

THE MUST-HAVE **ACCESSIBILITY** HANDBOOK



This eBook provides everything you need to know to make your website accessible, including: a simple and thorough explanation of accessibility theory, where to begin, low hanging fruit, use cases, best practices, and tips and tricks.

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A BEGINNER'S GUIDE TO WEB ACCESSIBILITY

Why web accessibility?

Surveys show that up to 20% of internet users experience accessibility issues when using the internet. This means that by having a website with accessibility issues, up to 1 in 5 users will encounter difficulties.

One of the good things about ensuring web accessibility is that not only are you increasing your number of users, you also have a number of extra benefits in the form of increased search engine optimization (SEO) and improved usability. This is why ensuring web accessibility on your website is worth the investment.



Who is accessibility for?

By optimizing web accessibility you ensure that as many users as possible can use your website. You ensure that people with disabilities and reading difficulties can read your web pages and also that the website has a robustness that allows for most user agents to render content in a consistent and sensible way.

What are assistive technologies?

People with disabilities such as low vision, hearing or motor impairments, and people who have reading difficulties often use assistive technologies when using IT. These technologies assist the user in writing, spelling, reading and navigation, as well as having software and content read aloud. In order for these assistive technologies to be able to compensate in a meaningful way it is important that software and websites comply with the standards that make the assistive technologies able to interpret and render content properly. The Web Accessibility Initiative provides information on how different types of users browse the web and the technologies used: <http://www.w3.org/WAI/intro/people-use-web/browsing>

What is web accessibility?

If you look at all aspects of user experience (UX) on the internet, accessibility is one of many areas. Accessibility can be considered a fundamental technical foundation on which you build other aspects such as usability.

The term accessibility is used widely but there is a clear definition of what we mean when ensuring website accessibility and ensuring that as many users as possible can navigate and comprehend a website.

Most of ensuring web accessibility is about technical provisions. It is very much about how websites are implemented and about the tools that are used to publish content on websites. But accessibility is not just about techniques. The way you communicate on web pages can

also affect accessibility. This is described in detail in the section 'Mostly for web editors / content creators'.

How does one ensure an accessible website?

Federal agencies in the US are obligated by law to comply with the web accessibility guidelines, covered by Section 508 of the Americans With Disabilities Act. This means that if the responsibility of a federal website or part of a federal website lies on you, you are also responsible for ensuring its accessibility.

Who defines what web accessibility is and where can this definition and guidelines for this be found? The organization that standardizes the internet is called W3C and they have a working group called WAI. WAI defines web accessibility and they compose guidelines on how to ensure good web accessibility. The work that W3C does is globally recognized and you can feel secure in using these guidelines as a definition of the area. The set of guidelines that cover websites are called Web Content Accessibility Guidelines (WCAG) and generally helps to ensure that as many web users as possible can use a website. The guidelines are formulated in such a way, that if a website complies you also ensure a robustness resulting in most user agents (such as browsers and assistive technologies) being able to show and interpret your web pages in a consistent way. WAI are happy to have comments and suggestions and takes these seriously.

There is an original version in English as well as a number of translations in different languages.

In December 2008 the current version of WCAG was released. This is version 2.0 making the former 1.0 version obsolete.

WCAG 2.0 is divided into four main principles: Perceivable, Operable, Understandable and Robust. Each of these main principles is divid-

ed into a number of guidelines that are again divided into individual success criteria. It is the success criteria that are most often used as requirement for conformance. The criteria are divided into three levels: A, AA and AAA. Level A is considered the most severe. In most countries websites should be compliant on level AA. It will be difficult to be completely AAA compliant. It is recommended to pick out criteria on this level based on web pages addressing a mainstream audience and where the website has special target groups. On level AA there are 38 criteria in all to comply with. These are the framework for the rest of this handbook.

There are four interrelated documents to work with in connection with WCAG 2.0. You have the main document giving some background information and comprising all the criteria and their levels. Then you have a document describing how conformance is ensured. This document refers to a document containing specific techniques often with coding examples. Finally there is a document giving a detailed description of the individual criteria, why it is relevant and who it is relevant for.

When working with WCAG however one quickly comes to realize that the structure and the communication in the documents are somewhat complex. For this reason it takes a lot of work to understand and interpret the meaning of the different criteria. But in most cases whatever your role is in a web project, you do not have to relate to all of the criteria. You have to pick out the areas that are relevant for your specific role. If you are a developer a high number of criteria are relevant to you. If you are a CMS provider another set of criteria are relevant for you. And if you are a web content editor a third set of criteria are relevant to you.

There are a large number of tools that in an automated way can check if a website is in compliance. But there are a number of criteria that cannot be checked in an automated way.

For these, a number of assisting toolbars are available to help with the manual assessment of whether content is in conformance. This is described in more detail in the section 'Mostly for web managers'.

The roles and responsibilities of web accessibility

MOSTLY FOR WEB MANAGERS

If you have the responsibility of ensuring accessibility on a website, then all the criteria in WCAG are relevant to you (usually on level AA). It is then necessary to have a fundamental understanding of the subject in order to be able to ensure for instance that through a development project and by an acceptance test what is delivered conforms to the guidelines. It is also important that you as the responsible party make the right requirements in the requirement specifications and understand how meeting them is ensured. It is also important that you train your web editor colleagues on how to publish content the 'accessible way.' This way, when content is added it furthers your site's accessibility rather than introducing new accessibility issues.

If you have policies in your organization for communication and design it is a good idea to integrate the relevant accessibility criteria here.

If your job is to ensure accessibility on an existing website it is often a question of what can realistically be fixed now. It is always better to be 70% accessible rather than 60% accessible for instance because it makes the website accessible for more users.

Start out by using tools that can assist you in getting a quick overview of issues. For large websites the effort most likely needs to be prioritized. A good starting point is your main pages, for example the front page and a selection of your template pages. Often it requires

minor adjustments in the CSS or in a template and an issue will be fixed and take effect across all pages. If there is special content on some web pages such as video, dynamic content or self-services it is a good idea to include these pages also.

There can be areas where it is not possible to do a fix on the current website or that should be directed to development. Write these down so they are not forgotten and bring them up in the next relevant meeting.

Make a strategy for testing accessibility on a regular basis. It can be quarterly for instance as a part of the organization's web strategy.

MOSTLY FOR WEB DESIGNERS

As a web designer, several accessibility criteria are especially important to help you ensure as many users as possible can use your web application.

Consistent design

Some users may not be accustomed to using the internet at all, and other users may have a disability that makes it hard to get an overview of a webpage or navigate a website. Therefore, it's important that the navigation is consistent across all your web pages, and global elements like menus and help facilities are in the same order across the site. It's also important that elements with the same function (such as icons and references) are ordered in the same way on every page (Success criteria 3.2.3 and Success criteria 3.2.4).

Navigation

In order to make it easy for users to find information it's important to have more than one way of finding specific content on a web page. A user can find content on a page by navigating through the intended page hierarchy, but it should also be possible to find the page in another way through a sitemap, an index or a search function (Success criteria 2.4.5).

Headings

When designing the look and feel and the architecture of a website, it's important to keep in mind that some users cannot get a visual overview of a web page; they have to do this structurally. Make sure pages are divided into logical sections each having a heading (coded as a heading tag) describing the content, so that assistive technologies can render them as section headings (Success criteria 1.3.1 and Success criteria 2.4.6).

Use of color

In order to make sure that all users are aware that an element on a web page has a certain function or status, it is important not to give information solely by the use of color. For users who cannot see colors, that information can be lost. An example of conveying information through colors could be to show links within a text by giving links a different color than the text. Supplement this with another non-color specific way of indicating the links (such as underline, a symbol etc.) (Success criterion 1.4.1).

In order for visually impaired users to be able to read all the text on web pages it is important that the color of the text and the color of the background are in sufficient contrast to each other. This can be ensured by conforming to the requirement of keeping a contrast ratio of 4.5:1 for regular text and 3:1 for large text. There are a number of tools available to quickly assist in measuring the contrast ratios (Success criteria 1.4.3).

Links

When an element on a web page is to be a link or something clickable, it's important that the element text/description makes sense when read out of context. Part of this is ensured by the technical implementation but the design should consider using descriptive link texts also. Link texts such as: 'Read more,' 'here,' 'Click here,' and 'publication' are examples of poor link text if read out of their context (Suc-

cess criteria 2.4.4).

Interactive elements

When designing for interactive elements, i.e. content that the user can interact with, there should be a clear explanation of what is to be entered/chosen/checked. The design should make sure that when text fields, drop downs, check boxes and radio buttons are used, they have text connected to them describing their purpose (Success criterion 2.4.6 and Success criterion 3.3.2).

MOSTLY FOR WEB DEVELOPERS



Page titles

Make sure that all web pages have a descriptive title reflecting the page content. Also make sure that web editors can enter page titles via the authoring tool (for example CMS).

Keyboard navigation

All content on a web page should be navigable both with a computer mouse and from the keyboard alone. This applies to forms, buttons and links for instance.

Some users are not able to use a computer mouse. They can use the keyboard only to navigate by tabbing through content on a web page. These users need to be able to see where they are located on the page. For this reason it should always be visually evident where on the web page the tab indicator is located. Most browsers automatically show this with a dotted line around the content. You can also implement your own way of showing this. Note: some Reset Stylesheets remove this highlighting. Be sure to address this highlighting within the Reset CSS.

Content sequence

When content for web pages is coded, make sure that the content has a meaningful order, not only visually but also in the coding sequence. Some users navigate pages by this order. Ensure that the order of content is sensi-

ble when styles are disabled and when tabbing through content.

Enlarging

Make sure web page text can be resized up to 200% as a minimum, and still be usable and look sensible and without loss of content (newer browsers can zoom content and this is usually the way that assistive technologies do it as well).

Language

In order for user agents to be able to render content in the correct language it is important that the pages have a correct language definition in the HTML tag for a web page. The language tag should be 'en' for English pages, 'da' for Danish pages, and so on.

Also the CMS should give web editors the ability to highlight text that is in a different language than the rest of the page, and choose language for this part. The highlighting should add the lang="" attribute in the code.

Coding

In order to make sure that the website is shown consistently across different platforms (such as operating systems and browsers) and at the same time that assistive technologies can render content in a meaningful way, the standard for the format one publishes in should be complied with. If, for instance you are publishing in XHTML 1.0 or HTML 5.0 the syntax rules for this format should be followed. You can check your web pages for syntax errors at: <http://validator.w3.org/>

Also make sure that elements are marked up with the code that is intended for the purpose. For example, HTML headings should be tagged as <H> (H1...H6).

Data tables should be tagged as <table> and web editors should be able to give description to data tables via <caption>. Headings for

columns and rows should be defined by the use of <th> and perhaps 'header id' and 'scope'. If a complex data table needs explaining for screen reader users, then this should be done via 'summary'.

When writing text, web editors should be able to emphasize with and .

When form elements are used, a label should be explicitly connected to each control and form elements that belong to the same group should be assembled. For instance a group of radio buttons should be grouped with <fieldset> and <legend>. There are a number of techniques to ensure this: <http://www.w3.org/WAI/WCAG20/quickref/#qr-content-structure-separation-programmatic> and <http://www.w3.org/WAI/WCAG20/quickref/#qr-ensure-compat-rsu>

User input

If the user must enter information in a text field, make sure that if the user does not enter text in the right format they are notified with text that helps them correct the mistake. When filling out a form that is part of a financial transaction or a legal commitment where data is changed, the input must be checked by the system to avoid errors or the user should have the option of reading through the input before sending it. A third option is that the user can always reverse the submission.

Graphics

When web pages contain elements that are non-text it is important to give a text alternative describing the purpose of the non-text element. For example, images use the "alt text" HTML attribute (alt=""). It is important to note that the alternative text reflects the purpose of the image and not necessarily what the image is of. See information on images in the section 'Mostly for web editors' for a detailed description. In order for web editors to be able to give the alternative text correctly it is important

that the authoring tool -such as a CMS- allows for entering alternative texts on images that are entered on web pages. The alt attribute should always be included in the code, regardless of whether or not any descriptive text is needed. It should be up to the web editor either to leave the field empty or give a description for an image. An alternative text is context specific. For this reason it can be poor accessibility practice to enter an alternative text for an image once and for all when uploading to the media library. It should be possible to enter a new alternative text every time an image is used on a web page.

If a web page contains a media file, it should also be given a descriptive text either as an alt attribute or in the object tag on inline elements or similar.

Audio and video

When audio and video is published on a web page there are a number of relevant criteria, such as giving an alternative format, and having captions and audio description. These are described in detail in the section 'Mostly for web editors'.

Throughout development it is important to ensure that all buttons and navigation in the player can be used both with a computer mouse and from the keyboard alone. At the same time buttons and navigation are given text descriptions to help screen readers.

For a video it should be possible to enter a dedicated track for audio description as well as add captions.

If a passage of audio starts automatically, the user should be able to pause, stop or control the sound volume.

User control

Some users need a long time to read and navigate web pages. Therefore, if some sort of time limit is present on pages, such as a time out,

the user must be able to change the limit either by adjusting it, extending, or disabling it.

If content for moving, blinking or scrolling is added it is also important that the user can pause, stop or hide this content.

In order for screen reader users to avoid having to listen to the same content every time they load a new page, provide the option of skipping blocks of repeated content. Repeated content can be a global menu (and local menu) and help functions. There are several techniques for ensuring this; the easiest way is to provide a link at the top of all pages that takes the user to the main content of the page (for instance the heading 1 on the page in the content section). There are other options as well: <http://www.w3.org/WAI/WCAG20/quickref/#qr-navigation-mechanisms-skip>

When an element is to be altered by the user, such as a drop down menu, a radio button, etc., it is important that it acts as the user expects. Elements should not react solely when receiving focus or when the user lands on it from the keyboard. It should react when the user has had the time to choose and confirm.

Blinking content

Content should not blink more than three times per second, or else it may cause an epileptic episode for those suffering from epilepsy.

MOSTLY FOR WEB EDITORS

CONTENT CREATORS

Page titles

In a CMS you give a web page a title or name when you create it. In some systems there is also a specific field for this called 'Title'. It is important that this title is descriptive of what the page is about. It is the page title that is shown in the top of your browser and is read as the first thing on a web page by a screen reader.

Text

When writing text for web pages, consider the fact that some users cannot get an overview of a page visually, as opposed to structurally. Make sure that pages are divided into logical sections each given a heading that is descriptive of the section. You can use several levels of headings: Heading 1, Heading 2, etc. (in the code <h1>, <h2> etc., so that assistive technologies can render them as headings).

Because of low vision some users will perceive a web page very differently to the way other users would visually perceive it. Therefore make sure not to give important information solely by the use of color or with an instruction requiring sensory skills. For example, avoid writing only things like: '...you can read more about the event in the blue box to the right.'

It is fine to write something like this if you supplement it with something that all users can find, such as an additional text: '...you can read more about the event in the blue box to the right by the heading Events in March.' This way you are also giving text that all users will be able to find.

If you change the language in the text make sure you state the language of that piece of text. In the code this is done with the attribute lang="" for the text unit. If you have a good CMS it will allow you to highlight the piece of text and choose language from a drop down menu.

Links

When you add links on a page write link texts that make sense when read out of context. For instance avoid using link texts such as 'Read more,' 'Here,' 'Click here,' 'Publication,' etc. An example could be a text: 'You can read more about the Assistive Technologies event here.' Another example could be writing: 'You can read more about the Assistive Technologies event here.' It will be better to write 'You can

read more about the Assistive Technologies event here' for example. This way you are giving a link text that in itself is a good indicator of what the destination page is about.

Images

When you add images to a web page consider the fact that some users cannot see images. They need a text alternative. In most CMSs this is stated as "alternative text" or "alt text." The text given here is not visually displayed on the page but is hidden in the code to be accessed by screen readers. (The alternative text is not the same as a tooltip: The text displayed when you hover over the image from the 'title' attribute).

Close your eyes and visualize what information you need if you cannot see the image. Describe the purpose of the image and not necessarily what the image is of. If the image is linking, it is important to describe where the link goes to/ what happens when clicking on the image. If the image is solely used for decorative purposes such as creating an ambience or a visual context, then it should have no alternative text. (but your CMS should automatically insert the tag alt="" to the image in the code as this is important for decorative images). If the image contains information that information should be given in the alternative text.

Avoid using images of text. This means that you should avoid writing text in an image editing program and saving it as an image. Many of the types of software that reads text aloud (for instance used by dyslexics) cannot read images of text. This is because you cannot highlight text within an image to have it read out to you. (Some of these types of software can read alternative texts, but far from all. And they should not be confused with screen reader software used by the visually impaired. These are much more advanced). Images of text also tend to pixelate and become blurry upon magnification making them difficult to read.

Video and audio

If you are using video or audio clips on a web page there are several criteria to consider, such as captioning and audio description on video. Audio description is an extra track explaining what happens on the screen to visually impaired users. If you are not able to provide your videos with audio descriptions then give an alternative in the form of a transcript that is uploaded or linked to from the page. But be aware that without audio descriptions you cannot be AA compliant, but only A-compliant. If the content is solely visual (no sound) or only audio (no visual) then a text version is an accepted alternative on both levels.

Tables

When using data tables with information it is important to indicate headings for rows and/or columns. The way to do this is very CMS specific. In some cases the editor provides an accessibility tab where this information can be entered when using data tables.

Lists

When using a list of items make sure to use the function for this that is built into the editor in the CMS. This will ensure that accessible code is entered for lists. Avoid just making dots that looks like a list (such as asterisk, dash etc.).

Documents

Many of the same principles that apply to web content are relevant for documents. There are several sets of guidelines that are relevant when talking about accessible documents and especially accessible PDF. Most of this is covered by WCAG 2.0. Also an international standard ISO 14289-1 (PDF/UA-1) defines how to create accessible PDF. A way of testing for conformance is included in the Matterhorn Protocol.

Our whitepaper 'How to create accessible PDFs': <http://go.siteimprove.com/how-to-create-accessible-pdfs> covers all these areas.

The process of ensuring website accessibility

Web accessibility isn't something that is ensured solely through a website development project. To be successful, accessibility has to be a part of the overall web governance strategy.

Accessibility is often a neglected part of making a website strategy. The project manager usually has too much on their plate, and accessibility slips through the cracks. It isn't neglected as a result of not caring or a lack of interest, but rather because there is too much trust put in the vendors. The tendency is to assume that they know what to do, and that adding accessibility to your requirements specification means it will be taken care of. Unfortunately, this is far from the case.

Another problem is that many web managers do not know enough about accessibility to know that ensuring good web accessibility is a process, rather than just a coding task during development.

In many web projects an executive in the organizations says: 'Our website must meet WCAG, the web accessibility guidelines on all conformance levels,' but they have no idea what this entails. Accessibility isn't something that can be simply added into the current web project and the new website budget. For example, if you want to add a video to your website and want it to conform to the guidelines on level AA (which is mandatory for many public websites) there are many aspects to consider. You must provide captions, audio description and a number of other things. If you wish to conform on level AAA you must also provide sign language of the content. Do you have the resources for this every time you upload a video to the website?

Accessibility is relevant as an on-going process during the lifetime of the website. Every time you integrate a third party solution or you

upload video or audio content and similar situations. The publishing process of web editors and the CMS that the website is based on also has influence on the ability and the situation of whether the publishing work flow supports accessibility or whether it introduces new accessibility issues.

It's a good idea to have a separate strategy for ambitions on accessibility and what strategy to have in order to ensure it. It is also important to integrate the number of accessibility criteria relevant in the organization's communications policy, design guide, policy for purchase and the like. Create a matrix of the stakeholders in the process.

Helpful Tips

It's also a good idea to divide it into a set of areas of responsibility and subsidiary goals:

- Who will ensure that the right requirements are made at the right time with the vendors?
- Who will ensure that accessibility is integrated in the different policies for the organization? (Communications policy, design guide, policy for purchase and the likes).
- Who takes responsibilities for accessibility during design and development?
- How do we ensure that the requirements are met? Remember the CMS, video and audio players, forms and all the technical tools that are connected to and integrated with the website.
- Who ensures that web editors and authors of documents are trained to have an accessible publishing work flow?
- Who ensures that there is an on-going process of checking if the guidelines are met and that no new accessibility issues are introduced on the website?

It's important to have established the division of ownership and responsibilities on all the different areas, and you should have an accessibility coordinator. This person is consulted when new decisions are made for the website. This could be re-structuring, new purchases and integration, change of existing policies and the like. And this person has a written network of contacts inside and outside the organization that in some way can affect the website and its content.

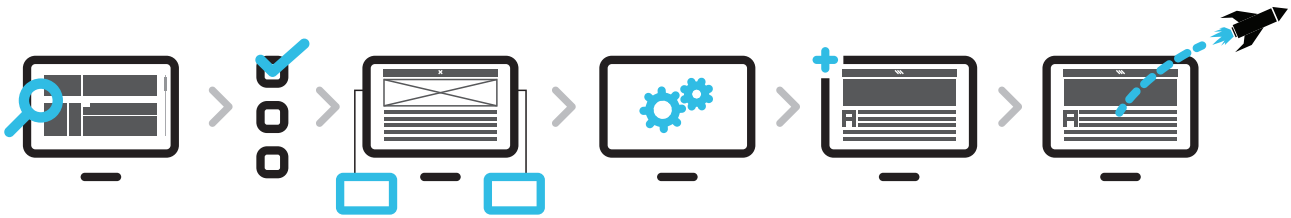
Level of ambition and resources spent

It is important to define a level of ambition that is in correspondence with the resources you have available.

First of all the ability to assess a website and it's compliance with accessibility guidelines requires a considerable amount of work and knowledge. Initially it is a good idea to clarify the roles and responsibilities and which parts you are able to do within the organization and which ones require outside help. This is relevant both for testing for accessibility issues and fixing accessibility issues.

Often the case is that a number of issues are something that you are able to fix within the organization and some issues (often related to style sheets and templates) is something you need outside help to fix. It is recommended you sort through the list of issues and divide them into these categories. Also remember that issues on level A are considered most important and issues on level AA considered second most important. Level AAA is a level you pick from, depending on types of pages and target groups.

Some criteria do not require a lot of work to meet and other require a lot of work. For instance the criteria on media content are quite extensive and time consuming. Therefore it is important to have a realistic approach and level of ambition for meeting these requirements.



Existing design: Evaluate > Specification: Make requirements > Design / mock ups: Evaluate > Templates and structure: Test > Content: Training and testing > Live: Strategy for training and testing

Getting a new website

If you are about to redesign your website, now is a good time to focus on getting a website that can be used by as many people as possible. As soon as you think 'new website' you should think 'accessibility'. By considering and implementing accessibility early on, the process will be much more manageable than if you think 'accessibility' in the late stages of developing a new website.

Requirements Specification

When you are writing your accessibility requirement specifications for your web development team, it is important that you use the right standards (The best standards are the international guidelines for accessibility outlined by WCAG). In web design projects, it's fairly common for the buyer to request that the website be designed in conformance with WCAG 2.0 on level AA, however this requirement may not be as straightforward as it would appear at first glance. In the middle of the project, how will you determine whether or not the website meets your expectations? My recommendation is that you explicitly state the individual success criteria that you wish to have compliance with. Have your website developer state if and how this is going to be complied with. Define the following (in a table or similar):

- Reference to criteria: 1.1.1
- Description of criteria: Non-text Content: All non-text content that is...
- Notes on criteria: This is relevant for images...
- Developer's field for description of solution (leave blank for developer to fill out)

Do the same for all the criteria. You can also state, if a criteria is an ultimate requirement or a desirable requirement.

It's also important that the CMS used to build the website helps web editors publish accessible content. Make requirements on how this should be ensured. You can pick the necessary check points from the guidelines on accessible authoring tools ATAG (these guidelines dictate that the tool generates accessible web content, helps web editors to publish accessible content, and that the tool itself is accessible). In my experience, you'll want to explicitly state requirements for how to:

- Handle alternative texts for images
- The use of headings
- The ability to create accessible data tables
- How to make quotes (<q> and <blockquote>)
- How to enter page titles
- How the html code created by the CMS complies with the W3C standards
- How to tag change of language in the text entered

Consider also the organization's design manual and if there are any contradictions with the accessibility guidelines. For example there are specific accessibility guidelines on the contrast ratio between background and text colors. For this reason it is important to use 'accessible' color combinations.

Design and Development

A handful of the accessibility criteria are relevant when starting the phase of designing and doing wire frames. Think about navigation, the use of headings, colors, link texts and descriptions where the user is to click on, fill out or choose content on web pages.

When it comes to the process of development most of the accessibility criteria are relevant. Therefore it is important that the people developing the solution have a solid understanding of accessibility. Make sure you test the solution during the process from start to finish. Do not wait until the acceptance test. By then it's nearly an impossible task to correct possible errors and shortcomings before the site goes live. It's especially important that the templates for different pages are tested as early as possible before building on them, to avoid spreading mistakes to hundreds or thousands of pages.

Publishing content

Make sure you train web editors on how to publish content the 'accessible way'. This way, when content is added both in the development phase and after you've launched, it furthers your site's accessibility rather than introducing new accessibility issues.

Media players, forms, and old content

Areas which are often being neglected occur when third party solutions are integrated, such as media players and forms. Remember these in the process. They should also be accessible!

Also think about content being migrated from the old system into the new. If you change the html/xhtml version the syntax specifications from W3C are different. There might also be content from the old system that is not accessible. After all your hard work, the last thing you want is to carry old problems over to your new website.

Accessibility Top 5

Text for everyone

- Make sure all text can be highlighted and read aloud so that screen readers and reading tools can access them (try turning off style sheets and images, and make sure no important information is missing. Another way to test is to access the website with reading tools or to test with real users of assistive technologies)
- Avoid images of text where possible. Where not, make sure that text alternatives are equivalent
- Provide alternative text for images: These must reflect the purpose of the image:
 - *Decorative: no alternative text*
 - *Having a function: Describe this*
 - *Linking: Describe destination*

Versatility

Create a website that can be used by as many as possible, in as many ways as possible according to user needs.

- All functionality can be used with a mouse
- All functionality can be used without a mouse - from the keyboard alone.
- Users can adapt color and font according to specific needs.

Association

- Text, headings, buttons, fields etc. that are logically connected must also be visually connected.
- Make sure it is also connected in the code.
- Make sure not to give instructions based solely on a location of content, such as 'In the box to your right...'. Supplement with a heading also
- Make link texts that can be read out of context. Avoid 'Click here', 'Read more,' ...

Color for everyone

- Make sure that the color of the background and the color of the text are in sufficient contrast to each other. That way people with low vision can also read it.
- Make sure that you do not give information to the user only by use of color (such as saying 'In the green box you will find...'). Otherwise it can create problems for both users with low vision or no vision, or people with color blindness.

Robustness

- Have a consistent design throughout the website
- Follow known conventions
- Follow the standard for the format you are publishing in (for example html 5 syntax) – this will optimize your website for many different platforms and user agents

Accessible PDF Top 3

- Structure documents
 - *Headings*
 - *Lists*
 - *Tables*
 - *Alternative text for images*
 - *Columns*
- Ensure reading order
- Save as pdf – do not print as pdf

Common accessibility issues

Images

A common misunderstanding is that all images need an alternative text. This is not the case, but all images need an alt-tag (the code alt=""). Whether the image should have an alternative text depends on the context and purpose of the image. Ask yourself these questions:

"Do I use the image as a decoration to create a visual context?" If this is the case, the image should not have an alternative text.

"Do I use the image to provide information?"

Then you need to describe what a visually impaired user can't see on the image (and this is not necessarily the same as describing what the image shows).

"Does the image link?" Then you need to describe the destination of the link in the alternative text.

Headings

Most people believe their CMS automatically puts in headings in fixed places on the pages and therefore they need not worry about headings. A website's main areas need to be categorized by headings. Places on the site where you wish to logically and visually highlight an area by using bold font/large font/another color etc. then this heading should also be highlighted code-wise so the heading not only functions visually, but also structurally. This means that it largely depends on page types/templates. The web editors also need to be able to enter headings (H1, H2...) in the content part of the pages.

Forms

Most people think that if a search field has a placeholder text indicating the purpose, this is sufficient instructions for users. If you need to be sure that all users can identify and use the search field, and at the same time comply with the guidelines, then you need to explicitly add text to the field through a label (the code label for=""). If this is not possible, use title="").

Read aloud functionality

Many believe that if they link to a read aloud functionality all disabled users are able to use the website. This is not necessarily true. An audio reading tool might help some people with dyslexia, but most people with impairments or dyslexia use specialized assistive technologies. They need significantly more help than what a simple audio reading tool can provide. The web standards and guidelines for accessibility are

created in order for user agents (browsers, assistive technologies etc.) to be able to interpret a website and render it in a meaningful way to the user. That is why the most important element when working towards ensuring accessibility is to follow the standards and guidelines.

Resources on Web Accessibility

The international resource on web accessibility is the Web Accessibility Initiative (WAI) with W3C: <http://www.w3.org/WAI/>. On their website you will find an extensive collection of information on how to work with accessibility.

WAI working group created the international guidelines on Web Accessibility Web Content Accessibility Guidelines: <http://www.w3.org/TR/WCAG20/>.

Siteimprove provides a library of blog posts covering accessibility from different angles: <http://blog.siteimprove.com/web-governance-blog/topic/accessibility>.

If you are particularly interested in accessibility in terms of documents such as PDF you can download our whitepaper on how to create accessible PDF: <http://go.siteimprove.com/how-to-create-accessible-pdfs>.

AbilityNet has gathered a list of great resources when working on accessibility: <http://www.abilitynet.org.uk/advice-info/web-accessibility-resources>.

Siteimprove helps organizations of all sizes maintain the integrity of their website content with a suite of hosted reporting tools. The company makes web governance easy for thousands of teams in 10 countries around the world, ranging from global corporations to one-person departments. Siteimprove is dedicated to being a good neighbor to the communities around them, and have offices located in North America, Europe and Australia.

To learn more, visit [**http://siteimprove.com**](http://siteimprove.com)

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