# **Draft Proposal for including WCAG AAA provisions in WCAG2ICT**

This is proposed language to update the [current WCAG2ICT](https://www.w3.org/TR/wcag2ict/) document to include all AAA provisions from WCAG 2.0, 2.1 and 2.2.

It is provided to help advance the process of considering the AAA provisions for inclusion in WCAG2ICT.

All instances of the word Web are highlighted

## 

## **Summary of Results**

In this proposal, all AAA provisions apply as written, and as described in Understanding WCAG 2.2 except

* **Success Criterion 2.4.8 Location**
  + A [mechanism](https://www.w3.org/TR/WCAG22/#dfn-mechanism) is available to allow the purpose of each link to be identified from link text alone, except where the purpose of the link would be [ambiguous to users in general](https://www.w3.org/TR/WCAG22/#dfn-ambiguous-to-users-in-general).
  + - applies as written with Software or Electronic documents , and as described in [Intent from Understanding Success Criterion 2.4.8](https://www.w3.org/WAI/WCAG22/Understanding/location.html), replacing “within a set of Web pages” with “in a set of non-web documents or software”.
* **Success Criterion 2.5.6 Concurrent Input Mechanisms** 
  + Web content does not restrict use of input modalities available on a platform except where the restriction is [essential](https://www.w3.org/TR/WCAG22/#dfn-essential), required to ensure the security of the content, or required to respect user settings.
  + **-** applies directly as written, and as described in [Intent from Understanding Success Criterion 2.5.6](https://www.w3.org/WAI/WCAG22/Understanding/concurrent-input-mechanisms.html), replacing “Web content” with “non-web content or software”.
* **Success Criterion 3.3.6 Error Prevention (All)** 
  + For [Web pages](https://www.w3.org/TR/WCAG22/#dfn-web-page-s) that require the user to submit information, at least one of the following is true:
    - **Reversible:** Submissions are reversible.
    - **Checked:** Data entered by the user is checked for input errors and the user is provided an opportunity to correct them.
    - **Confirmed:** A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.
  + **-** applies directly as written, and as described in [Intent from Understanding Success Criterion 3.3.6](https://www.w3.org/WAI/WCAG22/Understanding/error-prevention-all.html) (also provided below), replacing “Web pages” with “non-web documents or software”.

## **Results by provision**

Success Criterion 1.2.6 Sign Language (Prerecorded) (AAA)

From [Success Criterion 1.2.6](https://www.w3.org/TR/WCAG22/#sign-language-prerecorded):

[Sign language interpretation](https://www.w3.org/TR/WCAG22/#dfn-sign-language-interpretation) is provided for all [prerecorded](https://www.w3.org/TR/WCAG22/#dfn-prerecorded) [audio](https://www.w3.org/TR/WCAG22/#dfn-audio) content in [synchronized media](https://www.w3.org/TR/WCAG22/#dfn-synchronized-media).

Additional Guidance When Applying Success Criterion 1.2.6 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 1.2.6](https://www.w3.org/WAI/WCAG22/Understanding/sign-language-prerecorded.html) (also provided below).

**[Intent from Understanding Success Criterion 1.2.6](https://www.w3.org/WAI/WCAG22/Understanding/sign-language-prerecorded.html)**

**Intent**

The intent of this Success Criterion is to enable people who are deaf or hard of hearing and who are fluent in a sign language to understand the content of the audio track of synchronized media presentations. Written text, such as that found in captions, is often a second language. Because sign language provides the ability to provide intonation, emotion and other audio information that is reflected in sign language interpretation, but not in captions, sign language interpretation provides richer and more equivalent access to synchronized media. People who communicate extensively in sign language are also faster in sign language and synchronized media is a time-based presentation.

**Benefits**

* People whose human language is a sign language sometimes have limited reading ability. These individuals may not be able to read and comprehend the captions and thus require a sign language interpretation to gain access to the synchronized media content.

Success Criterion 1.2.7 Extended Audio Description (Prerecorded (AAA)

From [Success Criterion 1.2.7](https://www.w3.org/TR/WCAG22/#extended-audio-description-prerecorded):

Where pauses in foreground audio are insufficient to allow [audio descriptions](https://www.w3.org/TR/WCAG22/#dfn-audio-descriptions) to convey the sense of the video, [extended audio description](https://www.w3.org/TR/WCAG22/#dfn-extended-audio-description) is provided for all [prerecorded](https://www.w3.org/TR/WCAG22/#dfn-prerecorded) [video](https://www.w3.org/TR/WCAG22/#dfn-video) content in [synchronized media](https://www.w3.org/TR/WCAG22/#dfn-synchronized-media).

Additional Guidance When Applying Success Criterion 1.2.7 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 1.2.7](https://www.w3.org/WAI/WCAG22/Understanding/extended-audio-description-prerecorded.html)(also provided below).

[**Intent from Understanding Success Criterion 1.2.7**](https://www.w3.org/WAI/WCAG22/Understanding/extended-audio-description-prerecorded.html)

**Intent**

The intent of this Success Criterion is to provide people who are blind or visually impaired access to a synchronized media presentation beyond that which can be provided by standard audio description. This is done by periodically freezing the synchronized media presentation and playing additional audio description. The synchronized media presentation is then resumed.

Because it disrupts viewing for those who do not need the additional description, techniques that allow you to turn the feature on and off are often provided. Alternately, versions with and without the additional description can be provided.

**Benefits**

* People who are blind, people with low vision who cannot see the screen, as well as those with cognitive limitations who have difficulty interpreting visually what is happening, often use audio description of the visual information. However, if there is too much dialogue the audio description is insufficient. Extended audio description can provide the additional information needed to understand the video.

Success Criterion 1.2.8 Media Alternative (Prerecorded) (AAA)

From [Success Criterion 1.2.8](https://www.w3.org/TR/WCAG22/#media-alternative-prerecorded):

An [alternative for time-based media](https://www.w3.org/TR/WCAG22/#dfn-alternative-for-time-based-media) is provided for all [prerecorded](https://www.w3.org/TR/WCAG22/#dfn-prerecorded) [synchronized media](https://www.w3.org/TR/WCAG22/#dfn-synchronized-media) and for all prerecorded [video-only](https://www.w3.org/TR/WCAG22/#dfn-video-only) media.

Additional Guidance When Applying Success Criterion 1.2.8 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 1.2.8](https://www.w3.org/WAI/WCAG22/Understanding/media-alternative-prerecorded.html) (also provided below).

[**Intent from Understanding Success Criterion 1.2.8**](https://www.w3.org/WAI/WCAG22/Understanding/media-alternative-prerecorded.html)

**Intent**

The intent of this Success Criterion is to make audio visual material available to individuals whose vision is too poor to reliably read [captions](https://www.w3.org/WAI/WCAG22/Understanding/media-alternative-prerecorded.html#dfn-captions) and whose hearing is too poor to reliably hear dialogue and [audio description](https://www.w3.org/WAI/WCAG22/Understanding/media-alternative-prerecorded.html#dfn-audio-description). This is done by providing an alternative for time-based media.

This approach involves providing all of the information in the synchronized media (both visual and auditory) in text form. An alternative for time-based media provides a running description of all that is going on in the synchronized media content. The alternative for time-based media reads something like a book. Unlike audio description, the description of the video portion is not constrained to just the pauses in the existing dialogue. Full descriptions are provided of all visual information, including visual context, actions and expressions of actors, and any other visual material. In addition, non-speech sounds (laughter, off-screen voices, etc.) are described, and transcripts of all dialogue are included. The sequence of descriptions and dialogue transcripts is the same as the sequence in the synchronized media itself. As a result, the alternative for time-based media can provide a much more complete representation of the synchronized media content than audio description alone.

If there is any interaction as part of the synchronized media presentation (e.g., "press now to answer the question") then the alternative for time-based media would provide hyperlinks or whatever is needed to provide parallel functionality.

Individuals whose vision is too poor to reliably read captions and whose hearing is too poor to reliably hear dialogue can access the alternative for time-based media by using a refreshable braille display.

**NOTE**

For 1.2.3, 1.2.5, and 1.2.7, if all of the information in the video track is already provided in the audio track, no audio description is necessary. 

1.2.3, 1.2.5, and 1.2.8 overlap somewhat with each other. This is to give the author some choice at the minimum conformance level, and to provide additional requirements at higher levels. At Level A in Success Criterion 1.2.3, authors do have the choice of providing either an audio description or a full text alternative. If they wish to conform at Level AA, under Success Criterion 1.2.5 authors must provide an audio description – a requirement already met if they chose that alternative for 1.2.3, otherwise an additional requirement. At Level AAA under Success Criterion 1.2.8 they must provide an extended text description. This is an additional requirement if both 1.2.3 and 1.2.5 were met by providing an audio description only. If 1.2.3 was met, however, by providing a text description, and the 1.2.5 requirement for an audio description was met, then 1.2.8 does not add new requirements.

**Benefits**

* People who cannot see well or at all and who also cannot hear well or at all can get access to information in audio-visual presentations.

Success Criterion 1.2.9 Audio-only (Live) (AAA)

From [Success Criterion 1.2.9](https://www.w3.org/TR/WCAG22/#audio-only-live):

An [alternative for time-based media](https://www.w3.org/TR/WCAG22/#dfn-alternative-for-time-based-media) that presents equivalent information for [live](https://www.w3.org/TR/WCAG22/#dfn-live) [audio-only](https://www.w3.org/TR/WCAG22/#dfn-audio-only) content is provided.

Additional Guidance When Applying Success Criterion 1.2.9 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 1.2.9](https://www.w3.org/WAI/WCAG22/Understanding/audio-only-live.html) (also provided below).

NOTE: This SC applies to live content only and not to two-way conversations between two individuals.

[**Intent from Understanding Success Criterion 1.2.9**](https://www.w3.org/WAI/WCAG22/Understanding/audio-only-live.html)

**Intent**

The intent of this Success Criterion is to make information conveyed by live audio, such as video conferencing, live speeches and radio Webcasts, accessible through the use of a text alternative. A live text caption service will enable live audio to be accessible to people who are deaf or hard of hearing, or who cannot otherwise hear the audio. Such services use a trained human operator who listens in to what is being said and uses a special keyboard to enter the text with only a small delay. They are able to capture a live event with a high degree of fidelity, and also to insert notes on any non spoken audio which is essential to understanding the event. A transcript is sometimes a possibility if the live audio is following a set script; but a live caption service is preferred because it plays out at the same pace as the audio itself, and can adapt to any deviations from the script that might occur.

Using untrained operators, or providing a transcript which differs markedly from what actually happens would not be considered meeting this Success Criterion.

This success criterion was intended to apply to broadcast of audio and is not intended to require that two-way audio calls between two or more individuals through Web apps must be captioned regardless of the needs of users. Responsibility for providing captions would fall to the content providers (the callers) or the “host” caller, and not the application.

Success Criterion 1.3.6 Identify Purpose (AAA)

From [Success Criterion 1.3.6](https://www.w3.org/TR/WCAG22/#identify-purpose):

In content implemented using markup languages, the purpose of [user interface components](https://www.w3.org/TR/WCAG22/#dfn-user-interface-components), icons, and [regions](https://www.w3.org/TR/WCAG22/#dfn-regions) can be [programmatically determined](https://www.w3.org/TR/WCAG22/#dfn-programmatically-determinable).

Additional Guidance When Applying Success Criterion 1.3.6 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 1.3.6](https://www.w3.org/WAI/WCAG22/Understanding/identify-purpose.html) (also provided below).

NOTE: For software it applies to those parts of the software that are implemented in markup language.

[**Intent from Understanding Success Criterion 1.3.6**](https://www.w3.org/WAI/WCAG22/Understanding/identify-purpose.html)

**Intent**

The intent of this Success Criterion is to ensure that the purpose of many elements on a page can be programmatically determined, so that user agents can extract and present that purpose to users using different modalities.

Many users with limited vocabularies rely on familiar terms or symbols in order to use the Web. However, what is familiar to one user may not be familiar to another. When authors indicate the purpose, users can take advantage of personalization and user preferences to load a set of symbols or vocabulary familiar to them.

This Success Criterion requires the author to programmatically associate the purpose of icons, regions and components (such as buttons, links, and fields) so that user agents can determine the purpose of each and adapt indicators or terminology to make them understandable for the user. It is achieved by adding semantics or metadata that provide this context. It is similar to adding role information (as required by 4.1.2) but instead of providing information about what the UI component is (such as an image) it provides information about what the component represents (such as a link to the home page).

Identifying regions of the page allows people to remove or highlight regions with their user agent [NOTE: assistive technologies are a subset of user agents].

Products for people who are non-vocal often use symbols to help users communicate. These symbols are in fact people's language. Unfortunately, many of these symbols are both subject to copyright and not interoperable. That means end users can only use one device, and cannot use content, apps, or assistive technologies that have not been made by a single company.

This Success Criterion enables symbols to be interoperable so that symbol users can understand different content that was not just made by one company. When users' symbols are mapped to the same nodes, then user agents can load the user-understandable symbol. People can then buy the symbols and use them across different devices or applications. (Note that the symbols would still be proprietary, but they could then be interoperable.)

**Benefits**

People who benefit have many different cognitive disabilities including:

* Memory
* Focus and attention
* Language-related
* Executive function and decision making.

Meeting this Success Criterion helps users who need extra support or a familiar interface, including the need for:

* Symbols and graphics with which users are familiar
* Fewer features and less cognitive overload
* Keyboard shortcuts

Success Criterion 1.4.6 Contrast (Enhanced) (AAA)

From [Success Criterion 1.4.6](https://www.w3.org/TR/WCAG22/#contrast-enhanced):

The visual presentation of [text](https://www.w3.org/TR/WCAG22/#dfn-text) and [images of text](https://www.w3.org/TR/WCAG22/#dfn-images-of-text) has a [contrast ratio](https://www.w3.org/TR/WCAG22/#dfn-contrast-ratio) of at least 7:1, except for the following:

* **Large Text:** [Large-scale](https://www.w3.org/TR/WCAG22/#dfn-large-scale) text and images of large-scale text have a contrast ratio of at least 4.5:1;
* **Incidental:** Text or images of text that are part of an inactive [user interface component](https://www.w3.org/TR/WCAG22/#dfn-user-interface-components), that are [pure decoration](https://www.w3.org/TR/WCAG22/#dfn-pure-decoration), that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement.
* **Logotypes:** Text that is part of a logo or brand name has no contrast requirement.

Additional Guidance When Applying Success Criterion 1.4.6 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 1.4.6](https://www.w3.org/WAI/WCAG22/Understanding/contrast-enhanced.html) (also provided below).

[**Intent from Understanding Success Criterion 1.4.6**](https://www.w3.org/WAI/WCAG22/Understanding/contrast-enhanced.html)

**Intent**

The intent of this Success Criterion is to provide enough contrast between text and its background so that it can be read by people with moderately low vision (who do not use contrast-enhancing assistive technology). For people without color deficiencies, hue and saturation have minimal or no effect on legibility as assessed by reading performance (Knoblauch et al., 1991). Color deficiencies can affect luminance contrast somewhat. Therefore, in the recommendation, the contrast is calculated in such a way that color is not a key factor so that people who have a color vision deficit will also have adequate contrast between the text and the background.

Text that is decorative and conveys no information is excluded. For example, if random words are used to create a background and the words could be rearranged or substituted without changing meaning, then it would be decorative and would not need to meet this criterion.

Text that is larger and has wider character strokes is easier to read at lower contrast. The contrast requirement for larger text is therefore lower. This allows authors to use a wider range of color choices for large text, which is helpful for design of pages, particularly titles. 18 point text or 14 point bold text is judged to be large enough to require a lower contrast ratio. (See The American Printing House for the Blind Guidelines for Large Printing and The Library of Congress Guidelines for Large Print under [Resources](https://www.w3.org/WAI/WCAG22/Understanding/contrast-enhanced.html#visual-audio-contrast7-resources-head)). "18 point" and "bold" can both have different meanings in different fonts but, except for very thin or unusual fonts, they should be sufficient. Since there are so many different fonts, the general measures are used and a note regarding fancy or thin fonts is included.

NOTE

The point size should be obtained from the user agent, or calculated based on font metrics as the user agent does when evaluating this success criterion. Point sizes are based on the CSS pt size as defined in [CSS3 Values](https://www.w3.org/TR/css-values-3/#reference-pixel). The ratio between sizes in points and CSS pixels is 1pt = 1.333px, therefore 14pt and 18pt are equivalent to approximately 18.5px and 24px.

When fonts have anti-aliasing applied to make them look smoother, they can lose darkness or lightness. Thus, the actual contrast can be reduced. Thicker stem widths will reduce this effect (thin fonts could have the full stem lightened rather than just the ends). Using larger fonts and testing for legibility in user agents with font smoothing turned on is recommended.

Because different image editing applications default to different pixel densities (ex. 72 PPI or 96 PPI), specifying point sizes for fonts from within an image editing application can be unreliable when it comes to presenting text at a specific size. When creating images of large-scale text, authors should ensure that the text in the resulting image is roughly equivalent to 1.2 and 1.5 em or to 120% or 150% of the default size for body text as rendered by the browser.

The 7:1 and 4.5:1 contrast ratios referenced in this Success Criterion are intended to be treated as threshold values. When comparing the computed contrast ratio to the Success Criterion ratio, the computed values should not be rounded (e.g. 4.499:1 would not meet the 4.5:1 threshold).

The previously-mentioned contrast requirements for text also apply to images of text (text that has been rendered into pixels and then stored in an image format) as stated in Success Criterion 1.4.5

This requirement applies to situations in which images of text were intended to be understood as text. Incidental text, such as in photographs that happen to include a street sign, are not included. Nor is text that for some reason is designed to be invisible to all users. Stylized text, such as in corporate logos, should be treated in terms of its function on the page, which may or may not warrant including the content in the text alternative. Corporate visual guidelines beyond logo and logotype are not included in the exception.

In this provision there is an exception that reads "that are part of a picture that contains significant other visual content,". This exception is intended to separate pictures that have text in them from images of text that are done to replace text in order to get a particular look.

Although this Success Criterion only applies to text, similar issues occur for content presented in charts, graphs, diagrams, and other non-text-based information which is covered by [Success Criterion 1.4.11 Non-Text Contrast](https://www.w3.org/WAI/WCAG22/21/non-text-contrast.html).

Success Criterion 1.4.7 Low or No Background Audio (AAA)

From [Success Criterion 1.4.7](https://www.w3.org/TR/WCAG22/#low-or-no-background-audio):

For [prerecorded](https://www.w3.org/TR/WCAG22/#dfn-prerecorded) [audio-only](https://www.w3.org/TR/WCAG22/#dfn-audio-only) content that (1) contains primarily speech in the foreground, (2) is not an audio [CAPTCHA](https://www.w3.org/TR/WCAG22/#dfn-captcha) or audio logo, and (3) is not vocalization intended to be primarily musical expression such as singing or rapping, at least one of the following is true:

* **No Background:** The audio does not contain background sounds.
* **Turn Off:** The background sounds can be turned off.
* **20 dB:** The background sounds are at least 20 decibels lower than the foreground speech content, with the exception of occasional sounds that last for only one or two seconds.

NOTE

Per the definition of "decibel," background sound that meets this requirement will be approximately four times quieter than the foreground speech content.

Additional Guidance When Applying Success Criterion 1.4.7 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 1.4.7](https://www.w3.org/WAI/WCAG22/Understanding/low-or-no-background-audio.html) (also provided below).

[**Intent from Understanding Success Criterion 1.4.7**](https://www.w3.org/WAI/WCAG22/Understanding/low-or-no-background-audio.html)

**Intent**

The intent of this Success Criterion is to ensure that any non-speech sounds are low enough that a user who is hard of hearing can separate the speech from background sounds or other noise foreground speech content.

The value of 20 dB was chosen based on Large area assistive listening systems (ALS): Review and recommendations [[LAALS]] and In-the-ear measurements of interference in hearing aids from digital wireless telephones [[HEARING-AID-INT]]

**Benefits**

* People who are hard of hearing often have great difficulty separating speech from background sound.

Success Criterion 1.4.8 Visual Presentation (AAA)

From [Success Criterion 1.4.8](https://www.w3.org/TR/WCAG22/#visual-presentation):

For the visual presentation of [blocks of text](https://www.w3.org/TR/WCAG22/#dfn-blocks-of-text), a [mechanism](https://www.w3.org/TR/WCAG22/#dfn-mechanism) is available to achieve the following:

* Foreground and background colors can be selected by the user.
* Width is no more than 80 characters or glyphs (40 if CJK).
* Text is not justified (aligned to both the left and the right margins).
* Line spacing (leading) is at least space-and-a-half within paragraphs, and paragraph spacing is at least 1.5 times larger than the line spacing.
* Text can be resized without assistive technology up to 200 percent in a way that does not require the user to scroll horizontally to read a line of text [on a full-screen window](https://www.w3.org/TR/WCAG22/#dfn-on-a-full-screen-window).

Additional Guidance When Applying Success Criterion 1.4.8 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 1.4.8](https://www.w3.org/WAI/WCAG22/Understanding/visual-presentation.html) (also provided below).

[**Intent from Understanding Success Criterion 1.4.8**](https://www.w3.org/WAI/WCAG22/Understanding/visual-presentation.html)

**Intent**

The intent of this Success Criterion is to ensure that visually rendered text is presented in such a manner that it can be perceived without its layout interfering with its readability. People with some cognitive, language and learning disabilities and some low vision users cannot perceive the text and/or lose their reading place if the text is presented in a manner that is difficult for them to read.

People with some visual or cognitive disabilities need to be able to select the color of text and the color of the background. They sometimes choose combinations that seem unintuitive to someone without that disability. Sometimes these combinations have very low contrast. Sometimes only very specific color combinations work for them. Control of color or other aspects of text presentation makes a huge difference to their comprehension.

For people with some reading or vision disabilities, long lines of text can become a significant barrier. They have trouble keeping their place and following the flow of text. Having a narrow block of text makes it easier for them to continue on to the next line in a block. Lines should not exceed 80 characters or glyphs (40 if CJK), where glyphs are the element of writing in the writing system for the text. Studies have shown that Chinese, Japanese and Korean (CJK) characters are approximately twice as wide as non-CJK characters when both types of characters are displayed with characteristics that achieve the same readability, so the maximum line width for CJK characters is half that of non-CJK characters.

People with some cognitive disabilities find it difficult to track text where the lines are close together. Providing extra space between lines and paragraphs allows them to better track the next line and to recognize when they have reached the end of a paragraph. It is best if there are several different options, for instance, space-and-a-half and double spacing for line spacing. By space and a half within paragraphs we mean that top of one line is 150% further from the top of the line below it than would be true when the text is 'single spaced' (the default spacing for the font). By Paragraph spacing that is 1.5 times larger than the line spacing we mean that the spacing from the top of the last line of 1 paragraph is 250% farther from the Top of the first line of the next paragraph (i.e., that there is a blank line between the two paragraphs that is 150% of the single space blank line).

People with certain cognitive disabilities have problems reading text that is both left and right justified. The uneven spacing between words in fully justified text can cause "rivers of white" space to run down the page making reading difficult and in some cases impossible. Text justification can also cause words to be spaced closely together, so that it is difficult for them to locate word boundaries.

The resizing provision ensures that visually rendered text (text characters that have been displayed so that they can be seen [vs. text characters that are still in data form such as ASCII]) can be scaled successfully without requiring that the user scroll left and right to see all of the content. When the content has been authored so that this is possible, the content is said to reflow. This permits people with low vision and people with cognitive disabilities to increase the size of the text without becoming disoriented.

The scaling of content is primarily a user agent responsibility. User agents that satisfy UAAG 1.0 Checkpoint 4.1 allow users to configure text scale. The author's responsibility is to create Web content that does not prevent the user agent from scaling the content and that allows the reflow of the content within the current width of the viewport. See [1.4.4: Resize Text](https://www.w3.org/WAI/WCAG22/Understanding/resize-text) for additional discussion of resizing text.

The horizontal scrolling requirement is not intended to apply to small-screen devices where long words may be displayed on a single line and require users to scroll horizontally. For the purposes of this requirement, authors should ensure that content meets this requirement on standard desktop/laptop displays with the browser window maximized. Since people generally keep their computers for several years, it is best not to rely on the latest desktop/laptop display resolutions but to consider the common desktop/laptop display resolutions over the course of several years when making this evaluation.

Wrapping should always be possible as long as words are not so long that a single word is more than half the width of a full screen. Very long URIs may run off the side of an enlarged screen, but they would not be considered text for "reading" and, therefore, would not violate this provision.

This provision does not mean that a user would never need to use horizontal scrolling. It only means that they would not need to use horizontal scrolling back and forth to read a line of text. For example, if a page consisted of two equal sized columns of text, it would automatically meet this provision. Enlarging the page would mean that the first column was completely on screen and the user could just scroll vertically down the page to read it. To read the second column, they would horizontally scroll to the right, where the right hand column would then fit entirely within the width of the screen, and read that column without further horizontal scrolling.

Success Criterion 1.4.9 Images of Text (No Exception (AAA)

From [Success Criterion 1.4.9](https://www.w3.org/TR/WCAG22/#images-of-text-no-exception):

[Images of text](https://www.w3.org/TR/WCAG22/#dfn-images-of-text) are only used for [pure decoration](https://www.w3.org/TR/WCAG22/#dfn-pure-decoration) or where a particular presentation of [text](https://www.w3.org/TR/WCAG22/#dfn-text) is [essential](https://www.w3.org/TR/WCAG22/#dfn-essential) to the information being conveyed.

NOTE: Logotypes (text that is part of a logo or brand name) are considered essential.

Additional Guidance When Applying Success Criterion 1.4.9 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 1.4.9](https://www.w3.org/WAI/WCAG22/Understanding/images-of-text-no-exception.html) (also provided below).

[**Intent from Understanding Success Criterion 1.4.9**](https://www.w3.org/WAI/WCAG22/Understanding/images-of-text-no-exception.html)

**Intent**

The intent of this Success Criterion is to enable people who require a particular visual presentation of text to be able to adjust the text presentation as required. This includes people who require the text in a particular font size, foreground and background color, font family, line spacing or alignment.

This means implementing the text in a manner that allows its presentation to be changed or providing a mechanism by which users can select an alternate presentation. Using images of text is an example of an implementation that does not allow users to alter the presentation of the text within it.

In some situations, a particular visual presentation of the text is essential to the information being conveyed. This means that information would be lost without that particular visual presentation. In this case implementing the text in a manner that allows its presentation to be changed is not required. This includes text that demonstrates a particular visual aspect of the text, such as a particular font family, or text that conveys an identity, such as text within a company logo.

Text that is decorative does not require implementing the text in a manner that allows its presentation to be changed.

The definition of image of text contains the note: Note: This does not include text that is part of a picture that contains significant other visual content. Examples of such pictures include graphs, screenshots, and diagrams which visually convey important information through more than just text.

**Benefits**

* People with low vision (who may have trouble reading the text with the authored font family, size and/or color).
* People with visual tracking problems (who may have trouble reading the text with the authored line spacing and/or alignment).
* People with cognitive disabilities that affect reading.

Success Criterion 2.1.3 Keyboard (No Exception) (AAA)

From [Success Criterion 2.1.3](https://www.w3.org/TR/WCAG22/#keyboard-no-exception):

All [functionality](https://www.w3.org/TR/WCAG22/#dfn-functionality) of the content is operable through a [keyboard interface](https://www.w3.org/TR/WCAG22/#dfn-keyboard-interface) without requiring specific timings for individual keystrokes.

Additional Guidance When Applying Success Criterion 2.1.3 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.1.3](https://www.w3.org/WAI/WCAG22/Understanding/keyboard-no-exception.html) (also provided below).

[**Intent from Understanding Success Criterion 2.1.3**](https://www.w3.org/WAI/WCAG22/Understanding/keyboard-no-exception.html)

**Intent**

The intent of this Success Criterion is to ensure that **all** content is operable from the keyboard. This is the same as Success Criterion 2.1.1, except that no exceptions are allowed. This does not mean that content where the underlying function requires input that depends on the path of the user's movement and not just the endpoints (excluded from the requirements of 2.1.1) must be made keyboard accessible. Rather, it means that content that uses path-dependent input cannot conform to this Success Criterion and therefore cannot meet Guideline 2.1 at Level AAA.

Success Criterion 2.2.3 No Timing (AAA)

From [Success Criterion 2.2.3](https://www.w3.org/TR/WCAG22/#no-timing):

Timing is not an [essential](https://www.w3.org/TR/WCAG22/#dfn-essential) part of the event or activity presented by the content, except for non-interactive [synchronized media](https://www.w3.org/TR/WCAG22/#dfn-synchronized-media) and [real-time events](https://www.w3.org/TR/WCAG22/#dfn-real-time-events).

Additional Guidance When Applying Success Criterion 2.2.3 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.2.3](https://www.w3.org/WAI/WCAG22/Understanding/no-timing.html) (also provided below).

[**Intent from Understanding Success Criterion 2.2.3**](https://www.w3.org/WAI/WCAG22/Understanding/no-timing.html)

**Intent**

The intent of this Success Criterion is to minimize the occurrence of content that requires timed interaction. This enables people with blindness, low vision, cognitive limitations, or motor impairments to interact with content. This differs from the Level A Success Criterion in that the only exception is for real-time events.

**NOTE**

Video only, such as sign language, is covered in [Guideline 1.1](https://www.w3.org/WAI/WCAG22/Understanding/text-alternatives).

**Benefits**

* People with physical disabilities often need more time to react, to type and to complete activities. People with low vision need more time to locate things on screen and to read. People who are blind and using screen readers may need more time to understand screen layouts, to find information and to operate controls. People who have cognitive or language limitations need more time to read and to understand. People who are deaf and communicate in sign language may need more time to read information printed in text (which may be a second language for some).
* In circumstances where a sign-language interpreter may be relating audio content to a user who is deaf, control over time limits is also important.

Success Criterion 2.2.4 Interruptions (AAA)

From [Success Criterion 2.2.4](https://www.w3.org/TR/WCAG22/#interruptions):

Interruptions can be postponed or suppressed by the user, except interruptions involving an [emergency](https://www.w3.org/TR/WCAG22/#dfn-emergency).

Additional Guidance When Applying Success Criterion 2.2.4 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.2.4](https://www.w3.org/WAI/WCAG22/Understanding/interruptions.html) (also provided below).

[**Intent from Understanding Success Criterion 2.2.4**](https://www.w3.org/WAI/WCAG22/Understanding/interruptions.html)

**Intent**

The intent of this Success Criterion is to allow users to turn off updates from the author/server except in emergencies. Emergencies would include civil emergency alert messages or any other messages that warn of danger to health, safety, or property, including data loss, loss of connection, etcetera.

This allows access by people with cognitive limitations or attention disorders by enabling them to focus on the content. It also allows users who are blind or have low vision to keep their "viewing" focus on the content they are currently reading.

**Benefits**

* Individuals with attention deficit disorders can focus on content without distraction.
* Individuals with low vision or who use screen readers will not have content updated while they are viewing it (which can lead to discontinuity and misunderstanding if they start reading in one topic and finish in another).

Success Criterion 2.2.5 Re-authenticating (AAA)

From [Success Criterion 2.2.5](https://www.w3.org/TR/WCAG22/#re-authenticating):

When an authenticated session expires, the user can continue the activity without loss of data after re-authenticating.

Additional Guidance When Applying Success Criterion 2.2.5 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.2.5](https://www.w3.org/WAI/WCAG22/Understanding/re-authenticating.html) (also provided below).

[**Intent from Understanding Success Criterion 2.2.5**](https://www.w3.org/WAI/WCAG22/Understanding/re-authenticating.html)

**Intent**

The intent of this Success Criterion is to allow all users to complete authenticated transactions that have inactivity time limits or other circumstances that would cause a user to be logged out while in the midst of completing the transaction.

For security reasons, many sites implement an authentication time limit after a certain period of inactivity. These time limits may cause problems for persons with disabilities because it may take longer for them to complete the activity.

Other sites will log a person out of a session if a person logs in on the Web site from another computer or if other activities arise that make the site suspicious of whether the person is still the same legitimate person who logged in originally. When users are logged out while still in the midst of a transaction - it is important that they be given the ability to re-authenticate and continue with the transaction without the loss of any data already entered.

**Benefits**

* This Success Criterion benefits people who may require additional time to complete an activity. People with cognitive limitations may read slowly and require additional time to read and respond to a questionnaire. Users interacting via a screen reader may need extra time to navigate and complete a complicated form. A person with motor impairments or who navigates with an alternative input device may require additional time to navigate through or complete input within a form.
* In circumstances where a sign-language interpreter may be relating audio content to a user who is deaf, control over time limits is also important.

Success Criterion 2.2.6 Timeouts (AAA)

From [Success Criterion 2.2.6](https://www.w3.org/TR/WCAG22/#timeouts):

Users are warned of the duration of any [user inactivity](https://www.w3.org/TR/WCAG22/#dfn-user-inactivity) that could cause data loss, unless the data is preserved for more than 20 hours when the user does not take any actions.

**NOTE**  Privacy regulations may require explicit user consent before user identification has been authenticated and before user data is preserved. In cases where the user is a minor, explicit consent may not be solicited in most jurisdictions, countries or regions. Consultation with privacy professionals and legal counsel is advised when considering data preservation as an approach to satisfy this success criterion.

Additional Guidance When Applying Success Criterion 2.2.6 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.2.6](https://www.w3.org/WAI/WCAG22/Understanding/timeouts.html) (also provided below).

**[Intent from Understanding Success Criterion 2.2.6](https://www.w3.org/WAI/WCAG22/Understanding/timeouts.html)**

**Intent**

The intent of this Success Criterion is to ensure that when a timeout is used, users know what duration of inactivity will cause the page to time out and result in lost data. The use of timed events can present significant barriers for users with cognitive disabilities, as these users may require more time to read content or to perform functions, such as completing an online form.

During the completion of an online process, such as to reserve a hotel room or purchase a plane ticket, a user with a cognitive impairment may become overwhelmed with lengthy instructions and data input required to complete the process. The user may not be able to complete the process in one sitting and may need to take a break. Users should be able to leave a process without losing their current place within the process, and without losing information that has already been entered. If users cannot take a break and check their work, many will often be unable to complete a task correctly.

This Success Criterion works in tandem with Success Criterion 2.2.1 Timing Adjustable, but is specifically focused on notification of timeouts related to user inactivity.

The best way to conform to this success criterion is to keep the user data for at least 20 hours. This enables the user with disabilities and the aging community to start and finish a task, taking breaks as needed. However, when it is not practical to save the user data the author must warn the user about the duration of inactivity which will result in a timeout. Timeouts should be displayed to the user once at the beginning of the related task or process and not at each step.

This success criterion only applies to timeouts that are within the content provider's knowledge or control. For example, if the user closes a Web browser or device and loses content in an open page that has not yet been submitted, the success criterion has not been violated.

**Benefits**

This Success Criterion helps users by ensuring they are notified about timeouts related to inactivity.

When a user knows how much time they are allowed for a task, they will know whether they can take a needed break and resume their work without needing to start again. This enables many users to complete tasks online that they otherwise could not do. If a situation exists where a timeout is necessary, the user is warned at the start of the task about the length of inactivity that would generate a timeout. The user can then decide if they can manage this task or not in the given time, or if they need to prepare materials in advance of starting a process. This will reduce the frustration of losing work due to a timeout.

This Success Criterion helps people with many different cognitive disabilities, including people with:

* language-related disabilities;
* memory-related disabilities;
* focus-and-attention-related disabilities; and
* disabilities that affect executive function and decision making.

Success Criterion 2.3.2 Three Flashes (AAA)

From [Success Criterion 2.3.2](https://www.w3.org/TR/WCAG22/#three-flashes):

[Web pages](https://www.w3.org/TR/WCAG22/#dfn-web-page-s) do not contain anything that [flashes](https://www.w3.org/TR/WCAG22/#dfn-flashes) more than three times in any one second period.

Additional Guidance When Applying Success Criterion 2.3.2 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.3.2](https://www.w3.org/WAI/WCAG22/Understanding/three-flashes.html) (also provided below).

[**Intent from Understanding Success Criterion 2.3.2**](https://www.w3.org/WAI/WCAG22/Understanding/three-flashes.html)

**Intent**

The purpose of this Success Criterion is to further reduce the chance of seizures. Seizures cannot be completely eliminated since some people are so sensitive. However, by eliminating all 3-per-second flashing over any area of the screen, the chances of a person having a seizure are further reduced than when just meeting the measures ordinarily used today in standards internationally, as we do at Level A.

Whereas [Success Criterion 2.3.1](https://www.w3.org/WAI/WCAG22/Understanding/three-flashes-or-below-threshold) allows flashing if it is dim enough or has a small enough area, Success Criterion 2.3.2 does not allow flashing greater than 3 per second, regardless of brightness or size. As a result, even a single flashing pixel would violate this criterion. The intent is to guard against flashing larger than a single pixel, but since an unknown amount of magnification or high contrast setting may be applied, the prohibition is against any flashing.

**NOTE**

In some cases, what we refer to as "blinking" and what we refer to as "flashing" may overlap slightly. We are using different terms for the two because "blinking" causes a distraction problem which you can allow for a short time as long as it stops (or can be stopped) whereas "flashing" is a seizure trigger and cannot be allowed or it will cause a seizure. The seizure would occur faster than most users could turn it off. "Blink" therefore refers to slow repeating changes that would distract. "Flash" refers to changes that could cause a seizure if they were bright enough or persisted long enough. Blinking usually doesn't occur at speeds of 3 per second or more so blink and flash do not overlap. However, blinking can occur faster than 3 per second so there could be an overlap. See [2.2.2: Pause, Stop, Hide](https://www.w3.org/WAI/WCAG22/Understanding/pause-stop-hide) for more information on blink.

Success Criterion 2.3.3 Animation from Interactions (AAA)

From [Success Criterion 2.3.3](https://www.w3.org/TR/WCAG22/#animation-from-interactions):

[Motion animation](https://www.w3.org/TR/WCAG22/#dfn-motion-animation) triggered by interaction can be disabled, unless the animation is [essential](https://www.w3.org/TR/WCAG22/#dfn-essential) to the functionality or the information being conveyed.

Additional Guidance When Applying Success Criterion 2.3.3 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.3.3](https://www.w3.org/WAI/WCAG22/Understanding/animation-from-interactions.html) (also provided below).

**[Intent from Understanding Success Criterion 2.3.3](https://www.w3.org/WAI/WCAG22/Understanding/animation-from-interactions.html)**

**Intent**

The intent of this Success Criterion is to allow users to prevent animation from being displayed on Web pages. Some users experience distraction or nausea from animated content. For example, if scrolling a page causes elements to move (other than the essential movement associated with scrolling) it can trigger vestibular disorders. Vestibular (inner ear) disorder reactions include dizziness, nausea and headaches. Another animation that is often non-essential is parallax scrolling. Parallax scrolling occurs when backgrounds move at a different rate to foregrounds. Animation that is essential to the functionality or information of a Web page is allowed by this Success Criterion.

"Animation from interactions" applies when a user’s interaction initiates non-essential animation. In contrast, [2.2.2 Pause, Stop, Hide](https://www.w3.org/WAI/WCAG22/Understanding/pause-stop-hide.html) applies when the Web page initiates animation.

**NOTE:** The impact of animation on people with vestibular disorders can be quite severe. Triggered reactions include nausea, migraine headaches, and potentially needing bed rest to recover.

**How can a Website reduce the chances of triggering a vestibular disorder?** Choose any one of the following solutions. Avoid using unnecessary animation. Provide a control for users to turn off non-essential animations from user interaction. Take advantage of the reduce motion feature in the user agent or operating system.

**What about movement caused by a user scrolling a page?** Moving new content into the viewport is essential for scrolling. The user controls the essential scrolling movement so it is allowed. Only add non-essential animation to the scrolling interaction in a responsible way. Always give users the ability to turn off unnecessary movement.

**Benefits**

* **Vestibular Disorder**
  + People with vestibular disorders need control over movement triggered by interactions. Non-essential movement can trigger vestibular disorder reactions. Vestibular (inner ear) disorder reactions include distraction, dizziness, headaches and nausea.
  + Persona Quote: "Stop that extra movement! You are making me so dizzy I cannot concentrate. Now I have to turn off my computer and go lie down."

Success Criterion 2.4.8 Location (AAA)

From [Success Criterion 2.4.8](https://www.w3.org/TR/WCAG22/#location):

Information about the user's location within a [set of Web pages](https://www.w3.org/TR/WCAG22/#dfn-set-of-web-pages) is available.

Additional Guidance When Applying Success Criterion 2.4.8 to Non-Web Documents and Software:

This applies as written with Software or Electronic documents , and as described in [Intent from Understanding Success Criterion 2.4.8](https://www.w3.org/WAI/WCAG22/Understanding/location.html) (also provided below) , replacing “within a set of Web pages” with “in a set of non-web documents or software”.

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[**Intent from Understanding Success Criterion 2.4.8**](https://www.w3.org/WAI/WCAG22/Understanding/location.html)

**Intent**

The intent of this Success Criterion is to provide a way for the user to orient herself within a set of Web pages, a Web site, or a Web application and find related information.

**Benefits**

* This Success Criterion is helpful for people with a short attention span who may become confused when following a long series of navigation steps to a Web page. It is also helpful when a user follows a link directly to a page deep within a set of Web pages and needs to navigate that Web site to understand the content of that page or to find more related information.

Success Criterion 2.4.9 Link Purpose (Link Only) (AAA)

From [Success Criterion 2.4.9](https://www.w3.org/TR/WCAG22/#link-purpose-link-only):

A [mechanism](https://www.w3.org/TR/WCAG22/#dfn-mechanism) is available to allow the purpose of each link to be identified from link text alone, except where the purpose of the link would be [ambiguous to users in general](https://www.w3.org/TR/WCAG22/#dfn-ambiguous-to-users-in-general).

Additional Guidance When Applying Success Criterion 2.4.9 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.4.9](https://www.w3.org/WAI/WCAG22/Understanding/link-purpose-link-only.html) (also provided below).

[**Intent from Understanding Success Criterion 2.4.9**](https://www.w3.org/WAI/WCAG22/Understanding/link-purpose-link-only.html)

**Intent**

The intent of this Success Criterion is to help users understand the purpose of each link in the content, so they can decide whether they want to follow it. Best practice is that links with the same destination would have the same descriptions, but links with different purposes and destinations would have different descriptions (see also [Success Criterion 3.2.4](https://www.w3.org/WAI/WCAG22/Understanding/consistent-identification) which calls for consistency in identifying components that have the same functionality). Because the purpose of a link can be identified from its link text, links can be understood when they are out of context, such as when the user agent provides a list of all the links on a page.

The text in the link is intended to describe the purpose of the link. In cases where the link takes one to a document or a Web application, the name of the document or Web application would be sufficient to describe the purpose of the link (which is to take you to the document or Web application). Note that it is not required to use the name of the document or Web application; other things may also describe the purpose of the link.

[Success Criterion 2.4.2](https://www.w3.org/WAI/WCAG22/Understanding/page-titled) deals with the titles of pages. Here also, the name of a document or Web application being presented on the page would be sufficient to describe the purpose of the page. Having the link and the title agree, or be very similar, is good practice and provides continuity between the link 'clicked on' and the Web page that the user lands on.

The Success Criterion includes an exception for links for which the purpose of the link cannot be determined from the information on the Web page. In this situation, the person with the disability is not at a disadvantage; there is no additional context available to understand the link purpose. However, whatever amount of context is available on the Web page that can be used to interpret the purpose of the link must be made available in the link text to satisfy the Success Criterion.

The word "mechanism" is used to allow authors to either make all links fully understandable out of context by default or to provide a way to make them this way. This is done because for some pages, making the links all unambiguous by themselves makes the pages easier for some users and harder for others. Providing the ability to make the links unambiguous (by them selves) or not provides both users with disabilities with the ability to use the page in the format that best meets their needs.

For example: A page listing 100 book titles along with links to download the books in HTML, PDF, DOC, TXT, MP3, or AAC might ordinarily be viewed as the title of the book as a link with the words "in HTML" after it. then the sentence "Also available in: " followed by a series of short links with text of "HTML", "PDF", "DOC", "TXT", "MP3", and "AAC". At Level 3, some users could opt to view the page this way - because they would find the page harder to understand or slower to use if the full title of the book were included in each of the links. Others could opt to view the page with the full title as part of each of the links so that each link was understandable in itself. Both the former and the latter groups could include people with visual or cognitive disabilities that used different techniques to browse or that had different types or severities of disability.

**Benefits**

* This Success Criterion helps people with motion impairment by letting them skip Web pages that they are not interested in, avoiding the keystrokes needed to visit the referenced content and then return to the current content.
* People with cognitive limitations will not become disoriented by extra navigation to and from content they are not interested in.
* People with visual disabilities will benefit from not losing their place in the content when they return to the original page. The screen reader's list of links is more useful for finding information because the target of the links are described.

Success Criterion 2.4.10 Section Headings (AAA)

From [Success Criterion 2.4.10](https://www.w3.org/TR/WCAG22/#section-headings):

[Section](https://www.w3.org/TR/WCAG22/#dfn-section) headings are used to organize the content.

**NOTE:** "Heading" is used in its general sense and includes titles and other ways to add a heading to different types of content.

**NOTE:** This success criterion covers sections within writing, not [user interface components](https://www.w3.org/TR/WCAG22/#dfn-user-interface-components). User interface components are covered under [Success Criterion 4.1.2](https://www.w3.org/TR/WCAG22/#name-role-value).

Additional Guidance When Applying Success Criterion 2.4.10 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.4.10](https://www.w3.org/WAI/WCAG22/Understanding/section-headings.html) (also provided below).

[**Intent from Understanding Success Criterion 2.4.10**](https://www.w3.org/WAI/WCAG22/Understanding/section-headings.html)

**Intent**

The intent of this Success Criterion is to provide headings for sections of a Web page, when the page is organized into sections. For instance, long documents are often divided into a variety of chapters, chapters have subtopics and subtopics are divided into various sections, sections into paragraphs, etc. When such sections exist, they need to have headings that introduce them. This clearly indicates the organization of the content, facilitates navigation within the content, and provides mental "handles" that aid in comprehension of the content. Other page elements may complement headings to improve presentation (e.g., horizontal rules and boxes), but visual presentation is not sufficient to identify document sections.

This provision is included at Level AAA because it cannot be applied to all types of content and it may not always be possible to insert headings. For example, when posting a pre-existing document to the Web, headings that an author did not include in the original document cannot be inserted. Or, a long letter would often cover different topics, but putting headings into a letter would be very strange. However, if a document can be broken up into sections with headings, it facilitates both understanding and navigation.

**Benefits**

* People who are blind will know when they have moved from one section of a Web page to another and will know the purpose of each section.
* People with some learning disabilities will be able to use the headings to understand the overall organization of the page content more easily.
* People who navigate content by keyboard will be able to jump the focus from heading to heading, enabling them to find quickly content of interest.
* In pages where content in part of the page updates, headings can be used to quickly access updated content.

Success Criterion 2.4.13 Focus Not Obscured (Enhanced) (AAA)

From [Success Criterion 2.4.13](https://www.w3.org/TR/WCAG22/#focus-not-obscured-enhanced):

When a [user interface component](https://www.w3.org/TR/WCAG22/#dfn-user-interface-components) receives keyboard focus, no part of the [focus indicator](https://www.w3.org/TR/WCAG22/#dfn-focus-indicator) is hidden by author-created content.

Additional Guidance When Applying Success Criterion 2.4.13 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.4.13](https://www.w3.org/WAI/WCAG22/Understanding/focus-not-obscured-enhanced.html) (also provided below).

**[Intent from Understanding Success Criterion 2.4.13](https://www.w3.org/WAI/WCAG22/Understanding/focus-not-obscured-enhanced.html)**

**Intent**

The purpose of this Success Criterion is to ensure that a component with keyboard focus is visible. This criterion is closely related to [Focus Not Obscured (Minimum)](https://www.w3.org/WAI/WCAG22/Understanding/focus-not-obscured.html) but requires that the whole of the component is visible.

**Benefits**

* This Success Criterion helps anyone who relies on the keyboard to operate the page by letting them visually determine the component on which keyboard operations will interact at any point in time.
* People with attention limitations, short term memory limitations, or limitations in executive processes benefit by being able to discover where the focus is located.

Success Criterion 2.5.5 Target Size (Enhanced) (AAA)

From [Success Criterion 2.5.5](https://www.w3.org/TR/WCAG22/#target-size-enhanced):

The size of the [target](https://www.w3.org/TR/WCAG22/#dfn-targets) for [pointer inputs](https://www.w3.org/TR/WCAG22/#dfn-pointer-inputs) is at least 44 by 44 [CSS pixels](https://www.w3.org/TR/WCAG22/#dfn-css-pixels) except when:

* **Equivalent:** The target is available through an equivalent link or control on the same page that is at least 44 by 44 CSS pixels;
* **Inline:** The target is in a sentence or block of text;
* **User Agent Control:** The size of the target is determined by the user agent and is not modified by the author;
* **Essential:** A particular presentation of the target is [essential](https://www.w3.org/TR/WCAG22/#dfn-essential) to the information being conveyed.

Additional Guidance When Applying Success Criterion 2.5.5 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.5.5](https://www.w3.org/WAI/WCAG22/Understanding/target-size-enhanced.html) (also provided below).

[**Intent from Understanding Success Criterion 2.5.5**](https://www.w3.org/WAI/WCAG22/Understanding/target-size-enhanced.html)

**Intent**

The intent of this success criterion is to help users who may have trouble activating a small target because of hand tremors, limited dexterity or other reasons. If the target is too small, it may be difficult to aim at the target. Mice and similar pointing devices can be hard to use for these users, and a larger target will help them greatly in having positive outcomes on the Web page.

Touch is particularly problematic as it is an input mechanism with coarse precision. Users lack the same level of fine control as on inputs such as a mouse or stylus. A finger is larger than a mouse pointer, and generally obstructs the user's view of the precise location on the screen that is being touched/activated.

The issue can be further complicated for responsive/mobile sites which need to accommodate different types of fine and coarse inputs (e.g. a site that can be accessed both on a traditional desktop/laptop with a mouse, as well as on a tablet or mobile phone with a touch screen).

While this criterion defines a minimum target size, it is recommended that larger sizes are used to reduce the possibility of unintentional actions. This is particularly relevant if any of the following are true:

* the control is used frequently;
* the result of the interaction cannot be easily undone;
* the control is positioned where it will be difficult to reach, or is near the edge of the screen;
* the control is part of a sequential task.

**Benefits**

* Users who use a mobile device where touch screen is the primary mode of interaction
* Users with mobility impairments, such as hand tremors
* Users who find fine motor movements difficult
* Users who access a device using one hand
* Users with large fingers, or who are operating the device with only a part of their finger or knuckle
* Users who have low vision may better see the target

Success Criterion 2.5.6 Concurrent Input Mechanisms (AAA)

From [Success Criterion 2.5.6](https://www.w3.org/TR/WCAG22/#concurrent-input-mechanisms):

Web content does not restrict use of input modalities available on a platform except where the restriction is [essential](https://www.w3.org/TR/WCAG22/#dfn-essential), required to ensure the security of the content, or required to respect user settings.

Additional Guidance When Applying Success Criterion 2.5.6 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 2.5.6](https://www.w3.org/WAI/WCAG22/Understanding/concurrent-input-mechanisms.html) (also provided below) , replacing “Web content” with “non-web content or software”.

[**Intent from Understanding Success Criterion 2.5.6**](https://www.w3.org/WAI/WCAG22/Understanding/concurrent-input-mechanisms.html)

**Intent**

The intent of this Success Criterion is to ensure that people can use and switch between different modes of input when interacting with Web content. Users may employ a variety of input mechanisms when interacting with Web content. These may be a combination of mechanisms such as a keyboard or keyboard-like interfaces and pointer devices like a mouse, stylus or touchscreen.

Even though a device may have a primary input mechanism, the user may choose to employ alternative input mechanisms when interacting with the device. For example, the primary mechanism for mobile phones and tablets is the touchscreen. The user of these devices may choose to use a paired mouse or external keyboard as an alternative to using the touchscreen.

Users should be able to switch input mechanisms at any point should the user determine that certain tasks and interactions are more easily accomplished by using an alternative input mechanism. Content must not limit the user's interaction to any particular input mechanism unless the restriction is essential, or is required to ensure the security of the content or to respect user settings.

Note: A touch-typing Web application, which teaches users how to touch-type on a keyboard and/or measures their proficiency and speed, would be an example of an essential limitation to a particular input mechanism.

**Benefits**

* Users can interact with Web content with whichever input mechanism is preferred and available to them.
* Users may switch between input mechanisms when they desire or the circumstances require it.
* Users are allowed to add and remove input mechanisms at any point, where supported by the operating system.

Success Criterion 3.1.3 Unusual Words (AAA)

From [Success Criterion 3.1.3](https://www.w3.org/TR/WCAG22/#unusual-words):

A [mechanism](https://www.w3.org/TR/WCAG22/#dfn-mechanism) is available for identifying specific definitions of words or phrases [used in an unusual or restricted way](https://www.w3.org/TR/WCAG22/#dfn-used-in-an-unusual-or-restricted-way), including [idioms](https://www.w3.org/TR/WCAG22/#dfn-idioms) and [jargon](https://www.w3.org/TR/WCAG22/#dfn-jargon).

Additional Guidance When Applying Success Criterion 3.1.3 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 3.1.3](https://www.w3.org/WAI/WCAG22/Understanding/unusual-words.html) (also provided below).

[**Intent from Understanding Success Criterion 3.1.3**](https://www.w3.org/WAI/WCAG22/Understanding/unusual-words.html)

**Intent**

Certain disabilities make it difficult to understand nonliteral word usage and specialized words or usage. Certain disabilities make it difficult to understand figurative language or specialized usage. Providing such mechanisms is vital for these audiences. Specialized information intended for non-specialist readers is encouraged to satisfy this Success Criterion, even when claiming only Single-A or Double-A conformance.

**Benefits**

This Success Criterion may help people with cognitive, language and learning disabilities who:

* have difficulty decoding words
* have difficulty understanding words and phrases
* have difficulty using context to aid understanding

It would also help people with visual disabilities who:

* lose context when zoomed-in with a screen magnifier

Success Criterion 3.1.4 Abbreviations (AAA)

From [Success Criterion 3.1.4](https://www.w3.org/TR/WCAG22/#abbreviations):

A [mechanism](https://www.w3.org/TR/WCAG22/#dfn-mechanism) for identifying the expanded form or meaning of [abbreviations](https://www.w3.org/TR/WCAG22/#dfn-abbreviations) is available.

Additional Guidance When Applying Success Criterion 3.1.4 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 3.1.4](https://www.w3.org/WAI/WCAG22/Understanding/abbreviations.html) (also provided below).

[**Intent from Understanding Success Criterion 3.1.4**](https://www.w3.org/WAI/WCAG22/Understanding/abbreviations.html)

**Intent**

The intent of this Success Criterion is to ensure that users can access the expanded form of abbreviations.

**Benefits**

This Success Criterion may help people who:

* have difficulty decoding words;
* rely on screen magnifiers (magnification may reduce contextual cues);
* have limited memory;
* have difficulty using context to aid understanding.

Abbreviations may confuse some readers in different ways:

* Some abbreviations do not look like normal words and cannot be pronounced according to the usual rules of the language. For example, the English word "room" is abbreviated as "rm," which does not correspond to any English word or phoneme. The user has to know that "rm" is an abbreviation for the word "room" in order to say it correctly.
* Sometimes, the same abbreviation means different things in different contexts. For example, in the English sentence "Dr. Johnson lives on Boswell Dr.," the first "Dr." is an abbreviation for "Doctor" and the second instance is an abbreviation for the word "Drive" (a word that means "street"). Users must be able to understand the context in order to know what the abbreviations mean.
* Some acronyms spell common words but are used in different ways. For example, "JAWS" is an acronym for a screen reader whose full name is "Job Access with Speech." It is also a common English word referring to the part of the mouth that holds the teeth. The acronym is used differently than the common word.
* Some acronyms sound like common words but are spelled differently. For example, the acronym for Synchronized Multimedia Integration Language, S M I L, is pronounced like the English word "smile."

It would also help people with visual disabilities who:

* Lose context when zoomed-in with a screen magnifier

Success Criterion 3.1.5 Reading Level (AAA)

From [Success Criterion 3.1.5](https://www.w3.org/TR/WCAG21/#status-changes):

When text requires reading ability more advanced than the [lower secondary education level](https://www.w3.org/TR/WCAG22/#dfn-lower-secondary-education-level) after removal of proper names and titles, [supplemental content](https://www.w3.org/TR/WCAG22/#dfn-supplementary-content), or a version that does not require reading ability more advanced than the lower secondary education level, is available.

Additional Guidance When Applying Success Criterion 3.1.5 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 3.1.5](https://www.w3.org/WAI/WCAG21/Understanding/status-changes) (also provided below).

[**Intent from Understanding Success Criterion 3.1.5**](https://www.w3.org/WAI/WCAG22/Understanding/reading-level.html)

**Intent**

Content should be written as clearly and simply as possible. The intent of this Success Criterion is:

* to ensure that additional content is available to aid the understanding of difficult or complex text;
* to establish a testable measure indicating when such additional content is required.

This Success Criterion helps people with reading disabilities while also allowing authors to publish difficult or complex Web content. Text difficulty is described in terms of the level of education required to read the text. Education levels are defined according to the International Standard Classification of Education [[UNESCO]], which was created to allow international comparison among systems of education.

Difficult or complex text may be appropriate for most members of the intended audience (that is, most of the people for whom the content has been created). But there are people with disabilities, including reading disabilities, even among highly educated users with specialized knowledge of the subject matter. It may be possible to accommodate these users by making the text more readable. If the text cannot be made more readable, then supplemental content is needed. Supplemental content is required when text demands reading ability more advanced than the lower secondary education level—that is, more than nine years of school. Such text presents severe obstacles to people with reading disabilities and is considered difficult even for people without disabilities who have completed upper secondary education.

Reading disabilities such as dyslexia make it difficult to recognize written or printed words and associate them with the correct sounds. This is called "decoding" the text. Decoding must be automatic in order for people to read fluently. The act of decoding text word by word consumes much of the mental energy that most people are able to use for understanding what they read. Text that uses short, common words and short sentences is easier to decode and usually requires less advanced reading ability than text that uses long sentences and long or unfamiliar words.

The education level required to read text content (also called "readability") is measured by analyzing selected passages of text from the Web page. If the Web page includes text written for different purposes or different styles are used, the selected passages include samples of the types of content in the Web page and the different styles in which the content is written. (In many cases, the Web page contains only one kind of text content—e.g., technical documentation, a legal notice, marketing material, etc.—and all the content uses the same style.)

Educators can also measure the education level required to read text content. For example, qualified teachers can evaluate text according to local education standards to determine if it requires reading ability beyond what is expected for students in the last year of lower secondary education.

Because people's names, the names of cities or other proper names cannot be changed to shorter names with fewer syllables, and because doing so or just referring to everyone by pronouns can make sentences harder to understand, the success criterion specifies that proper names can be ignored or removed from the text before assessing whether it meets the reading ability requirement. Titles refer to the name of documents, books, movies, etc. Titles are removed or ignored for the analysis because changing the words in titles might make the titles easier to read but would make it impossible to understand the item to which the title refers. This would make it harder to read and understand the content. (e.g., a book, academic paper, article, etc.). Therefore, titles are also exempted specifically.

When a Web page contains multiple languages, a readability result should be calculated for each language that constitutes at least 5% of the content and that is used in full sentences or paragraphs (not just individual words or phrases). The overall readability of the page should be judged on the language that yields the worst readability results.

The readability of content may also be determined by applying a readability formula to the selected passage. Many (though not all) readability formulas base their calculations on passages of 100 words. Such formulas have been developed for many languages. The number of words in the passage is counted and the length of the words is determined by counting either the number of syllables or the number of characters. Most readability formulas also count the number and length of sentences. The average length of words and sentences in the content is then used to calculate a readability score. (Some languages, such as Japanese, may include multiple scripts within the same passage. Readability formulas for these languages may use the number and length of such "runs" in their calculations.) The result may be presented as a number (for example, on a scale from 0-100) or as a grade level. These results can then be interpreted using the education levels described in the International Standard Classification of Education. Readability formulas are available for at least some languages when running the spell checkers in popular software if you specify in the options of this engine that you want to have the statistics when it has finished checking your documents.

Adapted from International Standard Classification of Education [[UNESCO]]

NOTE

According to the Open Society Mental Health Initiative, the concept of Easy to Read cannot be universal, and it will not be possible to write a text that will suit the abilities of all people with literacy and comprehension problems. Using the clearest and simplest language appropriate is highly desirable, but the WCAG Working Group could not find a way to test whether this had been achieved. The use of reading level is a way to introduce testability into a Success Criterion that encourages clear writing. Supplementary content can be a powerful technique for people with some classes of cognitive disability.

**Benefits**

This Success Criterion may help people who:

* **Have difficulty comprehending and interpreting written language (e.g., articles, instructions, or newspapers in text or braille), for the purpose of obtaining general knowledge or specific information**

Success Criterion 3.1.6 Pronunciation (AAA)

From [Success Criterion 3.1.6](https://www.w3.org/TR/WCAG22/#pronunciation):

A [mechanism](https://www.w3.org/TR/WCAG22/#dfn-mechanism) is available for identifying specific pronunciation of words where meaning of the words, in context, is ambiguous without knowing the pronunciation.

Additional Guidance When Applying Success Criterion 3.1.6 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 3.1.6](https://www.w3.org/WAI/WCAG22/Understanding/pronunciation.html) (also provided below).

[**Intent from Understanding Success Criterion 3.1.6**](https://www.w3.org/WAI/WCAG22/Understanding/pronunciation.html)

**Intent**

The intent of this Success Criterion is to help people who are blind, people who have low vision, and people with reading disabilities to understand content in cases where meaning depends on pronunciation. Often words or characters have different meanings, each with its own pronunciation. The meaning of such words or characters can usually be determined from the context of the sentence. However, for more complex or ambiguous sentences, or for some languages, the meaning of the word cannot be easily determined or determined at all without knowing the pronunciation. When the sentence is read aloud and the screen reader reads the word using the wrong pronunciation, it can be even more difficult to understand than when read visually. When words are ambiguous or indeterminate unless the pronunciation is known, then providing some means of determining the pronunciation is needed.

For example, in the English language heteronyms are words that are spelled the same but have different pronunciations and meanings, such as the words desert (abandon) and desert (arid region). If the proper pronunciation can be determined from the context of the sentence, then nothing is required. If it cannot then some mechanism for determining the proper pronunciation would be required. Additionally, in some languages certain characters can be pronounced in different ways. In Japanese, for example, there are characters like Han characters(Kanji) that have multiple pronunciations. Screen readers may speak the characters incorrectly without the information on pronunciation. When read incorrectly, the content will not make sense to users.

**Benefits**

This Success Criterion may help people who:

* have difficulty decoding words
* have difficulty using context to aid understanding
* use technologies that read the words aloud

Success Criterion 3.2.5 Change on Request (AAA)

From [Success Criterion 3.2.5](https://www.w3.org/TR/WCAG22/#change-on-request):

[Changes of context](https://www.w3.org/TR/WCAG22/#dfn-change-of-context) are initiated only by user request or a [mechanism](https://www.w3.org/TR/WCAG22/#dfn-mechanism) is available to turn off such changes.

Additional Guidance When Applying Success Criterion 3.2.5 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 3.2.5](https://www.w3.org/WAI/WCAG22/Understanding/change-on-request.html) (also provided below).

**[Intent from Understanding Success Criterion 3.2.5](https://www.w3.org/WAI/WCAG22/Understanding/change-on-request.html)**

**Intent**

The intent of this Success Criterion is to encourage design of Web content that gives users full control of changes of context. This Success Criterion aims to eliminate potential confusion that may be caused by unexpected changes of context such as automatic launching of new windows, automatic submission of forms after selecting an item from a list, etcetera. Such unexpected changes of context may cause difficulties for people with motor impairments, people with low vision, people who are blind, and people with certain cognitive limitations.

Some types of change of context are not disruptive to some users, or actively benefit some users. For example, single-switch users rely on context changes that are animated by the system, and the preferences of low-vision users may vary depending on how much of the content they can see at once and how much of the session structure they can retain in working memory. Some types of content, such as slide shows, require the ability to change context in order to provide the intended user experience. Content that initiates changes of context automatically only when user preferences allow can conform to this Success Criterion.

**NOTE**

It is possible for more than one change of context to occur simultaneously. For example, clicking on a link which automatically opens a new window is an example of two separate changes of context related to the change in content and to the change in the viewport (window). The change in the content in this case is initiated by user request when they click on the link, but unless the user can be aware that the link will open in a new window then that change of context cannot be regarded as user-initiated.

**Benefits**

Individuals who are unable to detect changes of context or may not realize that the context has changed are less likely to become disoriented while navigating a site. For example:

* + individuals who are blind or have low vision may have difficulty knowing when a visual context change has occurred, such as a new window popping up. In this case, warning users of context changes in advance minimizes confusion when the user discovers that the back button no longer behaves as expected.
* Some individuals with low vision, with reading and intellectual disabilities, and who have difficulty interpreting visual cues may benefit from additional cues in order to detect changes of context.
* People with certain **cognitive limitations** do not get confused if automatic redirects are performed by the Web server instead of the browser.

Understanding text here. (left out for this draft because it is in development)

Success Criterion 3.3.5 Help (AAA)

From [Success Criterion 3.3.5](https://www.w3.org/TR/WCAG22/#help):

[Context-sensitive help](https://www.w3.org/TR/WCAG22/#dfn-context-sensitive-help) is available.

Additional Guidance When Applying Success Criterion 3.3.5 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 3.3.5](https://www.w3.org/WAI/WCAG22/Understanding/help.html) (also provided below).

[**Intent from Understanding Success Criterion 3.3.5**](https://www.w3.org/WAI/WCAG22/Understanding/help.html)

**Intent**

The intent of this Success Criterion is to help users avoid making mistakes. Some users with disabilities may be more likely to make mistakes than users without disabilities. Using context-sensitive help, users find out how to perform an operation without losing track of what they are doing.

Context-sensitive help only needs to be provided when the label is not sufficient to describe all functionality. The existence of context-sensitive help should be obvious to the user and they should be able to obtain it whenever they require it.

The content author may provide the help text, or the user agent may provide the help text based on technology-specific, programmatically determined information.

**Benefits**

* Assistance for text input helps individuals with writing disabilities and people with reading and intellectual disabilities who often have difficulty writing text in forms or other places that need text input.
* Additionally, these kinds of assistance help people who are aging and have the same difficulty in text input and/or mouse operation.

Success Criterion 3.3.6 Error Prevention (All) (AAA)

From [Success Criterion 3.3.6](https://www.w3.org/TR/WCAG22/#error-prevention-all):

For [Web pages](https://www.w3.org/TR/WCAG22/#dfn-web-page-s) that require the user to submit information, at least one of the following is true:

* **Reversible:** Submissions are reversible.
* **Checked:** Data entered by the user is checked for input errors and the user is provided an opportunity to correct them.
* **Confirmed:** A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.

Additional Guidance When Applying Success Criterion 3.3.6 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 3.3.6](https://www.w3.org/WAI/WCAG22/Understanding/error-prevention-all.html) (also provided below), replacing “Web pages” with “non-web documents or software”.

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[**Intent from Understanding Success Criterion 3.3.6**](https://www.w3.org/WAI/WCAG22/Understanding/error-prevention-all.html)

**Intent**

The intent of this Success Criterion is to help users with disabilities avoid consequences that may result from making a mistake when submitting form data. This criterion builds on [Success Criterion 3.3.4](https://www.w3.org/WAI/WCAG22/Understanding/error-prevention-legal-financial-data) in that it applies to all forms that require users to submit information.

Users with disabilities may be more likely to make mistakes and may have more difficulty detecting or recovering from mistakes. People with reading disabilities may transpose numbers and letters, and those with motor disabilities may hit keys by mistake. Providing the ability to reverse actions allows users to correct a mistake. Providing the ability to review and correct information gives the user an opportunity to detect a mistake before taking an action.

**Benefits**

* Providing safeguards to avoid consequences resulting from mistakes helps users with all disabilities who may be more likely to make mistakes.

Success Criterion 3.3.8 Accessible Authentication (No Exception) (AAA)

From [Success Criterion 3.3.8](https://www.w3.org/TR/WCAG22/#accessible-authentication-no-exception):

A [cognitive function test](https://www.w3.org/TR/WCAG22/#dfn-cognitive-function-test) (such as remembering a password or solving a puzzle) is not required for any step in an authentication process unless that step provides at least one of the following:

* **Alternative:** Another authentication method that does not rely on a cognitive function test.
* **Mechanism:** A mechanism is available to assist the user in completing the cognitive function test.

Additional Guidance When Applying Success Criterion 3.3.8 to Non-Web Documents and Software:

This applies directly as written, and as described in [Intent from Understanding Success Criterion 3.3.8](https://www.w3.org/WAI/WCAG22/Understanding/accessible-authentication-no-exception.html) (also provided below).

[**Intent from Understanding Success Criterion 3.3.8**](https://www.w3.org/WAI/WCAG22/Understanding/accessible-authentication-no-exception.html)

**Intent**

The purpose of this Success Criterion is to ensure there is an accessible, easy-to-use, and secure method to log in, access content, and undertake tasks. This criterion is the same as [Accessible Authentication](https://www.w3.org/WAI/WCAG22/Understanding/accessible-authentication) but without the exceptions for objects and user-provided content.

The scenarios where the two exceptions might apply are authentication mechanisms which:

* display a selection of images, and the user must choose which image they provided;
* display a selection of items as text, and the user must choose which they had provided;
* display a selection of images, and the user must choose the images which contain an object such as a car.

**Benefits**

The benefits of this success criterion are the same as [Accessible Authentication](https://www.w3.org/WAI/WCAG22/Understanding/accessible-authentication.html#benefits).

People with cognitive issues relating to memory, reading (for example, dyslexia), numbers (for example, dyscalculia), or perception-processing limitations will be able to authenticate irrespective of the level of their cognitive abilities.