

# WCAG Quick Guide

## Create an accessible website

Everything you need to know about digital accessibility and how your cultural organisation's website can comply with the WCAG.

# Introduction

**At a time in which we do more and more online, digital accessibility is becoming an increasingly important topic. The digital society is aimed at enabling people to easily manage their affairs online. For art and culture visitors this means, for example, finding information about performances, buying tickets for events, up to the navigation to the physical venue. Unfortunately, it is not yet so self-evident for everyone to be able to fully participate in this digital society.**

People with disabilities encounter barriers every day when using digital services such as websites. Thresholds that people without disabilities are often not aware of. That is why the WCAG was introduced: the Web Content Accessibility Guidelines. The WCAG describes how to make websites and other digital channels accessible to a wide audience.



## The importance of the WCAG

Digital accessibility and thus the WCAG is of great importance. By paying attention to this, we ensure that everyone can use websites in the same way and therefore has access to the same information. Just as some people need a disabled parking space to have access to physical places, a website must also be easily accessible for people with disabilities.

**An accessible website as defined in the WCAG is mandatory in a growing number of countries and for an increasing amount of organisations.** These guidelines therefore make the accessibility of digital services a social and societal responsibility. This allows people with disabilities to use more and more websites like any other.



## Art and culture for everyone

Also in the cultural sector, issues such as diversity, inclusiveness and thus digital accessibility are becoming increasingly important topics. We at Peppered are very happy with that! We would like to see that everyone can enjoy all the beauty in the cultural sector. By lowering digital thresholds for people with disabilities, we can take care of this together.

As far as we are concerned, an accessible website is essential for cultural organisations and we are happy to help realising that. After reading this white paper you will know everything about digital accessibility and the WCAG, and you can get started right away.

# Who should my website be accessible to?

**An accessible website is a website that can be used by everyone, including people with disabilities. Limitations that can make visiting websites difficult include visual, auditory, cognitive, and motor disabilities. This includes blind and partially sighted people, deaf and hard of hearing people, people with intellectual disabilities or dyslexia, but also people with low literacy and the elderly.**

## Limitations: permanent, temporary and situational

It is not only people with permanent disabilities who benefit from an accessible website. In fact, we all face problems sometimes that make visiting inaccessible websites difficult.

### Temporary limitations

Everyone is physically doing less well from time to time, and then you may suffer from temporary limitations. Think of an injury, infection, or inflammation. For example, a temporary motor limitation would be when you injure your hand and it is difficult to use a mouse. Then it is nice to be able to visit a website in an alternative way, such as with the keyboard.

### Situational limitations

Limitations can also occur when you are in a certain situation that is not optimal to visit an inaccessible website. Imagine that you are sitting in the silent compartment on the train and you want to watch a video, but you do not have your earphones with you. That would be a situational hearing impairment. Then it is nice if the video is subtitled so that you can still follow the video without audio.

# Meet the WCAG

Now you are probably wondering how you can make your website accessible to all those different target groups. That's exactly where the WCAG's accessibility standards can help. The Web Content Accessibility Guidelines contain a large number of recommendations to make web content more accessible.

## Accessible web content

The WCAG defines web content as images, animation, audio and video, forms, geo-information, navigation, PDF files, tables, technology and code, text and design. The information provided in all these different forms of content on your website should be available to everyone. This helps not only people with disabilities but also all other visitors. In addition, it helps search engines such as Google to better understand your website, so that you can rank higher in Google with an accessible website. So there are only advantages to immerse yourself in the WCAG.

## Levels

The WCAG thus consists of guidelines for making web content accessible. These guidelines are divided into three levels:



Each level is then tested on the basis of success criteria. Do you want your organisation's website to be easily accessible? Then you would do well to at least observe the criteria for level A and AA. That equates to 38 criteria in total. These are discussed later in this white paper.



## Principles for digital accessibility

The accessibility guidelines are based on four principles:

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### Perceivable

First of all, your content must be visible to everyone. For the blind and partially sighted, and the deaf and hard of hearing, for example, there must always be an alternative to non-text content. You can think of the following:

- Use texts as an alternative to images and illustrations.
- Provide subtitles and audio description for videos.
- Do not only show a map, but also name the addresses and directions.
- Provide sufficient contrast in the use of color. Keep a minimum contrast of 3:1.

## 2

## Operable

According to this principle, it must be ensured that visitors can find and use all content on the website, regardless of how they do it. For example, not everyone is able to use a mouse or touchscreen, but instead uses the keyboard and/or assistive technologies. Consider these adjustments:

- Make sure everything works with a keyboard.
- Use descriptive titles for pages and windows.
- Use descriptive links so it's clear towards where they lead.
- Show the keyboard focus and make sure its colour has enough contrast with the background.

The screenshot shows a website's blog page with a red header. The header contains the word "Blog" and a navigation menu with the following items: "Alles", "Features", "Succesverhalen", "Marketing tips", and "Projecten". Below the header, there are four featured articles, each with a title, a short description, and a category icon.

- Light login**: Met een paar klikken inloggen en weer door; het identificeren van online bezoekers is nog nooit zo eenvoudig geweest. Light login is de nieuwe manier om snel en veilig in te loggen. Onze Product Manag...  
Category: Features
- Streaming via Pepered**: Sinds het begin van de coronacrisis is streaming tot een populaire oplossing voor theaters uitgegroeid. Daarom boden wij al snel onze streaming-optie aan, waarmee Pepered-gebruikers over alle technie...  
Category: Features
- Amare creëert een contentplatform**: In samenwerking met Amare - het nieuwe cultuurhuis op het Spulplein in Den Haag - creëren we een contentplatform, waarmee het gemakkelijk wordt om verschillende soorten media op een slimme, geavanceer...  
Category: Projecten, Features
- Muziekcentrum De Bijloke**: Muziekcentrum De Bijloke, gevestigd in een oud middeleeuws hospitaal, werkt al jarenlang met een klein team naar tevredenheid met het Pepered-systeem.  
Category: Succesverhalen

*Met toetsenbordfocus geef je duidelijk aan welk element op de webpagina er geselecteerd is met het toetsenbord. Zorg ook hier weer voor voldoende contrast*

**3**

## Understandable

Subsequently, all content must also be understandable for users, so that the information on your website is also available, for example, to people with cognitive disabilities. Think about:

- Consistency in recurring elements and functions. For example, use the same styling for buttons.
- Provide clear instructions and error messages in case of incorrect input in forms.
- Make sure that the correct language of the text/page is selected in the software.

**4**

## Robust

The technology at the back of your website must also be in order so that the content is robust enough to be interpreted reliably. This means that your web builder must write good code, so that browsers and tools such as reading equipment and braille displays can read the content.

Your web builder can help you with this:

- Use error-free code.
- Ensure maximum compatibility with current and future browsers and other utilities.
- Make sure assistive technologies understand what each function is for and what condition it is in.



## Getting started with the WCAG

By now you do not only know what WCAG is all about, but hopefully you understand why digital accessibility is important and you can see the benefits of an accessible website. In the appendix you will find the WCAG guidelines for level A and AA. By following these based on the principles of 'perceivable', 'operable', 'understandable' and 'robust', you make your website accessible to people with disabilities and also more useful for all your visitors and search engines.

### How accessible is your website?

How accessible is your website already? Do the free quick scan on [wcag.nl](https://wcag.nl) and immediately get started with concrete points for improvement for your website. Be aware that this scan does not test for all requirements that a website must meet according to the WCAG, so read the guidelines that you find in the appendix carefully.



## WCAG-proof technology

Are you looking for powerful, WCAG-proof technology for the website of your cultural organisation? Then you've come to the right place! At Peppered, we make sure that our software is WCAG compliant, so that the technological foundation of your website is already accessible. We are happy to give you advice and tips in the design choices and when creating content. In this way, together we ensure an easily accessible website.

Would you like to receive more information about our system? Please contact [info@peppered.com](mailto:info@peppered.com).

## About Peppered

This whitepaper has been composed by Peppered. Peppered builds premium website, mail and marketing technologies for cultural organisations. With a wide range of users, including theatres, cinemas, concert halls and orchestras, Peppered has grown to become the market leader in the Benelux. Every day our knowledge and software contribute to the growth of a flourishing, progressive cultural sector.

## Resources

The following sources have been used when writing this white paper:

- <https://wcag.nl/>
- <https://www.digitoegankelijk.nl/>
- <https://www.accessibility.nl/>
- <https://www.w3.org/WAI/standards-guidelines/wcag/>
- <https://www.w3.org/TR/WCAG21/>

**Appendix:**  
**Web Content Accessibility**  
**Guidelines**  
**Level A & AA**

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# Principal 1: Perceivable – Information and user interface components must be presentable to users in ways they can perceive.

## Guideline 1.1 Text Alternatives: Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.

**1.1.1 Non-text Content (Level A):** All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below.

- **Controls, Input:** If non-text content is a control or accepts user input, then it has a name that describes its purpose. (Refer to Success Criterion 4.1.2 for additional requirements for controls and content that accepts user input.)
- **Time-Based Media:** If non-text content is time-based media, then text alternatives at least provide descriptive identification of the non-text content. (Refer to Guideline 1.2 for additional requirements for media.)
- **Text:** If non-text content is a test or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non-text content.
- **Sensory:** If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content.
- **CAPTCHA:** If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities.
- **Decoration, Formatting, Invisible:** If non-text content is pure decoration, is used only for visual formatting, or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology.

## **Guideline 1.2 Time-based Media: Provide alternatives for time-based media.**

**1.2.1 Audio-only and Video-only (Prerecorded) (A):** For prerecorded audio-only and prerecorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such:

- **Prerecorded Audio-only**

An alternative for time-based media is provided that presents equivalent information for prerecorded audio-only content.

- **Prerecorded Video-only**

Either an alternative for time-based media or an audio track is provided that presents equivalent information for prerecorded video-only content.

**1.2.2 Captions (Prerecorded) (A):** Captions are provided for all prerecorded audio content in synchronised media, except when the media is a media alternative for text and is clearly labeled as such.

**1.2.3 Audio Description or Media Alternative (Prerecorded) (A):** An alternative for time-based media or audio description of the prerecorded video content is provided for synchronised media, except when the media is a media alternative for text and is clearly labeled as such.

**1.2.4 Captions (Live) (AA):** Captions are provided for all live audio content in synchronised media.

**1.2.5 Audio Description (Prerecorded) (AA):** Audio description is provided for all prerecorded video content in synchronized media.

## **Guideline 1.3 Adaptable: Create content that can be presented in different ways (for example simpler layout) without losing information or structure.**

**1.3.1 Info and Relationships (A):** Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.

**1.3.2 Meaningful Sequence (A):** When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined.

**1.3.3 Sensory Characteristics (A):** Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, color, size, visual location, orientation, or sound.

**Note:** For requirements related to colour, refer to Guideline 1.4.

**1.3.4 Orientation (AA):** Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential.

**Note:** Examples where a particular display orientation may be essential are a bank check, a piano application, slides for a projector or television, or virtual reality content where binary display orientation is not applicable.

**1.3.5 Identify Input Purpose (AA):** The purpose of each input field collecting information about the user can be programmatically determined when:

- The input field serves a purpose identified in the Input Purposes for User Interface Components section; and
- The content is implemented using technologies with support for identifying the expected meaning for form input data.

## **Guideline 1.4 Distinguishable: Make it easier for users to see and hear content including separating foreground from background.**

**1.4.1 Use of Colour (A):** Colour is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

**Note:** This success criterion addresses colour perception specifically. Other forms of perception are covered in Guideline 1.3 including programmatic access to colour and other visual presentation coding.

**1.4.2 Audio Control (A):** If any audio on a Web page plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level.

**Note:** Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether or not it is used to meet other success criteria) must meet this success criterion. See Conformance Requirement 5: Non-Interference.

**1.4.3 Contrast (Minimum) (AA):** The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following:

- **Large Text:** Large-scale text and images of large-scale text have a contrast ratio of at least 3:1;
- **Incidental:** Text or images of text that are part of an inactive user interface component, that are 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.

**1.4.4 Resize text (AA):** Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality.

**1.4.5 Images of text (AA):** If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following:

- **Customisable:** The image of text can be visually customised to the user's

- requirements;
- **Essential:** A particular presentation of text is essential to the information being conveyed.

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

**1.4.10 Reflow (AA):** Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for:

- Vertical scrolling content at a width equivalent to 320 CSS pixels;
- Horizontal scrolling content at a height equivalent to 256 CSS pixels.

Except for parts of the content which require two-dimensional layout for usage or meaning.

**Note 1:** 320 CSS pixels is equivalent to a starting viewport width of 1280 CSS pixels wide at 400% zoom. For web content which are designed to scroll horizontally (e.g. with vertical text), the 256 CSS pixels is equivalent to a starting viewport height of 1024px at 400% zoom.

**Note 2:** Examples of content which require two-dimensional layout are images, maps, diagrams, video, games, presentations, data tables, and interfaces where it is necessary to keep toolbars in view while manipulating content.

**1.4.11 Non-text Contrast (AA):** The visual presentation of the following have a contrast ratio of at least 3:1 against adjacent color(s):

- **User Interface Components:** Visual information required to identify user interface components and states, except for inactive components or where the appearance of the component is determined by the user agent and not modified by the author;
- **Graphical Objects:** Parts of graphics required to understand the content, except when a particular presentation of graphics is essential to the information being conveyed.

**1.4.12 Text Spacing (AA):** In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all of the following and by changing no other style property:

- Line height (line spacing) to at least 1.5 times the font size;
- Spacing following paragraphs to at least 2 times the font size;
- Letter spacing (tracking) to at least 0.12 times the font size;
- Word spacing to at least 0.16 times the font size.

Exception: Human languages and scripts that do not make use of one or more of these text style properties in written text can conform using only the properties that exist for that combination of language and script.



**1.4.13 Content on Hover or Focus (AA):** Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true:

- **Dismissable:** A mechanism is available to dismiss the additional content without moving pointer hover or keyboard focus, unless the additional content communicates an input error or does not obscure or replace other content;
- **Hoverable:** If pointer hover can trigger the additional content, then the pointer can be moved over the additional content without the additional content disappearing;
- **Persistent:** The additional content remains visible until the hover or focus trigger is removed, the user dismisses it, or its information is no longer valid.

Exception: The visual presentation of the additional content is controlled by the user agent and is not modified by the author.

**Note 1:** Examples of additional content controlled by the user agent include browser tooltips created through use of the HTML title attribute.

**Note 2:** Custom tooltips, sub-menus, and other nonmodal popups that display on hover and focus are examples of additional content covered by this criterion.

## 2. Operable: User interface components and navigation must be operable.

### Guideline 2.1 Keyboard Accessible: Make all functionality available from a keyboard.

**2.1.1 Keyboard (A):** All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints.

**Note 1:** This exception relates to the underlying function, not the input technique. For example, if using handwriting to enter text, the input technique (handwriting) requires path-dependent input but the underlying function (text input) does not.

**Note 2:** This does not forbid and should not discourage providing mouse input or other input methods in addition to keyboard operation.

**2.1.2 No Keyboard Trap (A):** If keyboard focus can be moved to a component of the page using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys or other standard exit methods, the user is advised of the method for moving focus away.

**Note:** Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference.

**2.1.4 Character Key Shortcuts (A):** If a keyboard shortcut is implemented in content using only letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true:

- **Turn off:** A mechanism is available to turn the shortcut off;
- **Remap:** A mechanism is available to remap the shortcut to use one or more non-printable keyboard characters (e.g. Ctrl, Alt, etc);
- **Active only on focus:** The keyboard shortcut for a user interface component is only active when that component has focus.

## Guideline 2.2 Enough Time: Provide users enough time to read and use content.

**2.2.1 Timing Adjustable (A):** For each time limit that is set by the content, at least one of the following is true:

- **Turn off:** The user is allowed to turn off the time limit before encountering it; or
- **Adjust:** The user is allowed to adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or
- **Extend:** The user is warned before time expires and given at least 20 seconds to extend the time limit with a simple action (for example, “press the space bar”), and the user is allowed to extend the time limit at least ten times; or
- **Real-time Exception:** The time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or
- **Essential Exception:** The time limit is essential and extending it would invalidate the activity; or
- **20 Hour Exception:** The time limit is longer than 20 hours.

**Note:** This success criterion helps ensure that users can complete tasks without unexpected changes in content or context that are a result of a time limit. This success criterion should be considered in conjunction with Success Criterion 3.2.1, which puts limits on changes of content or context as a result of user action.

**2.2.2 Pause, Stop, Hide (A):** For moving, blinking, scrolling, or auto-updating information, all of the following are true:

- **Moving, blinking, scrolling:** For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and
- **Auto-updating:** For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential.

**Note 1:** For requirements related to flickering or flashing content, refer to Guideline 2.3.

**Note 2:** Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference.

**Note 3:** Content that is updated periodically by software or that is streamed to the user agent is not required to preserve or present information that is generated or received between the initiation of the pause and resuming presentation, as this may not be technically possible, and in many situations could be misleading to do so.

**Note 4:** An animation that occurs as part of a preload phase or similar situation can be considered essential if interaction cannot occur during that phase for all users and if not indicating progress could confuse users or cause them to think that content was frozen or broken.

## **Guideline 2.3 Seizures and Physical Reactions: Do not design content in a way that is known to cause seizures or physical reactions.**

**2.3.1 Three Flashes or Below Threshold (A):** Web pages do not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds.

**Note:** Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference.

## **Guideline 2.4 Navigable: Provide ways to help users navigate, find content, and determine where they are.**

**2.4.1 Bypass Blocks (A):** A mechanism is available to bypass blocks of content that are repeated on multiple Web pages.

**2.4.2 Page Titled (A):** Web pages have titles that describe topic or purpose.

**2.4.3 Focus order (A):** If a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability.

**2.4.4 Link purpose (in context) (A):** The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general.

**2.4.5 Multiple ways (AA):** More than one way is available to locate a Web page within a set of Web pages except where the Web Page is the result of, or a step in, a process.

**2.4.6 Headings and labels (AA):** Headings and labels describe topic or purpose.

**2.4.7 Focus visible (AA):** Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.

## Guideline 2.5 Input Modalities: Make it easier for users to operate functionality through various inputs beyond keyboard.

**2.5.1 Pointer Gestures (A):** All functionality that uses multipoint or path-based gestures for operation can be operated with a single pointer without a path-based gesture, unless a multipoint or path-based gesture is essential.

**Note:** This requirement applies to web content that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology).

**2.5.2 Pointer Cancellation (A):** For functionality that can be operated using a single pointer, at least one of the following is true:

- **No Down-Event:** The down-event of the pointer is not used to execute any part of the function;
- **Abort or Undo:** Completion of the function is on the up-event, and a mechanism is available to abort the function before completion or to undo the function after completion;
- **Up Reversal:** The up-event reverses any outcome of the preceding down-event;
- **Essential:** Completing the function on the down-event is essential.

**Note 1:** Functions that emulate a keyboard or numeric keypad key press are considered essential.

**Note 2:** This requirement applies to web content that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology).

**2.5.3 Label in Name (A):** For user interface components with labels that include text or images of text, the name contains the text that is presented visually.

**Note:** A best practice is to have the text of the label at the start of the name.

**2.5.4 Motion Actuation (A):** Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation, except when:

- **Supported Interface:** The motion is used to operate functionality through an accessibility supported interface;
- **Essential:** The motion is essential for the function and doing so would invalidate the activity.

# **Principle 3: Understandable – Information and the operation of user interface must be understandable.**

## **Guideline 3.1 Readable: Make text content readable and understandable.**

**3.1.1 Language of Page (A):** The default human language of each Web page can be programmatically determined.

**3.1.2 Language of Parts (AA):** The human language of each passage or phrase in the content can be programmatically determined except for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text.

## **Guideline 3.2 Predictable: Make Web pages appear and operate in predictable ways.**

**3.2.1 On focus (A):** When any user interface component receives focus, it does not initiate a change of context.

**3.2.2 On input (A):** Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behavior before using the component.

**3.2.3 Consistent navigation (AA):** Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated, unless a change is initiated by the user.

**3.2.4 Consistent identification (AA):** Components that have the same functionality within a set of Web pages are identified consistently.

## **Guideline 3.3 Input Assistance: Help users avoid and correct mistakes.**

**3.3.1 Error Identification (A):** If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text.

**3.3.2 Labels or instructions (A):** Labels or instructions are provided when content requires user input.

**3.3.3 Error suggestion (AA):** If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardise the security or purpose of the content.

**3.3.4 Foutpreventie (wettelijk, financieel, gegevens) (AA):** For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, 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 finalising the submission.



# Principal 4: Robust – Content must be robust enough that it can be interpreted by a wide variety of user agents, including assistive technologies.

## Guideline 4.1 Compatible: Maximise compatibility with current and future user agents, including assistive technologies.

**4.1.1 Parsing (A):** In content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features.

**Note:** Start and end tags that are missing a critical character in their formation, such as a closing angle bracket or a mismatched attribute value quotation mark are not complete.

**4.1.2 Name, role, value (A):** For all user interface components (including but not limited to: form elements, links and components generated by scripts), the name and role can be programmatically determined; states, properties, and values that can be set by the user can be programmatically set; and notification of changes to these items is available to user agents, including assistive technologies.

**Note:** This success criterion is primarily for Web authors who develop or script their own user interface components. For example, standard HTML controls already meet this success criterion when used according to specification.

**4.1.3 Status Messages (AA):** In content implemented using markup languages, status messages can be programmatically determined through role or properties such that they can be presented to the user by assistive technologies without receiving focus.