

Accessible Design

A guide to how design can be more accessible to a wider audience



It's important to create visual communication that is engaging and accessible to the widest possible audience. There are various considerations designers can take in to account to make content more accessible.

Typography

Using a large point size might be the first thing that comes to mind when considering accessibility, and while it is important to use a size which considers readability, there are other typographic elements which can make a print communication more accessible.

Choice of Typeface

Some typefaces are designed for display purposes, these are usually very decorative. Other typefaces are designed to be highly legible. When considering a typeface for body copy, choose a typeface with easily recognisable letterforms, in a medium or regular weight.

AaBbCc

Helvetica is a sans serif typeface. It doesn't have decorative elements at the end of each character, it also has a consistent line width, making it easier for the eye to recognise letterforms.

GaBbCc

Grand Hotel is a script typeface. Display fonts such as this are harder to read, due to the decorative elements.

Each typeface has its own x-height which can affect the size letterforms appear when set at a certain point size. The x-height; the height of a lower case 'x', is a measurement which is used to describe the general proportions of a typeface. Considering a font with a tall x-height may improve readability as the height of the typeface will appear larger, as shown in the example below:

x-height Text Text

Museo Sans, 11pt

Cochin, 11pt

Type Settling

Aligning text to the left (in Western cultures) is usually the easiest format to read. Justifying text creates uneven spaces within the text and centralising body copy makes it difficult for the eye to quickly track where the next line of

text begins. The length of the text column also impacts how the text is read. Choosing a column length which isn't too wide or too short is important to avoid issues such as too much hyphenation, uneven line breaks and the eye losing track of the next line.

Pe rehenda ntente pa quati nost,
tem ea dolorep edipsam reperum
quis eiuntionsed ut.

Text that is aligned to the left is easier to read.

Pe rehenda ntente pa quati nost,
tem ea dolorep edipsam
quis eiuntionsed ut.

Text that is aligned to the centre is more difficult to read. It is hard to track where the next line of text begins.

Typographic styling options such as CAPITALISATION, underlining and *italics* can be used to add emphasis. But in terms of accessibility, should be used sparingly and have a purpose. The spacing between lines of text, known as leading, can also impact the readability. If this is set too tight lines of text become overly condensed. Alternatively, if set too loose this can make it difficult for the reader to navigate where the next line begins. Altering the spacing between letters or words can improve the readability of the text. The space between letters or kerning and the spacing between words or tracking can also be altered to improve the readability of the body text.

Hierarchy and grids

Using a grid helps to create a consistent structure throughout print materials whilst text hierarchy helps readers navigate around a page. Text hierarchy should be present in all design materials, however it is particularly important in more complex pieces. For readers with visual disabilities this is vital. They also appreciate having signposts, in order to help them quickly identify content and process the meaning easily.

Example of text hierarchy:

I'm a Title

I'm a sub-heading

And me, I'm the body text.

Colour

Readers perceptions of colour can be affected by many variations of problems with vision.

People who experience colour blindness:



4.5%

of the global population



1 in 12

men



1 in 200

women

People who suffer from low vision:



1 in 30

people (4%)



1 in 188

people (0.6%)

When designing for people that are colour blind, it is important to not just look at individual colours and check they are 'visible'. But rather look at groupings of colours, and see if they are distinguishable. Even then, it is important to use visual aids to ensure users won't mistake one colour from another.

With this in mind, it is important that designers do not use colour to solely convey information. There are many ways to make forms like this easily accessible to all, for example using crosses and ticks to show error fields.

View with colours:



View with no colours:



As seen in the example above, it is important that you don't rely on colour to communicate. As people with colour blindness or low vision will not be able to see which fields they have completed incorrectly. By adding a simple use of icons, all users are able to see which fields need to be adjusted.

You must also ensure that the contrast ratio between text and the background is at least 4.5 to 1. A good rule of thumb, is to ensure that there is a 70% difference in colour value between the type and background tone. There are many guides available to help you find an accessible colour palette.

Top tip:

You can see what your designs would look like to someone who is colour blind in both Adobe Photoshop and Illustrator by using the following process:

View > Proof Setup > Colour blindness

Print and paper type

When working with print, it is important to think about the paper that artwork will be printed on. Print surfaces and finishes can create problems for readers. Paper with a matt finish is always preferable, since glossy surfaces can create a glare which makes text and images difficult to see. Using lightweight or thin paper can also cause problems as any printing on the reverse might show through.

Accessibility online

Websites should be designed for all people, whatever their abilities and disabilities. This includes older audiences and people with visual, hearing, cognitive or motor impairments. When websites are badly designed without accessibility in mind, it creates barriers that exclude some people from using websites.

Alt text

People with visual impairments often require text alternatives (alt text) that software can convert into speech, large print, Braille, symbols or simpler language. Alt text should serve the same purpose and describe exactly what is conveyed in the image. Visually impaired users often use a screen reader, which will read the websites out loud. Including alt text with your images ensures all users, regardless of visual ability, can appreciate the content on your website.

Poor example:



X Picture of a designer

Don't use phrases "image of ..." or "graphic of ..." to describe the image. It's usually apparent to the user that it is an image.

Good example:



X A graphic designer drawing a character for animation

Text is kept short with maximum information.

Contrast and typography

The same rules apply from print to web design. Poor contrast will prevent users from seeing your information, due to their visual impairment. Light text and light background combinations should be avoided. Using a contrast analyser will ensure that there is enough differentiation between text and background colours.



As with print, colours should not be relied upon for efficient communication. An example of this is the colours red or green being used as indicators of correct or incorrect details on forms.

The biggest obstacle for visually impaired users is text clarity, so designers should take every measure to increase legibility (clarity of letters) and readability (clarity of text blocks). A clear font should always be used, and serif fonts, particularly for small text should be avoided.

Text should always be kept to a minimum size of 16 pixels, with spacing between the lines at least 25% of the font size. Font resizing should always be allowed in style sheets.

Navigation

Users with mobility impairments will likely use the website without a mouse. Therefore, it is important that the website allow them to accurately use all interface and navigation components without one. This means that all functionality must be accessible directly from the keyboard. This includes all links, buttons and form fields. A fully accessible site should not depend on the mouse.

Buttons and hyperlinks should always have descriptive, meaningful text. Use of vague, unpredictable text makes it difficult for users on screen readers and the autistic spectrum to understand.



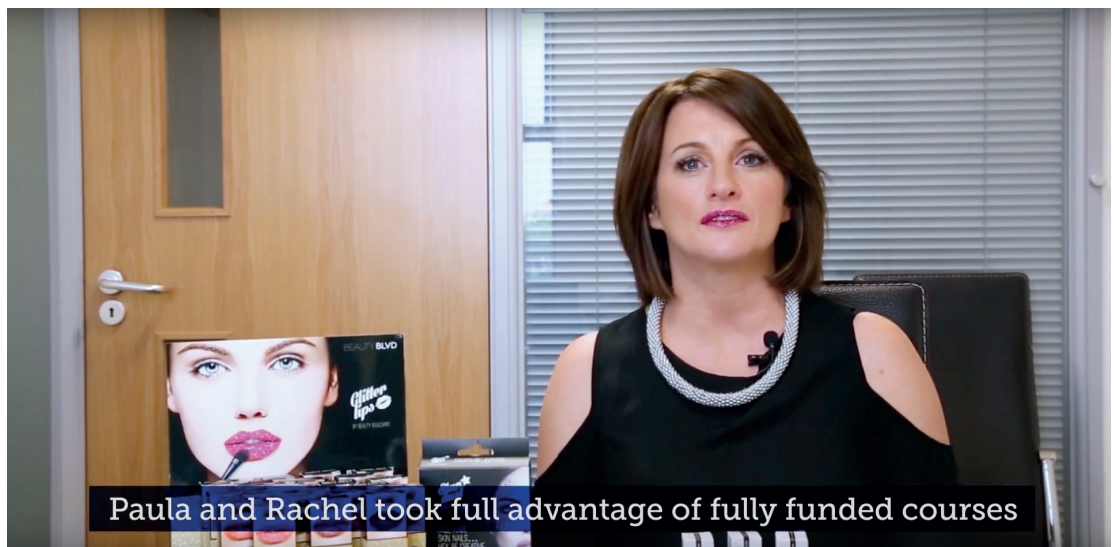
Layout

Interfaces and content must be clear for all users. Use a consistent, simple interface with the clearest possible language. Avoid large blocks of text and break up large sections with smaller sections with meaningful, directive headings. The most effective websites allow users to select preferences for colour, size, typeface and sound.

For touch controls, any area less than 40x40 pts. will cause trouble for some users. This is the preferred dimension for all finger sizes as well as any assistance tools.

Hearing disabilities

Users with hearing disabilities will struggle with information that is communicated through sound, such as video and voiceover. It is important that all videos use subtitles or transcriptions to convey messages.



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