the activating element in the DOM. The Top various chart views do not allow tabbing past the chart content. The table headers should not have two tab-stops. |
| [2.4.7: Focus Visible](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-focus-visible) (AA)  The page element with the current keyboard focus has a visible focus indicator | Partially supports | Most elements use a custom-styled visible focus.  **Exceptions:**  Homepage: The Overview, Benchmarking, etc. have two links each, the first of which does not have a visible focus.  Overview: The table headers for Topics and Topic Clusters do not have a visible focus.  Benchmarking: The table headers do not have a visible focus.  Collaboration: The subnavigation options in the collaboration modal (Overview, Current co-authors, Potential co-authors) do not have a visible focus.  Reporting: The View/Edit report modal's subnavigation tabs do not have a visible focus. |
| [3.2.1: On Focus](http://www.w3.org/TR/WCAG20/#consistent-behavior-receive-focus) (A)  When a UI component receives focus, this does not trigger unexpected actions. | Supports | Focusable elements do not cause unexpected actions when receiving focus. |
| Headers and Structure | | |
| **WCAG 2.0**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.3.1: Information and Relationships](http://www.w3.org/TR/WCAG20/#content-structure-separation-programmatic) (A)  Info, structure, and relationships can be programmatically determined | Partially supports | Headings are used on most pages. Some pages make use of more than one h1. Unordered lists are typically used to group related content. Landmarks are used in several places (role of main, navigation, regions with labels, etc.).  **Exceptions:**  Select Panel: Lists of institutions, groups, people, etc. in an advanced search should be in an unordered list.  Overview: Multiple Navigation landmarks are used so they each need to be uniquely labelled. The Topics and Topic Clusters table is made using divs which do not create any semantic relationships between headers or cells.  Benchmarking: There is a hidden h2 under "bubble size" that is empty. The left-most column of entity names should be row table headers. The table headers need scope attributes. It makes more sense for "y-axis" and "x-axis" to be h2s, rather than the metric name.  Reporting: The table is made using divs which do not create any semantic relationships between headers or cells. |
| [2.4.1: Bypass Blocks](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-skip) (A)  Users can bypass repeated blocks of content. | Partially supports | Headings and landmarks exist, allowing screen reader users to skip repetitive content.  **Exceptions:**  There is no visible "skip to main content" link at the beginning of the page. |
| [2.4.6: Headings and Labels](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-descriptive) (AA)  Headings and labels are clear and consistent. | Supports | Headings are clear and descriptive. |
| [3.1.1: Language of Page](http://www.w3.org/TR/WCAG20/#meaning-doc-lang-id) (A)  The language of the page is specified | Supports | The language is defined as lang="en-US" on all pages. |
| [3.1.2: Language of Parts](http://www.w3.org/TR/WCAG20/#meaning-other-lang-id) (AA)  Specify the language of text passages that are in a different language than the default language of the page. | Supports | None of the site-wide UI or functionality uses a different language than the default. |
| [4.1.1: Parsing](http://www.w3.org/TR/WCAG20/#ensure-compat-parses) (A)  Use valid, error-free HTML | Supports | HTML and CSS passes concerning these 4 specific criteria:  (i) elements have complete start and end tags,  (ii) elements are nested according to their specifications  (iii) elements do not contain duplicate attributes (iv) any IDs are unique, except where the specifications allow these features. |
| Labeling | | |
| **WCAG 2.0**  **Checkpoint** | **Supporting Features** | **Notes** |
| [2.4.2: Page Titled](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-title) (A)  The page has a title describing its topic or purpose | Supports | The title changes accordingly for each page and descriptive. |
| [2.4.4: Link Purpose (In Context)](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-refs) (A)  The purpose of each link can be determined from the link text or surrounding context. | Partially supports | Most links used have an identifiable purpose from the link text or surrounding context.  **Exceptions:**  Header: The SciVal homepage link (logo) does not have any link text. |
| [3.2.4: Consistent Identification](http://www.w3.org/TR/WCAG20/#consistent-behavior-consistent-functionality) (AA)  UI components used across the web site are identified consistently on every page. | Supports | UI components are consistent across the site. |
| [3.3.1: Error Identification](http://www.w3.org/TR/WCAG20/#minimize-error-identified) (A)  Input errors are clearly marked and described to the user. | Supports | Errors are given and described well. |
| [3.3.2: Labels and Instructions](http://www.w3.org/TR/WCAG20/#minimize-error-cues) (A)  Items requiring user input are clearly labeled or have clear instructions. | Partially supports | Most input areas have clear labels which are programmatically assigned.  **Exceptions:**  Custom Select elements should be using an actual label, instead of using one of the select options as a label.  Select Panel: The checkboxes in advanced search are not labelled and must be unique.  Overview: The Save Analysis As input does not have a label. The Filtering tree does not have a proper label (Filter by Subject Area is hidden).  Benchmarking: The Filtering tree does not have a proper label (Filter by Subject Area is hidden).  Collaboration: The author checkboxes in the collaboration modal do not have labels.  Trends: The checkboxes within the various tables do not have proper labels. |
| [3.3.3: Error Suggestion](http://www.w3.org/TR/WCAG20/#minimize-error-suggestions) (AA)  When the user makes an input error, give suggestions for valid input. | Supports | The error text given is sufficient for error suggestions. |
| [4.1.2: Name, Role, Value](http://www.w3.org/TR/WCAG20/#ensure-compat-rsv) (A)  For all UI components, the name, value, and role can be programmatically determined. | Partially supports | Many UI components properly communicate their state programmatically.  **Exceptions:**  Button tooltips should not be alerts.  Select Panel: The expand/collapse panel icon button does not have proper button text. The 'X' close button for the panel does not have proper button text. The panel category buttons should have proper button text. The expand/collapse buttons in Advanced Search and Define New need aria-expanded. For radio buttons that cause a page reload when selected, they should either communicate as buttons and should indicate that they will select/unselect and reload the page.  Overview: More Details on this Institution should be a button. The ASJC and Data sources elements should be buttons. The filtering tree should be marked up like an ARIA Tree to communicate properly to screen readers.  Benchmarking: The y-axis/x-axis dropdowns work similarly to an ARIA menu and should be properly marked up as such. The ASJC and Data sources elements should be buttons. The filtering tree should be marked up like an ARIA Tree to communicate properly to screen readers. The slider in the Year dropdown should use proper ARIA to mark the content as a proper slider.  Collaboration: The ASJC and Data sources elements should be buttons. The filtering tree should be marked up like an ARIA Tree to communicate properly to screen readers. The Co-Authored publications modal has expand/collapse buttons for various filters that need accessible button text.  Trends: The Data Sources element should be a button.  Reporting: The table headers should communicate their sorting programmatically. The Expand/Collapse entity buttons do not have any button text and also require aria-expanded. The on-hover entity options do not have proper button text. The expand/collapse buttons within the View/Edit report modal do not have button text and also require aria-expanded. |
| Multimedia | | |
| **WCAG 2.0**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.2.1: Audio-only or Video-only (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-av-only-alt) (A)  Provide alternatives for pre-recorded audio-only or video-only content. | Supports (N/A) | No pre-recorded audio-only or video-only content was reviewed. |
| [1.2.2: Captions (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-captions) (A)  Provide captions for pre-recorded audio | Supports (N/A) | There is no pre-recorded audio on the site. |
| [1.2.3: Audio Description or Media Alternative (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-audio-desc) (A)  Provide alternatives for pre-recorded synchronized audio/video | Supports (N/A) | There is no pre-recorded synchronized audio/video on the site. |
| [1.2.4: Captions (Live)](http://www.w3.org/TR/WCAG20/#media-equiv-real-time-captions) (AA)  Provide captions for live audio in synchronized audio/video. | Supports (N/A) | There is no live audio in synchronized audio/video. |
| [1.2.5: Audio Description (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-audio-desc-only) (AA)  Provide an audio description of pre-recorded video. | Supports (N/A) | There is no pre-recorded video on the site. |
| [1.4.2: Audio Control](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-dis-audio) (A)  Audio can be paused and stopped, or the audio volume can be changed. | Supports (N/A) | There is no audio content on the site. |
| [2.2.2: Pause, Stop, Hide](http://www.w3.org/TR/WCAG20/#time-limits-pause) (A)  Users can stop, pause, or hide moving, blinking, scrolling, or auto-updating information. | Supports (N/A) | There is no moving, scrolling, or auto-updating information. |
| Usability | | |
| **WCAG 2.0**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [2.2.1: Timing Adjustable](http://www.w3.org/TR/WCAG20/#time-limits-required-behaviors) (A)  Users are warned of time limits shorter than 20 hours and time limits can be turned off or extended | Partially supports | There is session timeout that causes the user to logout. The timeout is after 24 hours, however.  There is a login check that occurs after 30 inactive minutes that refreshes the page. All data is saved server-side, so most data will not be lost if this occurs. A few tasks could be interrupted, such as defining new groups or institutions. |
| [2.4.5: Multiple Ways](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-mult-loc) (AA)  More than one way is available to navigate to other web pages. | Partially supports | Users can reach most pages in the system using the global navigation.  Content pages can be reached through the global nav or homepage.  Recommend using a Site Map to cover all bases.  **Exceptions:**  There are several pages that can only be accessed through dropdowns in the header, such as My Entities, Usage Analytics, etc. |
| [3.2.2: On Input](http://www.w3.org/TR/WCAG20/#consistent-behavior-unpredictable-change) (A)  Changing the setting of a checkbox, radio button, or other UI component does not trigger unexpected changes in context. | Supports | User inputs do not cause unexpected actions for any content. |
| [3.2.3: Consistent Navigation](http://www.w3.org/TR/WCAG20/#consistent-behavior-consistent-locations) (AA)  Navigation menus are in the same location and order on every web page. | Supports | Navigation menus are consistently in the same place and in same order. |
| [3.3.4: Error Prevention (Legal, Financial, Data)](http://www.w3.org/TR/WCAG20/#minimize-error-reversible) (AA)  For web pages with legal or financial commitments, input can be reviewed and corrected before final submission, and submissions can be reverted. | Supports (N/A) | There are no submissions which require legal or financial commitments. |