



MODULE 14

I promote my green business

Learning outcomes

You will learn here:

- How to identify people's needs, and choose simple ways to customize digital environments to these needs
- How to edit and create accessible green content in different formats
- How to select digital technologies to interact with people and to share and digital contents

But first, you will learn why digital accessibility matters for your business.



Figure 1: Businessman in wheelchair working at desk, Microsoft picture

Basic information



In this module, you will learn what you need for your green business idea.



This module contains three exercises.



You will need 15 h to finish the module.



You need 66% correct answers to pass this module.



Your lecturer is Clement.

DISCLAIMER FOR EXTERNAL LINKS

This module contains hyperlinks to external websites.

These external links are being provided as a convenience and for informational purposes.

Only; they do not constitute an endorsement or an approval by Go4DiGREEN of any of the products, services or opinions of the corporation or organization or individual.

Go4DiGREEN bears no responsibility for the accuracy, legality or content of the external.

Site or for that of subsequent links. Use at your own risk.

2020-1-AT01-KA226-VET-092693



The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Content

LEARNING OUTCOMES.....	0
BASIC INFORMATION	0
WELCOME TO MODULE 14.....	3
WHY ACCESSIBILITY MATTERS FOR A BUSINESS.....	3
IDENTIFYING AND UNDERSTANDING THE USERS' NEEDS	4
What is disability?.....	4
What is digital accessibility?.....	5
Different users' needs and how to meet them.....	6
Perceive	7
Understand	8
Navigate, interact, and contribute.....	9
EDITING AND CREATING ACCESSIBLE GREEN CONTENT IN DIFFERENT FORMATS:	10
Images.....	10
Alt text example.....	13
Structure.....	15
Headings.....	16
Lists.....	19
Contrasts.....	19



Links	22
SELECT DIGITAL TECHNOLOGIES TO INTERACT WITH PEOPLE AND TO SHARE AND DIGITAL CONTENTS:	23
Websites	24
Online platforms	26
Social media	26
Video hosting services	29
Emails	30
.....	30
REFERENCE LIST	31
ADDITIONAL RESOURCES	31
LIST OF FIGURES	31
ANNEX	33
Exercise 1 - Solution	33

Welcome to Module 14

You have almost reached the end of the last training block. This module is about accessibility. We briefly discussed accessibility in the previous module in the chapter "How to improve and integrate new content and information to create new and accessible green content". Now we want to go into much more detail.

We will give you definitions about disability and accessibility. Then we'll talk about the different needs of users and how to meet them.

In the next section, we'll familiarise you with editing and creating accessible green content in different formats.

The final section will focus on selecting digital technologies for interacting with people and sharing digital content.

Why accessibility matters for a business

"Web accessibility means that websites, tools, and technologies are designed and developed so that people with disabilities can use them."

This definition comes from the World Wide Web Consortium (W3C).

There are several reasons why accessibility matters for a business.

- About 15% of the world population has one or several disabilities. By making your digital contents accessible, you ensure that you can reach more potential customers.
- If you have accessible digital contents, you can advertise it. This will improve your brand image. Your brand image is the way people perceive your business.

- The European Accessibility Act, a European law, says that businesses that sell services and products online will have to make their contents accessible by the end of June 2025. So, let's get ready!
- Accessibility features often solve unanticipated problems, and therefore can drive innovation.
- Your partners, employees and yourself may have one or more disabilities and so need accessibility. Remember that some disabilities are invisible.

More details on the [W3C Business Case for Digital Accessibility. webpage.](#)

Identifying and understanding the users' needs

Before talking about specific needs, you'll need to know some important definitions:

- What is disability?
- What is digital accessibility?

What is disability?

It is the interaction between a personal impairment and barriers that prevent the person to fully participate in society.

For example:

A person in a wheelchair in front of stairs cannot go beyond.

This definition follows the social model of disability, which says that a disability comes from the inaccessible environment, not from the person's impairment.

This also means that the concept of disability is a social construct created by social barriers which can be eliminated, by providing accessibility.

This applies both to the physical and digital worlds.

You can find the United Nations definition of disability in the Convention on the Rights of Persons with Disabilities.

What is digital accessibility?

As we said in the introduction:

“Web accessibility means that websites, tools, and technologies are designed and developed so that people with disabilities can use them.”

This definition comes from the World Wide Web Consortium (W3C).

Digital accessibility's objective is to provide access to online content to the users with disabilities, but this benefits every user.

The definition says, *“designed and develop”*.

It is important to consider accessibility from the first steps and during the whole creation process.

This saves time and resources and guarantees reaching the largest possible number of users.

Different users' needs and how to meet them

Digital accessibility helps to ensure that people with any disability can do the following concerning online content:

- Perceive
- Understand
- Navigate
- Interact
- Contribute

Each user has unique needs and may use assistive technologies, tools that helps them to compensate for their impairment.

Glasses and wheelchairs are example of assistive technologies.

Screen readers, software which reads aloud digital texts, are also assistive technologies.

Content creators must produce content that is compatible with assistive technologies, to provide a favourable environment for users to navigate it.

This video, produced by the W3C, introduces various accessibility needs: *"Web Accessibility Perspectives"*.

It shows that accessibility also benefits people without disabilities.

It can be useful for all your customers.

We will detail these needs while specifying the target users, the possible accommodations, and assistive technologies they may need.

Perceive

Target groups:

People mainly use sight and hearing to perceive digital contents.
So you have to make contents perceivable for two main target groups.



People with visual disabilities include:

- Different types of blindness
- Colour blindness
- Conditions related to sensitivity to colours and lights



People with auditory disabilities include:

- Deafness
- Partial hearing loss

Assistive technologies and accommodations:

For online visual content, users have assistive technologies such as:



- Screen readers: a tool that vocalizes the text contents of a document or a page.
- Refreshable braille display: a tool that provides a written alternative, in braille, to the contents of a document or a page.
- Zoom software: a tool that allows users to enlarge the content on their screen.
- Reverse contrast software: a tool that allows users to control the level of contrast of their screens and reverse it if needed.

For online auditory content, users need the following:



- Sign language interpretation.
- Closed captions.
- Written transcriptions.

Closed captions also allows people to watch your videos, for example promotions videos, in loud environment or in places where they need to be quiet.

Understand

Target groups:

- Learning and cognitive disabilities such as dyslexia, autism, and ADHD ([Attention deficit hyperactivity disorder Wikipedia page](#)).
- Intellectual disabilities are defined, among other criteria, by a person's IQ level (lower than 70).

Assistive technologies and accommodations:

Aa

Sans serif fonts usually provide a more comfortable reading experience to readers who are dyslexic. We recommend using these fonts:

- Luciole - [download this font from www.luciole-vision.com](http://www.luciole-vision.com)
- Calibri - [download this font from learn.microsoft.com](http://learn.microsoft.com)
- Comfortaa - [download this font from fonts.google.com](http://fonts.google.com)
- Lato - [download this font from fonts.google.com](http://fonts.google.com)
- Roboto - [download this font from fonts.google.com](http://fonts.google.com)

Using simpler language can help people with intellectual disabilities to access digital content.

- Plain language is a simpler language with no specific rule
- Easy-to-read has specific rules that are detailed in a [separate document](#) produced by the Inclusion Europe project.

It also has a specific logo.



Figure 2: Easy to read logo, Inclusion Europe.

© European Easy-to-Read Logo: Inclusion Europe. More information at www.inclusion-europe.eu/easy-to-read

Among these rules:

- Using images to illustrate the text.
- Writing short clear sentences.
- A person with an intellectual disability must check and validate the content.

Simpler language can also allow you to reach possible foreign customers who have difficulties to understand the language.

Navigate, interact, and contribute

Target groups include:

- People with physical disabilities, especially those that affect the upper body motor skills.
- People who have tremors
- Neurological conditions, such as photosensitive epilepsy

Assistive technologies and accommodations:

Some users are unable to use a mouse, the keyboard is the only alternative they have to navigate a document or page.

Any page or document must be compatible with keyboard navigation, for that...

- A document must have a proper structure.
- A website code must respect the digital accessibility rules.

Some users use their voices to navigate documents and pages, as they can use neither a mouse nor a keyboard.

Editing and creating accessible green content in different formats:

Now you know the main needs of users with disabilities.

In this section, you can find the basic rules of digitally accessible content.

Images



Images are often used in online content, to illustrate a written text, or to communicate important information.

As stated above, there are 2 types of pictures. The first type is decorative images. They are used to add a visual element to the document but does not contain any information.

These images must be marked as decorative, so the screen reader can ignore it while voicing the content.

For example, the image below is purely decorative, in the context of this article.



10 refugees who will change your perception of entrepreneurship

By Lauren Pereter, Associate Innovation Engagement Officer, June 5, 2016



Despite significant hardships, refugees are pushing the limits of what most people recognize as the general entrepreneur spirit. There is a resilience among refugee communities that enables them to thrive, not just to survive, and to be creative members

Figure 3: Screenshot of an online article with a decorative image, UNHCR

The second type is images containing information.

These images will need a text alternative, that a screen reader can read as part of the document.

For example, the image below contain text.



Figure 4: Image with text

To distinguish between these 2 types of images, you must ask yourself a question:

Can the reader access all the information, even if the image is deleted?

- If the answer is yes, the image is decorative, it should be ignored.
- If the answer is no, you must add a text alternative to the image.

To write relevant text alternatives to images

- Keep it short and specific
 - If the image is complex and requires a detailed and thorough explanation, you can add it as part of the text, or in a separate document/page.
- Keep in mind the context of the article
- Avoid starting with “image/photo of”, as the screen reader already states that there is an image
- If the image contains text, include it in the alternative.
- Images with caption **MUST** have an alternative.
- There isn’t one right answer when it comes to alternative text. The end goal is to provide access to the information.

Alt texts also help search engines to index your contents, which helps your content promotion.

Alt text example

Here is an example from Microsoft Office Word. In this document, there is a logo which is an image with text on it.

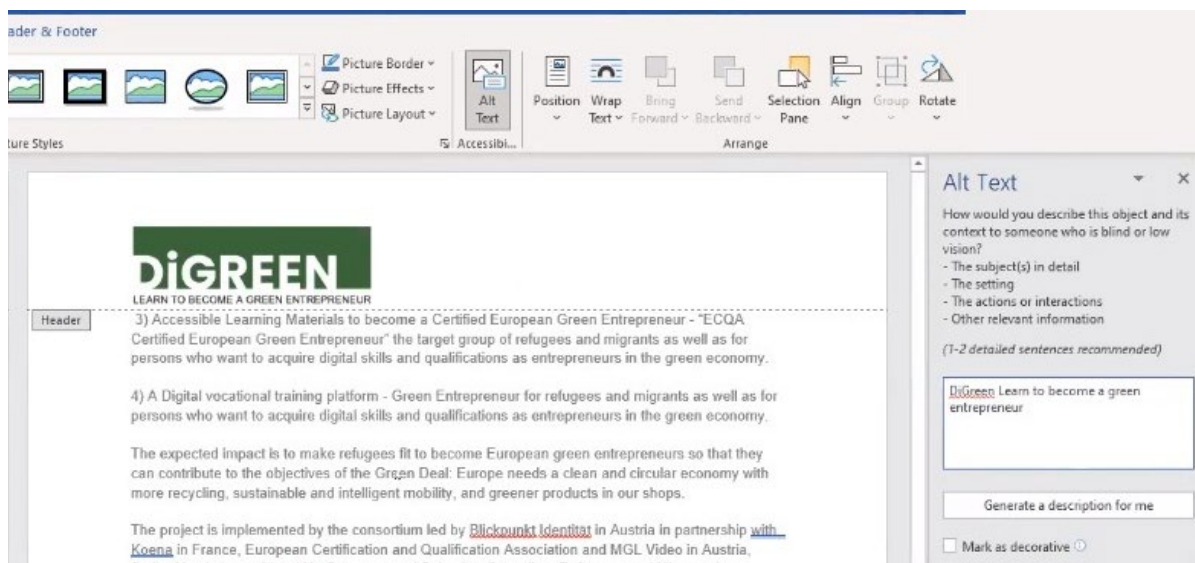


Figure 5: Screenshot of a Word interface with an alt text setting for an image

The picture is not decorative in the context of this article, so a text alternative is necessary.

- When the image is selected, review the image settings to write the alternative text.
- If the image is decorative, check the “Mark image as decorative” box.

The alternative text for this photo can be:

“DiGreen: learn to become a green entrepreneur”.

EXERCISE 1



M 14_E 1: Creating Alternative Text

Open a writing programme or take a sheet of paper. On the top, write the number of the module and the number of this exercise.

What to do with this group of images?



Figure 6: Group of images used for the exercise

These are five images of stars. To find out the alternative for each of them, the global meaning can be determined then used.

We made a proposition of correction at the end of the document.

When you have completed the exercise, name your digital document after the number of this exercise and save it in the folder to Module 14!

If you did the exercise on paper, take readable photos and keep them.



Structure

Well-structured documents help to read comfortably and to navigate using a screen reader. It is also beneficial for the content creators, because well-structured documents and pages attract readers and users.

From a visual perspective:

- Increases the reading comfort for users.
- Allows people with any neurological, cognitive, or intellectual conditions to maintain their focus on the information.

From a navigation perspective:

- Users navigating using a screen reader will have vocal information that helps them understand where they are on the page or document.
- Screen reader users will also be able to easily access the information they are looking for instead of going through the entirety of the document or page.

Digital content can be structured using 2 main elements, headings and structure.

Headings

Using headings is to place the titles in a hierarchical and logical order. It also provides you with a table of content, that users can use to find the specific topic they are interested in.

A screen reader will vocalize the heading level, help users to locate themselves in the overall document or page.

For example, Wikipedia has structured pages, as seen in the image below:

- “Function” is a title, it is set as a heading level 1.
- “Palestine refugee mandate” is a title, it is set as a heading level 2.



Figure 7: Screenshot from United Nations High Commissioner for Refugees on Wikipedia

HeadingsMap is a browser extension, available for Chrome Firefox and Edge. It is a useful tool that can be used to check the structure of a webpage.

By installing it, it is possible to access the structure of the webpage as it was set in its code.

For example, for the Wikipedia page above, here is the structure of its titles obtained with HeadingsMap.

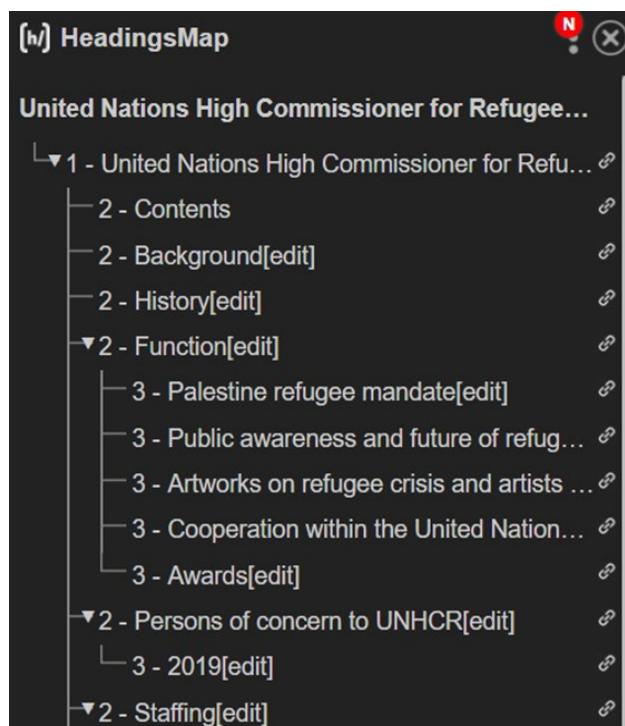


Figure 8: Screenshot of the HeadingsMap interface showing the headings structure

It is necessary to respect the correct hierarchy of the titles. It is also important not to skip any titles or levels.

EXERCISE 2



M 14_E 2: Checking the Headings Structure

Open a writing programme or take a sheet of paper. On the top, write the number of the module and the number of this exercise.

Install the HeadingsMap extension on your web browser.

A new icon should appear on your browser.

The image below is an example with Chrome.



Figure 9: Screenshot of a Chrome interface with the HeadingsMap icon.

Choose a webpage, activate HeadingsMap and check the webpage headings.

What do you think of the page headings structure?

Please comment in written words!

When you have completed the exercise, name your digital document after the number of this exercise and save it in the folder to Module 11!

If you did the exercise on paper, take readable photos and keep them.



Lists



Large blocks of text can be confusing or overwhelming for readers.

Using lists can help the reader distinguish between different elements.

A screen reader will announce the presence of a list if it's created using the proper tools, and not using a hyphen or a dash.

Here is an example of an incorrect list:

- Blickpunkt Identität
- Koena
- ECQA

Here is an example of a correct list:

- Blickpunkt Identität
- Koena
- ECQA

Contrasts



Content must have good contrast to be accessible.

Some people with low contrasts sensibility could miss important information if it's not visible to them.

The text colour must be sufficiently contrasted with the background colour.

A useful online tool to check the contrast between 2 colours is "Contrast Checker". The minimum ratio between 2 colours is set at 4.5, if the ratio is less, then the content is inaccessible.

For example, of a text in light grey is not sufficiently contrasted with its white background, which makes the caption inaccessible.

This is an example of an inaccessible text.

EXERCISE 3



M 14_E 3: Using a Contrast Checker

Open a writing programme or take a sheet of paper. On the top, write the number of the module and the number of this exercise.

Go to the Contrast Checker webpage.

Try different combinations of colours to see if they are contrasted enough.

You can use the colour picker in the page to compare colours on existing contents.

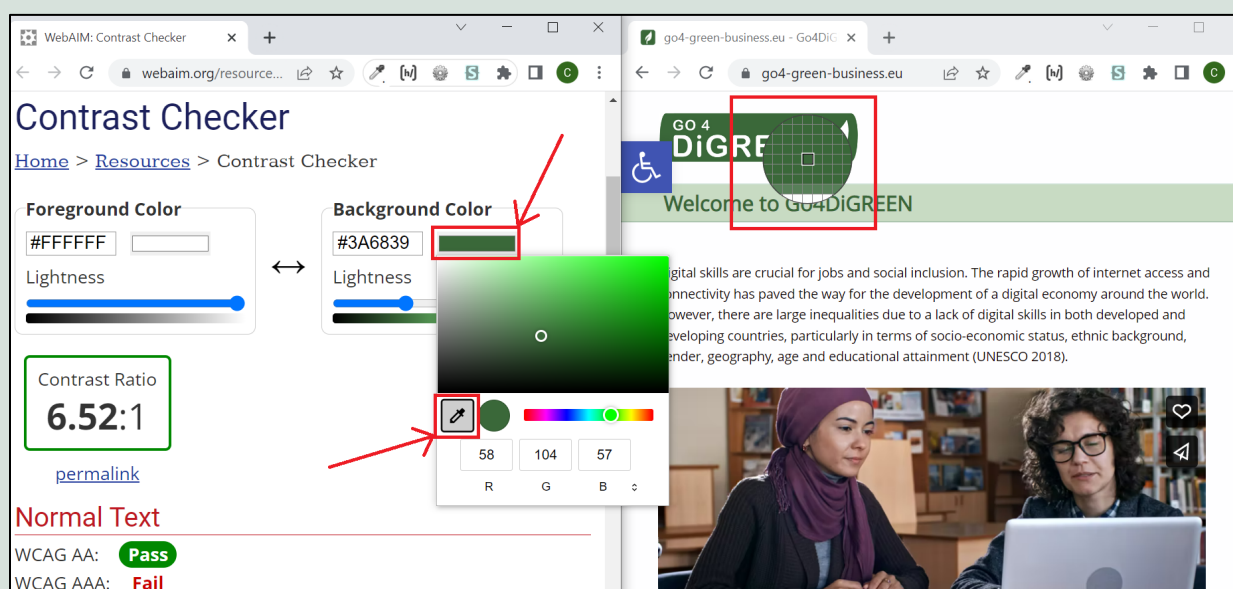


Figure 10: Contrast Checker interface with the colour picker feature.



To use the colour picker, click on the colour rectangle under “Foreground Colour” or “Background Colour”, click on the picker icon and click on the pixel which colour you want to test.

You may have to resize your browser window to be able to pick a colour on another window, like it was done on the image above.

Were the colours you tested contrasted enough?

Write down your experiences with the Contrast Checker webpage

When you have completed the exercise, name your digital document after the number of this exercise and save it in the folder to Module 11! If you did the exercise on paper, take readable photos and keep them.

Links



A link allows to navigate between different webpages or even in the same webpage.

It is accessible when:

- It has an explicit destination,
- it is not a long URL

Screen reader users can access a list of the links on a page, that's why the links need to be explicit outside the context of the sentence.

If you put a URL, the screen reader will read each letter and symbol, which makes the content incomprehensible.

Here is an example of an accessible link:

[United Nations High Commissioner for Refugees Wikipedia page](#)

Here is an example of an inaccessible link:

[United Nations High Commissioner for Refugees Wikipedia page:](#)

en.wikipedia.org/wiki/United_Nations_High_Commissioner_for_Refugees

Some additional instructions include:

- If an image is clickable (i.e. contains a link), never mark it as decorative, as the link will be ignored by the screen reader
- If the link leads to a downloadable document, indicate the title, format, and size of the document. If the document language is not the same as in the website, indicate it.

For example:

[Download the PDF version of the Easy-to-read rules in English](#)



Select digital technologies to interact with people and to share and digital contents:

Interacting and communicating with users is an important aspect of any structure's online presence.

Users will be able to access your online content by different means.

We will have an overview of their accessibility options and settings.



Figure 11: Older man in a video call

Online presence and communication are usually established through:

- Websites
- Hosting services
- Emails

Websites

You can use 2 kinds of tools to create websites:

1. Content management system (abbreviated CMS)
2. HTML, CSS and JavaScript

With a CMS such as WordPress, you must take into account the following digital accessibility elements, so the website can be accessible:

- colour contrasts
- page structure
- using titles
- alternative text for images
- accessible links

Here are examples from WordPress for alternative text and structuring a page with titles.

First alternative text

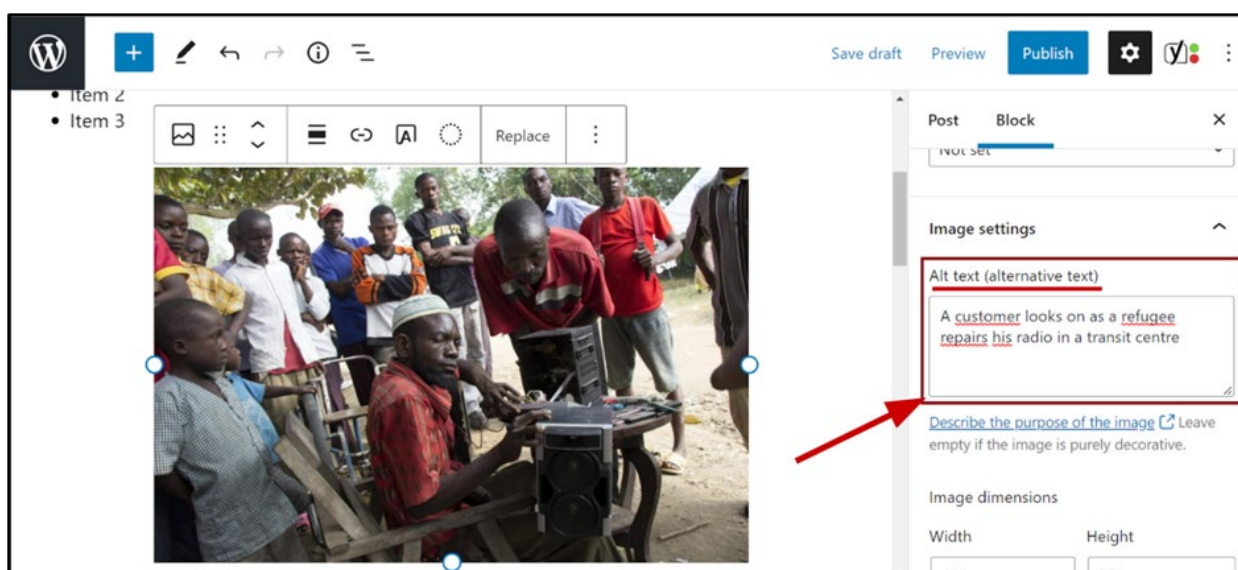


Figure 12: WordPress interface with an alt text setting for an image from UNHCR

The picture in the context of this article is not decorative, therefore, a text alternative is necessary.

When the image is selected, review the image settings to write the alternative text.

If the image is decorative, you can leave the text field empty.

The alternative text for this photo can be: “A customer watches as a refugee repairs his radio in a transit centre”.

Now the page structure

In WordPress, it is possible to structure a page using titles and setting them with a heading level.

You can add up to 6 heading levels.

As shown below, the title “Section 1” is a heading level 1 (H1), followed by the title “Part A” which is a heading level 2 (H2).

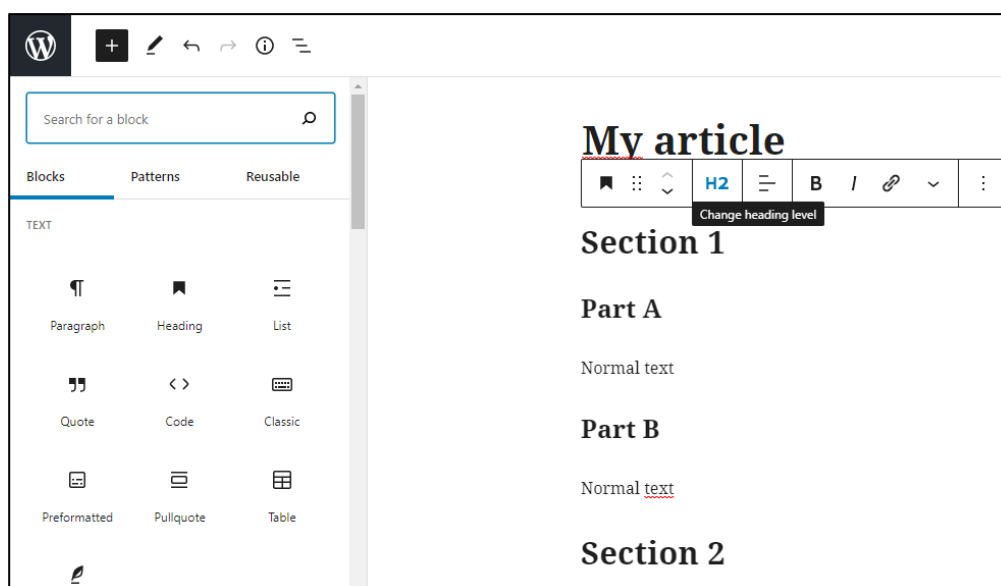


Figure 13: WordPress interface with headings parameters for a text

Online platforms

Social media

As previously explained, text alternatives to images containing information are a necessity. It also helps search engines to index your contents, which helps your content promotion.

Various social media platforms allow content creators to add alternative text to images and GIFs. These platforms include Facebook, Twitter, LinkedIn, and Instagram.

Here is an example from Facebook:

- After you uploaded an image that requires alternative text, click on the "edit" button.
- It will be possible to add alternative text describing the image.
 - In this case, the alternative text can be "Koena logo".

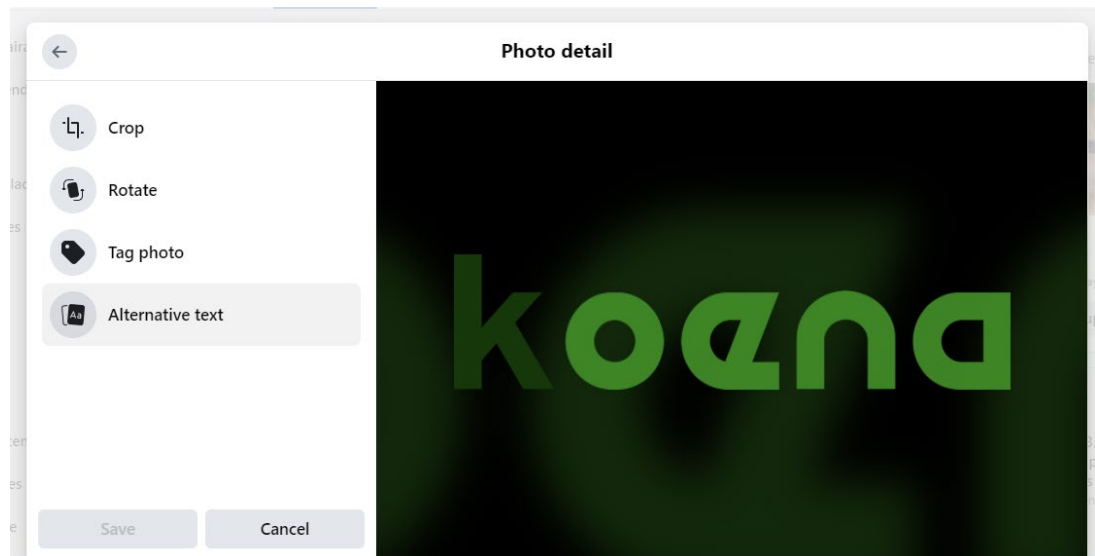


Figure 14: Screenshot of a Facebook interface with an alt text setting for an image

Here is an example from Twitter:

- After posting an image or a GIF, you can add an alternative text by clicking on "Add description".
- As shown below the description has to be 1000 characters or less.
 - In this case, the alternative text for the GIF can be "Yes".

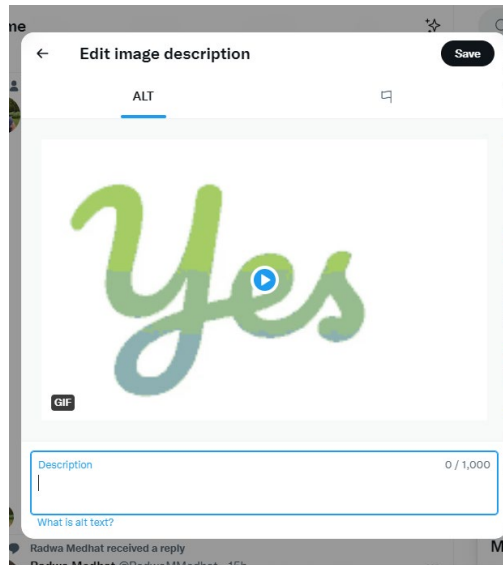


Figure 15: Screenshot of a Twitter interface with an alt text setting for an image

What about hashtags?

Hashtags can be accessible to screen reader users if each word starts with a capital letter. That way the screen reader will be able to differentiate several words. This is called a camelback hashtag.

Here is an example of an accessible hashtag: #ScreenReaderDemo

Here is an example of an inaccessible hashtag: #screenreaderdemo

And Emojis?

There is an important distinction between emojis and emoticons, which is that the first one can be accessible, while the second cannot.

This is an accessible emoji 😊

This smiling face emoji already contains an alternative text that can be read by a screen reader.

This is an inaccessible emoticon :-)

This smiling face emoticon might be read by some screen reader as its 3 characters, a colon, a hyphen, and a parenthesis, which does not convey the correct meaning.

It's preferable to use emojis to avoid confusing the users.

Here are some good practices when using emojis:

- Put your emojis at the end of the post, so it doesn't disturb screen reader users.
- Avoid using too many emojis, 3 is a sufficient number.
- Don't replace words with emojis.
 - For example, don't write "I ❤️ 🥙" with emojis but write "I love falafels" with letters instead.

The case of ASCII art

ASCII art are images made with characters.

Just like emoticons, each character will be read individually by a screen reader, which will result in incomprehensible content.

If an ASCII art is essential, post it as a screenshot or an image, and add to it a text alternative.

For example, here is an ASCII art image:

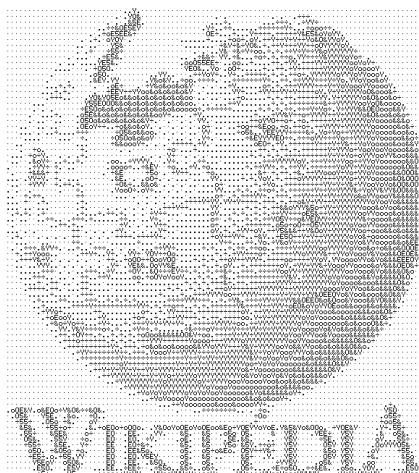


Figure 16: ASCII art Wikipedia logo, Wikipedia

Video hosting services

When posting videos on hosting services such as YouTube and Vimeo, the content must be accessible both visually and auditorily.

For that, you must use closed captions and audio description.



Closed captions provide written information for anyone who can't have access to the audio, whether it's a result of a disability or simply the environment the person is in. Reaching people who watch your promotional videos in a noisy place sure will help your business!

Closed captions provide a written alternative for vocal and musical cues in a video.

You can also provide a written transcription of the video, which helps users access the entirety of the video's content.

Audio description are “narration added to the soundtrack to describe important visual details that cannot be understood from the main soundtrack alone” (definition from the [WCAG website](#)).

They allow users with visual impairments to understand the content of the video.



Emails

To send accessible emails, for example the newsletters you send your customers, there are some rules to follow. They are basically the same that we presented for other contents.

1. Choose colours with good contrast
2. Make your links accessible
3. Avoid large blocks of text using lists
4. Use headings when writing a long email



Congratulations!

You finished Module 14. You are now able to take a quiz on the platform to test your knowledge and apply for a certificate with ECQA.



Reference list

European Commission (2019) European Accessibility Act [online] Available at: <https://ec.europa.eu/social/main.jsp?catId=1202>

Office of the United Nations High Commissioner for Human Rights (2006) Convention on the Rights of Persons with Disabilities [online] Available at: <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities>

<https://www.unhcr.org/innovation/10-refugees-who-will-change-your-perception-of-entrepreneurship/>

https://en.wikipedia.org/wiki/United_Nations_High_Commissioner_for_Refugees

World Wide Web Consortium Web Accessibility Initiative (2005) Introduction to Web Accessibility [online] Available at: <https://www.w3.org/WAI/fundamentals/accessibility-intro/#what>

Additional resources

“Web Accessibility Perspectives”, WC3 Web Accessibility Initiative Youtube Channel

Attention deficit hyperactivity disorder Wikipedia page

Inclusion Europe, Easy-to-read Checklist (pdf,225 Ko)

List of figures

Figure 1: Businessman in wheelchair working at desk, Microsoft picture	0
Figure 2: Easy to read logo, Inclusion Europe. © European Easy-to-Read Logo: Inclusion Europe. More information at www.inclusion-europe.eu/easy-to-read	9
Figure 3: Screenshot of an online article with a decorative image, UNHCR	11
Figure 4: Image with text	11



Figure 5: Screenshot of a Word interface with an alt text setting for an image	13
Figure 6: Group of images used for the exercise	14
Figure 7: Screenshot from United Nations High Commissioner for Refugees on Wikipedia	16
Figure 8: Screenshot of the HeadingsMap interface showing the headings structure	17
Figure 9: Screenshot of a Chrome interface with the HeadingsMap icon.	18
Figure 10: Contrast Checker interface with the colour picker feature.	20
Figure 11: Older man in a video call	23
Figure 12: WordPress interface with an alt text setting for an image from UNHCR	24
Figure 13: WordPress interface with headings parameters for a text	25
Figure 14: Screenshot of a Facebook interface with an alt text setting for an image	26
Figure 15: Screenshot of a Twitter interface with an alt text setting for an image	27
Figure 16: ASCII art Wikipedia logo, Wikipedia	29

Annex

Exercise 1 - Solution

The group of images' meaning is a rating, something like "4 out of 5".

This meaning needs to be accessible to people who use screen readers.

A possible solution would be

- To put "4 out of 5" as an alternative for the first star
- To mark the other stars as decorative so they are ignored by screen readers.