Achieving Accessibility in Email Marketing

For Developers

What Does Email Accessibility Mean?

As digital marketing continues to play a bigger role in everyone’s lives, email accessibility becomes much more important—especially considering that 320 billion emails are predicted to deploy daily by 2021.¹ In the U.S., the Americans with Disabilities Act (ADA) requires that everyone can access and read your emails, including people with disabilities who use assistive technology, such as screen readers, magnifiers, joysticks and eye-tracking devices. Another way to think about this is that you must build in alternate, accessible routes that lead different end users to the same information.

Global Stats

- **320B** emails are predicted to deploy daily by 2021
- **80M** people with disabilities in Europe will be affected by the digital accessibility legislation enacted in 2016

U.S. Stats

- **$1T** opportunity to tap into tremendous annual disposable income
- **13.7%** of adults in the U.S. have a mobility disability
- **650M** people with disabilities in the Asia-Pacific region will be affected by the CRPD treaty
- **6%** of adults in the U.S. experience deafness or a serious hearing disability
- **10.8%** of adults in the U.S. have a cognitive disability, such as difficulty remembering
- **4.6%** of adults in the U.S. experience blindness or serious difficulty seeing

What Do Digital Accessibility Standards Look Like on a Global Scale?

Across the world, accessibility legislation is slowly but surely making its way into the digital sphere, affecting the way almost 800 million people, about 15% of the global population,² engage with online content. The Convention on the Rights of Persons with Disabilities (CRPD), a treaty mandating accessibility standards across physical and technological environments, has been ratified by 84% of Asia-Pacific countries.

This treaty will affect the way that 650 million people in the Asia-Pacific region live with disabilities.³ In 2016, the EU adopted its first piece of digital accessibility legislation, a directive that maps out a timetable for compliance standards through 2021. This legislation will affect an estimated 80 million people with disabilities in Europe.⁴ Accessible design on a global scale starts with

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¹ The Shocking Truth about How Many Emails Are Sent, Campaign Monitor
² World report on disability, World Health Organization
³ Issue Paper: Asia-Pacific Bureau—Digital Accessibility, Internet Society
⁴ EU Accessibility Legislation: Keeping the Public Sector Accessible, ICS
legislation and succeeds with education. For example, the Office of the Government Chief Information Officer (OGCIO) in Hong Kong has created an incentive program that encourages accessible design in digital spaces, while also providing workshops to raise awareness—and as a result, the number of accessible Hong Kong-based websites has tripled.5 While global legislation has its sights on website and mobile app initiatives, the effects will also inevitably translate into email marketing.

Why Should Your Email Marketing Comply?

For one, you should ensure you are in legal compliance by reviewing current requirements with your own legal counsel. But it’s just as crucial to understand how marketing strategies impact the one billion people worldwide who have accessibility issues.6 These range from visual or hearing deficiencies to neurological impairments such as ADHD and dyslexia. If you’re not currently making your emails accessible, you could be excluding a sizable percentage of your audience, while also missing out on a tremendous opportunity to tap into $1 trillion in annual disposable income.7

Beyond fulfilling legal requirements, this path to accessibility presents major revenue potential. And by making your emails accessible, you’re demonstrating that you empathize enough to consider all your potential customers and their specific needs—and that you’re not excluding anyone—which can create a positive halo effect for your business or organization.

Examples of Accessibility Issues

GHOSTING

CATARACTS

LOW-ACUITY

DYSLEXIA

COLOR BLINDNESS
Not everyone with a vision disability is unable to see. There are 253 million people worldwide who are visually impaired, and 320 million worldwide who are colorblind. Those with dyslexia, who comprise up to 20% of the global population, and other reading-related disabilities also encounter considerable hurdles when faced with text-heavy, misaligned emails. Older populations that experience myopia and may require glasses are also impacted by similar challenges. Consider the following best practices:

**CHOOSE A READABLE WEB FONT**
that’s evenly spaced and not too condensed. Headlines should be at least 18px and body copy should be at least 14px.

**LEFT ALIGN TEXT** to produce a visual “rag” that provides an optimal reading experience. Harsh rivers and breaks in a justified paragraph are too difficult to follow. Aim for 50–70 characters per line.

**SPACE OUT PARAGRAPHS** by using a line height between 150%–200% for easier tracking.

**SET THE HTML LANGUAGE ATTRIBUTE** to ensure screen readers pronounce words correctly.

**USE HEADINGS TO ORGANIZE** page/email content. Screen reader users will scan content by jumping from heading to heading before listening to the entire email.

**USE ALT TEXT** to present the content and function, not a description. Decorative imagery should have an empty ALT text value, and ALT text for images that link out should describe the link’s purpose.

**USE SUCCICIENT COLOR CONTRAST** and don’t rely on one color alone to convey your message. Be cautious of red/green color combinations. Achieve a contrast ratio of 4.5:1 for body copy and 3:1 for large text.

**ZOOM IN TO 200%** without losing readability, clarity or content.

**LINK TO A VIDEO** if the situation calls for a breakdown of more complicated information.

**AVOID FLICKERING AND STROBE ANIMATIONS** and large images with bright flashes. Avoid content that flashes more than 3 times per second.

**HOT TIP!**
Learn to use the Colour Contrast Analyser (CCA) tool to test for sufficient contrast. [Download the CCA here >](#)
Hearing/Audio

Globally, 466 million people experience hearing loss. It’s important that external links with video or audio messaging have another sensory input option. Consider the following:

**INCLUDE CLOSED CAPTIONING**
for live audio and video. Prerecorded audio-only and video-only media must have a transcript of the content. Prerecorded video with audio must have captions, audio description and a transcript of all audible and visual content. Captions must be synchronized, identify the speaker, include verbal content and describe meaningful non-verbal content, following caption standards.

**CAREFULLY CHOOSE AUDIO EFFECTS AND BACKGROUND MUSIC** as they may muddle video content by screen readers.

**PROVIDE A WAY TO PAUSE OR HIDE CONTENT** that moves or updates automatically (for 5+ seconds), and to pause or silence audio content that plays automatically (for 3+ seconds).

Mobility/Touch

Those with a physical disability also require additional consideration in situations where clicking or tapping on a screen is necessary. Consider the following:

**CREATE BULLETPROOF BUTTONS**
(built at 48 px tall with code instead of an image) to distinguish them from other images and clearly link to a new destination.

**GIVE LINKS MULTIPLE SENSORY CHARACTERISTICS** like color, boldness, underline, size, visual location, orientation and sound. Do not rely solely on one indicator.

**Cognitive**

Users with cognitive disabilities could have trouble with memory or attention span—losing focus halfway through an email, for example. Consider the following:

**CHUNK CONTENT INTO SMALLER PIECES** and keep descriptive copy and subject lines brief.

**CONSIDER CALENDAR REMINDERS** to aid with memory lapses.

**PROVIDE LINKS TO VIDEOS** for access to more digestible content.

**ESTABLISH A CLEAR HIERARCHY** and place important information higher in the email for easier navigation.

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11 *Deafness and Hearing Loss Fact Sheet, World Health Organization, March 2018*
The Basics of Email Accessibility

The first step toward email accessibility is coding your message to email standards. Once your message meets basic email standards, achieving email accessibility will be much more efficient.

Key Components of Email Standards that Boost Accessibility

- Create responsive emails
- No text as images
- Include alt text on images and style the alt text to ensure contrast
- Use descriptive link text (avoid “click here” language)
- Keep the font size at least 14px and 150% line height

HTML Structure

**DECLARE THE CONTENT TYPE:** The content type is declared in the head using a meta tag, according to the language/charset and content used. This helps screen readers to convey content correctly.

```html
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
```

*Impact: Vision*

**DECLARE THE LANGUAGE:** The language is declared in the html tag at the top of your file. You can add this determination to the end of the tag, which helps make sure the screen reader is relaying content in the appropriate language.

```html
<html lang="en" xml:lang="en">
```

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**USE A TITLE TAG:** A title is used in the head tag that describes the page’s content – not usually visible to email users but still relevant for some screen readers.

```html
<title>Company Name – Black Friday Sale Starts Now</title>
```

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**USE RESPONSIVE CODE:** Smart phones are the most commonly used assistive technology. Responsive code ensures content is accessible for all users. It’s important to use as little duplicate or hidden content as possible as some screen readers will read both sets of content.

*Impact: Vision, Hearing, Mobility, Cognitive*
HTML Structure (con't)

INCLUDE A ROLE ON ALL TABLE ELEMENTS: Tables should have (role="presentation") on each table. This helps screen readers read it as content instead of as a data table.

```html
<table role="presentation">

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```

BREAK UP CONTENT: Text should be broken up into columns, paragraphs and other sections in order to reduce strain and ease understanding of content. Establish a clear hierarchy and place important information higher in the email for easier navigation. Consider using the least amount of text to explain a concept while still being informative.

```html
<header> -- Header code -- </header>
<footer> -- Footer code -- </footer>

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SECTION CONTENT: <header>, <nav>, <main> and <footer> tags should wrap around the tables or table rows (tr) in order to section the HTML file appropriately. This helps screen reader users skip content that they may not want to listen to – like a list of links in the header – giving them the ability to scan messages for important content.

```html
<header> -- Header code -- </header>
<footer> -- Footer code -- </footer>

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```

Visual Media – Images and Video

ENSURE ALL IMAGES HAVE ALT TEXT:
Alt text is included on all images, regardless of how the images interact with the content. That means that decorative or spacer images need a null alt text value, which allows the screen reader to skip the image; without the null value, the full image source will be read instead. Duplicated images (e.g., multiple stars to give rating) should have alt text on the first image and null on the rest.

```html
<img src="" alt="Use alt text" />

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```

USE RELEVANT ALT TEXT: Do not use duplicate alt content – if the text adjacent to the image says the name of the product featured in the image you can use the null value. Avoid alt text terms like “picture of,” “image of,” etc., as the assistive technology will already relay that information. Use the fewest number of words necessary. Never use alt text that tells users to “turn on images” or “display images to show real-time content.” Instead, use descriptive alt text that explains the content of the image. Consider end users who may not be able to see the content, even if images are turned on. Images with links should follow the same notes as text links and should clearly describe where the link is taking them.

```html
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```

11 Deafness and Hearing Loss Fact Sheet, World Health Organization, March 2018
DO NOT USE TEXT IN IMAGES:
There are different conformance levels for using text in images. The first level (AA) allows for the following exceptions: logos, text headings that cannot be replicated in live text, text using a specific font not available in live text (not web safe). The higher level (AAA) does not allow for any exceptions unless absolutely necessary for that content: logotype, font family representation like a font book, scans of letters or symbolic text characters. In all of these cases, descriptive and relevant alt text is required.

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STYLE ALT TEXT: Alt text should be styled appropriately to fit the design and provide appropriate contrast. This helps all users, but especially those with low vision who have images turned off.

<img src="" alt="Style alt text" style="background-color:#ffffff; color:#000000; font-family: arial, sans-serif; font-size:18px;" />

Impact: Vision

ALLOW USER TO CONTROL VIDEO/AUDIO PLAYERS: Video and audio should never auto play. Since these media formats are not well supported in email clients, it’s important to note that players are already controlled by the end-user’s device. Mobile devices, for instance, will not auto play emails and will provide a button for the user to click on to play the content.

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CONSIDER COMPLEX IMAGES/SLICING:
Complex images or images containing several slices should have clearly presented alt text, not duplicated alt text. If the alt text will not support the content, consider additional accessible ways to access that content – like a video or audio file that describes the complex images displayed.

Impact: Vision, Cognitive

ANIMATED GIFS AND VIDEO CONTENT:
Animated gifs should only rotate 3 times before stopping to reduce eye strain and protect those with epilepsy. Differing levels of conformance are available here as well. To achieve a basic “A” level of conformance the content may flash or blink within a 3x-per-second threshold if it is dim enough or small enough (within a 10 degree threshold). To achieve a high “AAA” level of conformance there cannot be content that flashes or blinks within a 3x per second threshold.

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**Audio Effects and Background Music:** Carefully choose audio effects and background music to avoid muddling video content by screen readers.

*Impact: Hearing*

**Provide Alternate Content Solutions for Media:** Just like images need alt text, video and audio should have options for closed captioning or transcripts (this is the responsibility of the video creator). There are varying levels of conformance for these alternate content solutions and they can be very involved. They are not all required to meet those conformance levels, but rather showcase some of the available solutions to meet compliance:

- **Level A – Audio and Video Content:** A short explanation of the audio/video content in audio or text formats is included in the messaging near the video content, like a link below that says “Video Transcript.”

- **Level A – Video Content:** A link to an audio recording or text transcript that includes descriptions of visual information is included for video content.

- **Level AA – Video Content:** A link to an audio format that includes visual descriptions in audio format is included near video content.

- **Level AAA – Video Content:** A Picture in Picture video of sign language interpreter in video screen (part of the video file for email).

- **Level AAA – Video Content:** An extended audio description for videos as a separate link near the video content.

- **Level AAA – Video Content:** A link to an extended text description is included near the video content.

*Impact: Vision, Hearing*

**Text**

**Web Fonts:** Use live text as much as possible with readable webkit or websafe fonts, including proper fallback fonts so text is always easy to read.

*Impact: Vision, Cognitive*

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**Aa  Text (con’t)**

**FONT SIZE:** Font size should be at least 14px with a line height of 150%. Many mobile clients will automatically reset small fonts to an appropriate size; do not allow your code to overwrite this to ensure content can be read.

*Impact: Vision, Cognitive*

**ZOOM:** Ensure that no content will be lost or lose visibility at up to 200%. This is usually resolved by creating flexible designs and not boxing in content, along with the line height adjustment to percentages instead of pixels.

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**DATA TABLES:** Identify data table headers with the `<th>` element and provide an appropriate scope attribute for the column headers and row headers as necessary. Add a table caption if appropriate.

`<th scope="col">Column Header</th>` or `<th scope="row">Row Header</row>`

`<caption>This is the caption for the chart</caption>`

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**PREHEADER TEXT:** Preheader text can include additional text specific for screen reader users and to prevent the screen reader from reading code and URL components. This additional text can be hidden from email clients and will only be heard by those using a screen reader. Please note: This content is not always read by screen readers, and usually only on the preview pane of an email client – therefore it should be tested and used sparingly.

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**TEXT LINE HEIGHT:** On all text styles include the "mso-line-height-rule:exactly;" style, in addition to setting line height elements as "line-height: 150%;" using the percentage approach instead of a pixel dimension. This will help users with low vision or reading disabilities who may choose to increase the font size without causing the text to overlap (as it does with pixel dimensions). Font size should be set between 150% and 200%.

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**COLOR CONTRAST:** Foreground and background colors require certain standards of color contrast. Differing levels of conformance are used to determine severity of needed contrast. To meet the minimum “AA” conformance level requirement, text and background color contrasts must be at 4.5:1 for normal text and 3:1 for large text. To meet the enhanced “AAA” conformance level requirement, text and background color contrasts are considered sufficient at 7:1 for normal text and 4.5:1 for large text. This includes background colors declared for background images as well.

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**DEFINE LANGUAGE:** Specify the language for the parts that are a different language from the rest of the coded assets.

`<a href="#" lang="es-us">Español</a>`.

*Impact: Vision*

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11 Deafness and Hearing Loss Fact Sheet, World Health Organization, March 2018
SEMANTIC MARKUP: Use tags like <h1>, <ul> and <p>, which help screen readers differentiate between sections of content. Headings should be chronological within the file (h1 goes before h2, etc.). In proper semantics, there should only be one h1 tag per page/section. You want to follow a typographic hierarchy where there is one main headline, perhaps a few secondary headlines, multiple subheadlines, etc., as required by the design. It's uncommon for an email to have this much text content, and simplicity is the main goal. Be sure to test any new semantic elements to be sure rendering issues are resolved and use proper resets to style content.

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HEADINGS: Use headings to organize and chunk content. Apply text styling inside each open heading tag instead of the <td> tag. Add "margin: 0px;" to the heading tag, and declare a font-weight as required by the design. Apply padding and other structural styles like background colors to the container <td> tag. Be sure to have semantic markup for your headings (i.e., use <h1> for top headings, <h2> for secondary headings, etc.). Follow expected typographic hierarchy. Please note that this approach does not cause any rendering issues because you are resetting the typical h1 styles that provide margins and bolding.

PARAGRAPHS: Apply styling inside each open paragraph tag instead of the <td> tag. Then add "margin: 0px;" to the paragraph tag. Apply padding and other structural styles like background colors to the container <td> tag if necessary. If you are stacking multiple paragraph tags (like in a footer), you will want to add an additional bottom margin to allow for proper spacing. Please note that this approach does not cause any rendering issues because you are resetting the typical paragraph styles that provide margins.

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11 Deafness and Hearing Loss Fact Sheet, World Health Organization, March 2018
LISTS: It is possible to use semantically correct lists in email, which does require a few more adjustments on our side but is a better solution for accessibility. Instead of nested tables, we use a ul, ol or dl tag (unordered lists use bullets, ordered lists use numbers) to determine the items.

Inside a table cell with appropriate text styles, insert this list:

```
<ul style="padding: 0; Margin: 0 0 0 20px;"><!-- left and right margins only -->
<li style="Margin: 0 0 0 0;">This list</li><!-- top and bottom margins only -->
<li style="Margin: 0 0 0 0;">Will look the same</li>
<li style="Margin: 0 0 0 0;">Across all mail clients</li>
</ul>
```

NOTE: The "M" in margin must be capitalized. Within the li tags, you can only apply top and bottom margins (not padding) to provide additional spacing between bullet items. The first left margin (on the ul/ol/dl tag) determines the left alignment of the text, with the bullets or numerals inset.

Because the bullets are technically left of the text, you need to provide left margin to align the bullets with other left aligned content. You will need to align these visually and test. Numerals take more space than bullets so adding/removing left margin will likely be necessary based on several factors.

In some versions of Outlook, the bullet cuts off strangely so there is additional MSO code required in the head:

```
<!--[if gte mso 9]><style>
li {
  text-indent: -1em; /* Adjusts space between bullets and text */
}
</style><![endif]-->
```

LIST DETAILS: Currently, in some email clients a list can only be left aligned. Center or right aligned content will result in the bullets/numerals of the list still being left aligned while the content follows the alignment command. This happens in a moderate number of email clients so it’s important to note to a client what the expected rendering is of center or right aligned lists. The alternative is to go back to nested tables which is not ADA compliant, so if the client wants centered or right aligned lists across all email clients the lack of ADA compliance must be communicated.

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VISUALLY DISTINGUISHED: Links must be visually identifiable from other content in ways other than color. Underline is preferred for text content, but other options include color, boldness, size, visual location and orientation. Do not rely solely on color as those with color blindness or low vision may not able to see the difference.

Impact: Vision
INDIVIDUALIZED: Links must not be duplicated throughout a message. If you are displaying an image of a product along with correlating text, the link should be on the text or on its own CTA or button.

*Impact: Vision*

DESCRIPTIVE: Links should be clear about where they are going. “Click Here” terms are not descriptive enough.

*Impact: Vision, Cognitive*

SIZING: Links must be large enough to click on, generally about 48 pixels high.

*Impact: Mobility*

TITLE ATTRIBUTES: Do not use title attributes on links as they will be read by the screen reader, causing confusion.

*Impact: Vision*

IMAGE LINK ALT TEXT: Linked alt text should describe the image as a link along with its destination.

*Impact: Vision*

BUTTONS: Confirm button style is simple and use a coded, bulletproof button rather than an image. This helps to distinguish this content outside of an image.

*Impact: Vision, Mobility*

You Wouldn’t Build a Storefront Without a Ramp

Just as public spaces should be built to be as accessible as possible, your email campaigns should include the access points necessary to deliver content to all users. This represents a considerable amount of capital, both in savings from lawsuit losses to potential business growth and visibility.

Assistive technology and accessible designs not only help those with disabilities but give everyone a chance to easily interact with and understand information. Across industries, the concept of an inclusive experience is steadily gaining momentum, from NBA sensory rooms to Apple’s commitment to accessibility on all devices. There is considerable pull in the social sphere to emphasize inclusion and accessibility in all facets of daily life, which extends to the digital realm—especially with a tool as familiar and ubiquitous as email.

12 NBA Creating Sensory Rooms at More Than Half of Its Arenas, Understood.org

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