



DESIGN

FOR A DIVERSE WORLD

A CLOSER LOOK INTO THE NEW AGE OF DESIGNING FOR ACCESSIBILITY

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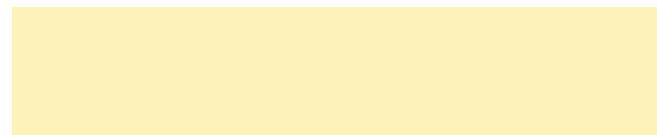
Sources

Designers need to be original and make a well-organized plan to convey a message through visual communication, while keeping the design appealing to the eye. Graphic design is essential to market products, so designers must appeal to consumers including those with accessibility problems who will interact with the design (Truity, 2012).

Examining how the consumer will perceive the designs they develop is key to ensuring they convey the client's desired message to everyone (Truity, 2012). Graphic Design is everywhere, from one's cereal box to the layout of a water bill. We need to consider everyone that can benefit from a design, including those with accessibility issues, which is more of the population than one may think.



“Information is only useful when it can be understood” – Muriel Cooper



What Types of Disabilities should a Designer keep in Mind?

Many are not aware of the portion of the population who have cognitive, visual and auditory disabilities and may have problems interpreting a design. Without considering these individuals, a designer risks leaving some of their audience confused or overwhelmed.

Strategies can range from dividing information up into smaller sections or including descriptions of a picture for assistive technologies (Creative Boost, 2019).

IN THE UNITED STATES...



6.4 million people have visual disabilities like colour blindness, low vision, blindness, and cataracts.



10.5 million people have an auditory disability like deafness or hearing loss.



14.8 million people have a neurological or cognitive disability such as dyslexia or multiple sclerosis.
(Creative Boost, 2019)

Why should graphic designers keep accessibility in mind when designing?

COSTLY TO FIX

Accessible design should not be an afterthought as it can be costly to fix. Colours in a brand logo may need modification if colour blind individuals can't decipher the graphic elements. Colours can be lightened, darkened or changed completely. Even a document or website can be costly to fix; nevertheless, it is worth looking into if you have a pre-existing website that isn't accessible (Creative Boost, 2019).

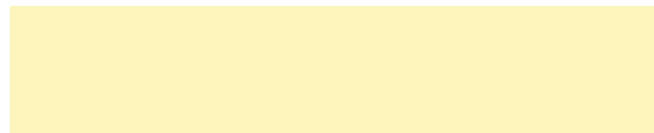
CONSUMER APPRECIATION

Including accessibility into your designs can be the reason a potential customer chooses a business. It shows that the company cares about this undervalued area in the design world (Creative Boost, 2019). People with

disabilities are three times more likely to avoid a business if it has a reputation for lacking diverse accommodations (Australian Network on Disability, 2020). 71% of disabled users leave a website that is not accessible (Crawford, 2017).

ALL CUSTOMERS BENEFIT

Accessible design is actually beneficial to all your users. It creates a comfortable reading experience, clearly distinguished hyperlinks, and the ability to have a website read to you is convenient for many, not just the visually impaired. In addition, accessible-friendly websites have significantly shorter URL's, which helps search engine optimization immensely. This means the website will likely bump up on Google ranking (Creative Boost, 2019).



WHY?

Contrast makes for a more enjoyable viewing experience. Most importantly, it ensures that your design is readable. If your design includes two very similar colours with no variation in saturation, the design would essentially be unreadable for everyone.

COLOUR BLINDNESS

There are two main types of colour blindness. The first is trouble distinguishing between red and green, and the more severe is living in a completely black and white world. When considering these individuals, your colours must have contrasting hues and contrasting saturation levels (National Eye Institute, 2019).

TIPS AND TRICKS

A good rule for your designs is that there should be at least a 70% deviation in colour values for optimum colour contrast between neighboring colours. An extra way to check if the colours used have enough variation is to switch the colours to grayscale (RGD Ontario, 2010).

When working with pie charts, graphs, maps etc., you should use different patterns or brightness levels to distinguish between two pieces of information, especially when a legend is involved or when colours are adjacent to each other (Creative Boost, 2019). Colour contrast checkers are available for this reason.

For individuals with cognitive issues and low vision, alternating the background shades of grouped information can make navigation more comfortable; however, this should not convey hierarchy (RGD Ontario, 2015).

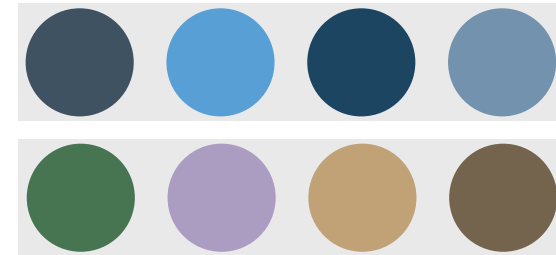


**DIFFERENT
WAYS TO
INCORPORATE
COLOUR
CONTRAST
INTO YOUR
DESIGNS**

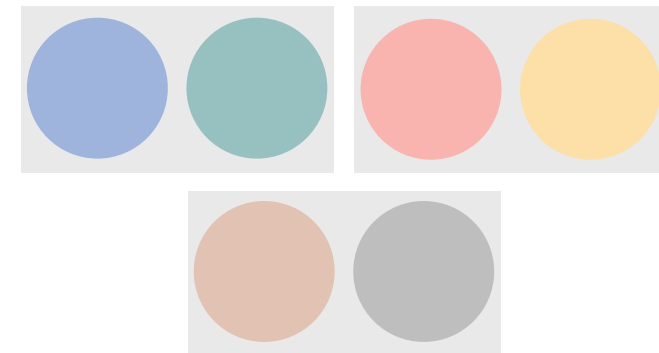
SHADES AND TINTS



COLOUR SCHEMES



TEMPERATURES

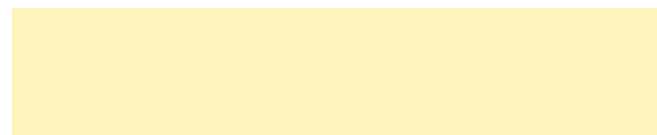
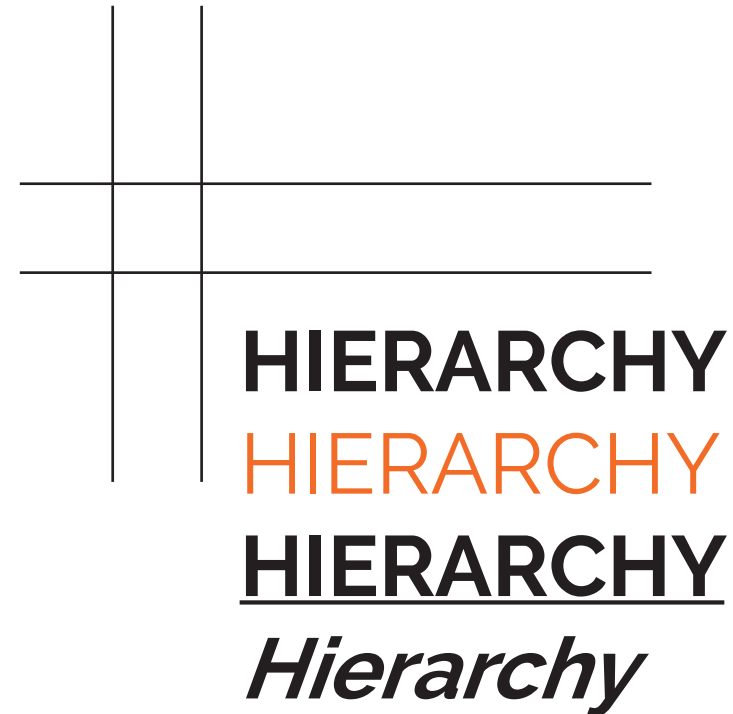


GRIDS

The best way a designer can arrange a layout is with a grid system. It helps ensure your document has a consistent structure (RGD Ontario, 2010) and keeps everything organized both for the user and the creator. Sectioning pieces of information into small gridded segments can also help guarantee that no body of text will be too overwhelming for readers.

HIERARCHY

Using the grid system will help users navigate through passages of text, but so will Hierarchy (RGD Ontario, 2015). It will inform the readers what they can expect, and when searching for a specific topic, they can go directly to the headline that they are looking for more information about. Hierarchy can be portrayed by adjusting the colour, size, texture font, etc., of essential text pieces (Bigman, 2019).



LEGIBILITY

It's important to consider that letterform contrast is vital when for readers with low vision to ensure appropriate balance between their stroke and counter form.

Typefaces with high x-heights are more comfortable to read because they seem bigger, and letters with similar width and height measurements are easier to read because they aren't too wide.

There are two font categories, decorative display or readable type. Accessible design uses the most legible fonts (RGD Ontario, 2010).

Bad Letterform Contrast



Good Letterform Contrast



Helvetica has a tall x-height

Superclarendon has similar width and height dimensions

DECORATIVE VS. READABLE FONTS

DRIFTTYPE

Arial

RETROTYPE

Helvetica

RIO GRANDE

Rockwell

MAKING DESIGN ACCESSIBLE: READABILITY

Readability refers to the body of text as a whole and tools like tracking and leading impact how a user perceives a paragraph. When working with all of these tools, finding a suitable middle ground is vital.

LEADING

If the leading creates a tight look, ascenders and descenders of letters could overlap, which will make letters hard to identify. Moreover, the leading can be too loose, making identifying the new line confusing for readers (RGD Ontario, 2010).

Leading is
too loose

Leading is
too tight

ALIGNMENT

When designing with accessibility in mind, left-aligned text is recommended because all text will start on the same vertical plane and make it easier for readers to navigate your text's next line. Right-aligned or justified text should only be used with small amounts of text as a headline. Justified

often creates large gaps between words, which makes all spacing very inconsistent, making it hard for readers to get into a good reading flow (RGD Ontario, 2010).

EXTRA TIPS

All caps, italics or bold fonts should only be used to convey hierarchy, because they can be a visual distraction for large text bodies. Keep the background simplistic. Large graphic elements or photos can be distracting and affect contrast. Some chunks of letters could blend in with objects in their foreground, making them hard to identify (RGD Ontario, 2010).



MAKING DESIGN ACCESSIBLE: READABILITY

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COLUMNS

Columns are suitable for many designs; however, if the column length is too short, many of the words will be hyphenated, which can be difficult for readers. If columns are too long, readers may have trouble navigating back to the start of the next line (RGD Ontario, 2010).

TRACKING AND KERNING

When tracking or kerning is needed, making the length too wide can create gaps, which makes it hard for readers to identify where words start and end—making the width too small could cause readers to not recognize letters (RGD Ontario, 2010).

MAKING DESIGN ACCESSIBLE: COMPATIBILITY WITH ASSISTIVE TECHNOLOGY

All mouse options should be made accessible from a keyboard for people with limited motor control (RGD Ontario, 2015). Tagging is a great way to do this, for both websites and PDF's. In the coding process, you can add tags which tell any assistive technology what content is, to help with navigation. Semantic tags ensure that assistive technology, like screen readers, do its job (MDN, 2020).



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