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Design for All:
Accessibility For The Web

Magento Presents:
Community Insights

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Magento is proud to present 'Community Insights' to help merchants develop strategies and tactics to better serve their customers.

The Magento Partner Community is a trusted network of consulting and technology companies that help merchants grow their business, and create engaging customer experiences with the Magento Platform. These organizations provide valuable insights and practical takeaways from their real world experiences with merchants like you.

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DESIGN FOR ALL:
ACCESSIBILITY FOR THE WEB

WHY SHOULD YOU CARE ABOUT WEBSITE ACCESSIBILITY?

Title III of the Americans with Disabilities Act (ADA) requires that businesses help disabled people access the same services as able-bodied people, including those services offered via a website. Additional laws, both on x State and Federal level, are cropping up throughout North America and Europe, affecting businesses of all sizes.

Meanwhile, numerous businesses within the US, including Foot Locker, Toys 'R Us and Brooks Brothers, face ADA lawsuits regarding accessibility. In 2016, over 240 lawsuits were filed against websites for their lack of accessibility in 2016 alone!

Rather than face potential litigation, merchants can take steps to make their sites accessible to all citizens. In fact, the American Bar Association (ABA) has recently concluded that businesses should actively review their websites to assess their level of accessibility:

> *As it appears the DOJ is preparing to issue standards governing web accessibility under the ADA, covered entities should assess with their IT professionals and attorneys whether their websites are accessible to individuals with disabilities and whether doing so would as a legal matter pose an undue hardship or fundamentally alter the nature of the goods or services provided. Based on the assessment and any accessibility barrier discovered, covered entities should map out a plan to make their websites accessible even in advance of the looming regulatory action from the DOJ. Covered entities whose websites are inaccessible to individuals with disabilities may be the targets of lawsuits filed*

Beyond compliance, making your site accessible to disabled people makes good economic sense. According to the Department of Justice, there are 51.2 million people with disabilities in the United States, all of whom may be potential customers for businesses that are accessible to people with disabilities.

Moreover, consider the range of people who will benefit from accessible design may be greater than most merchants may realize. For instance, a fully accessible site will be useful to a new mom holding her baby in one arm as she tries to re-order diapers, or to any citizen attempting to order via a mobile device while outside on a bright day.

Certainly the upticks in traffic and conversions will go a long way towards offsetting the costs of making your site accessible.

For these reasons, we believe that taking a proactive approach – and becoming familiar with the requirements of ADA and WCAG 2.0 – is a smart move. In fact, we propose that all retail sites include an accessibility exercise to your compliance calendar.

Let's begin with the challenges disabled people face when going online.

CHALLENGES DISABLED PEOPLE FACE WHEN GOING ONLINE.

People with disabilities often rely on assistive technology when going online to shop or access other services, such as screen readers (i.e. programs that reads text aloud for the user), text enlargement software, or software that allows users to control their computers via voice commands.

If a website doesn't accommodate these assistive technologies, it will needlessly create obstacles for disabled people. The US Department of Justice identified some common problems disabled people face with website design:

IMAGES WITHOUT TEXT EQUIVALENTS.
People who are blind or have low vision often use a screen reader or a refreshable Braille display. However, these solutions can't translate images into speech or Braille.

DOCUMENTS WITH INACCESSIBLE FORMATS.
PDFs and other image-based documents aren't easily accessible to people who use assistive technologies.

SPECIFYING COLORS AND FONT SIZES.
Websites are designed using elements (color, font sizes and styles) that reflect a company's brand. But many people with low vision use color and font settings that help them see the screens better, and need the ability to select their own colors, contrast and font sizes.

VIDEOS AND OTHER MULTIMEDIA LACK ACCESSIBLE FEATURES.
For blind or deaf people, these types of content are inaccessible without audio descriptions of images and text captions.
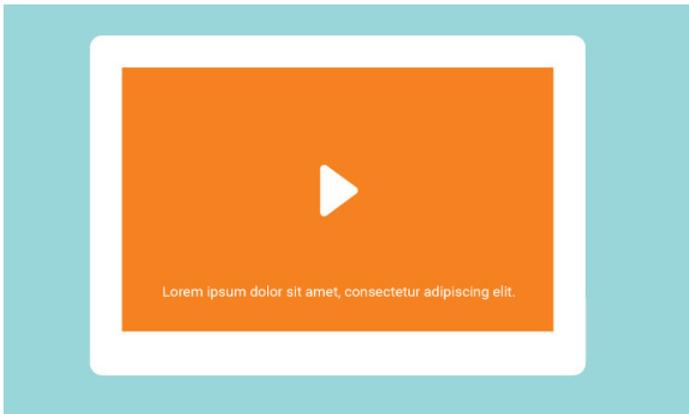

In our work, we've also discovered that screen readers and other assistive technologies encounter issues with navigation, headers, footers, understanding where the main content is located, as well as enhanced features, such as live chat.

So how should online merchants address accessibility? Should merchants jettison all of their images, videos and multimedia they've put on their sites?

Or is there a way to promote accessibility while creating a stellar brand experience for all visitors? We believe that there is, particularly for sites that choose to go beyond the requirements of the ADA, and opt for a truly modern approach to accessibility.

OUR APPROACH TO WEBSITE ACCESSIBILITY.
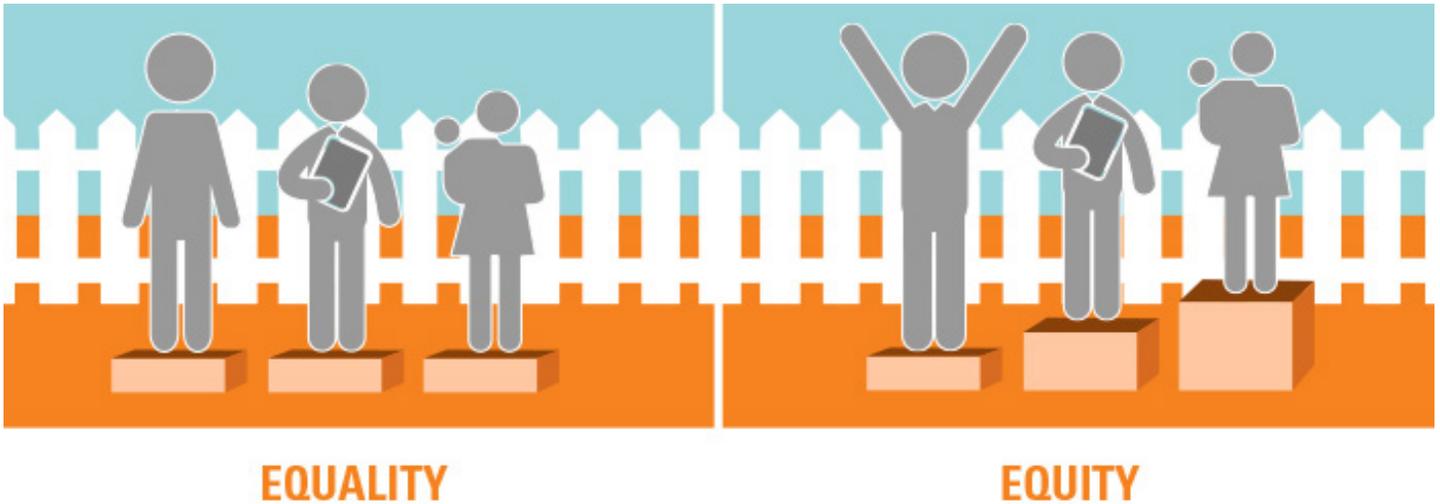
EQUALITY

EQUITY

While we applaud the DoJ's recommendation for accessibility (and await their new recommendations), we believe that accessibility for websites should go further, incorporating key features:

PERSONALIZATION.

Website personalization is a top goal of today's retailers, and is reason why personalization engines are now widespread. We believe that personalization is a concept that should also apply to consumers who are permanently or temporarily disabled.

EQUITABLE EXPERIENCES.

Not all users will interact with every aspect of a site, though there are key areas – such as the conversion funnel – that should get special attention in order to ensure all consumers have an equally positive site experience. This may mean giving users who are impaired the ability to toggle off some advanced website features that don't work well with assistive technologies, and applying some of the emerging protocols that allow disabled people to navigate a site seamlessly.

EVERYONE MAY BE "DISABLED" AT SOME POINT.

Keep in mind that many people who aren't permanently disabled can greatly benefit from accessibility. Accessing your site via a mobile device in bright sunlight can be just as difficult has having reduced vision.

Achieving this level of accessibility isn't enormously complicated. For instance: by approaching font-size and color contrast in an accessibility-first design exercise, you go a long way in ensuring all users have the same brand experience. Replacing iconography with simple text instructions will mean all mobile users benefit from the smaller page sizes.

Implementing common keyboard navigation techniques to menus allows Google's web crawlers to understand and prioritize navigation structures on your sites. And testing your designs with browser plugins that emulate common color-blindness lets you uncover potential issues.

Most importantly, accessible sites can be beautiful. Website designers don't need to sacrifice any of the website elegance they've worked so hard to achieve.

ACCESSIBLE WEBSITES ARE BEAUTIFUL

There are plenty of fully accessible websites that are truly beautiful (you probably interact with plenty of them without realizing it!). Here is a brief list of things websites should feature in order to promote accessibility for all:

UX

Use primitive elements (e.g. boxes, blocks, and placeholder text) to convey order and meaning to the design.

Stripping a site down to its bare essentials allows you to "see" how users with text-only and screen-reader devices will experience it.

SITE ARCHITECTURE

Think carefully about your approach to information architecture and the visual hierarchy of the site.

For instance, deep information architecture is difficult to navigate and creates chaotic user experiences. This is true for all users, not just differently-abled.

FORMS

Web forms are often the vehicle for customers to ask questions, and should be friendly. Things to keep in mind:

- Consider the length of the likely response to the question and factor that into the design. When designing a form, place the label outside of the field to visually re-reference it.

- Use asterisks to denote importance or that a field is required.

- Limit side-by-side information, which creates chaos for users who rely on screen readers. A stacked form-field list works better.

CONVENIENCES
(e.g. live chat, hamburger menus, quick view modals, sticky headers, etc.)

• Avoid items that pop-up and change the context of the page (e.g. instead of a modal expand, use an inline content section.)

• Place QuickViews on flat planes so that screen readers understand when an action takes place outside the page's field of focus.

TEXT
Generally, fonts with thin lines and minimal spacing between letters are difficult to read for disabled and senior citizens.

The same goes for the amount of contrast against the background color – if a font is thinner, a larger amount of contrast will be required for it to be legible. Contrast is also useful in denoting next steps and calls-to-action.

Keep product descriptions as concise as possible.

NOTIFICATIONS
It's easy for any consumer to miss notifications such as "This item is out of stock." Designers typically use color to indicate a specific notice, but plain text is a better route. For example: "Warning: This item is out of stock."

BELLS & WHISTLES
Some website features – parallax scrolling, animations, etc. – are inherently unfriendly to assistive technologies. Consider adding a "Skip to Content" tab for those users who can see them.

These are some of the strategies for designing an accessible website. But there are challenges as well, which need to be addressed upfront in the design
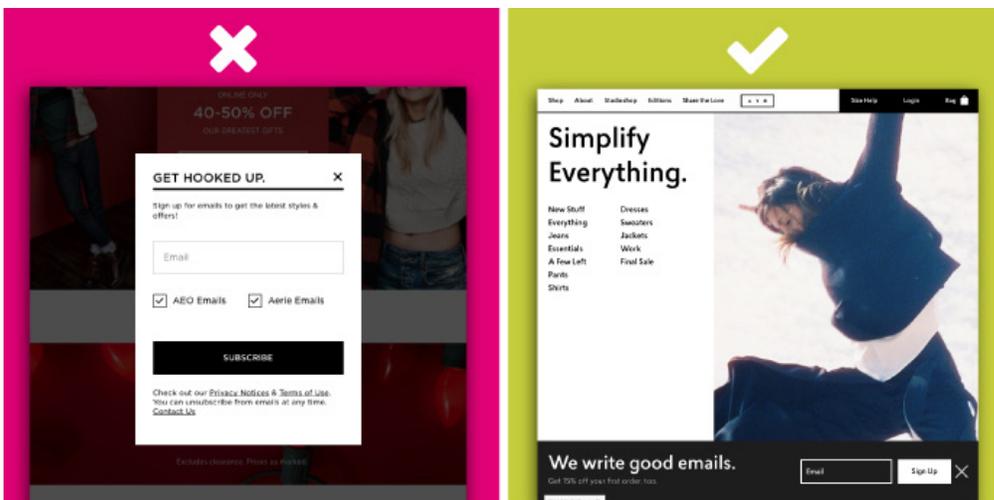
CHALLENGES TO DESIGNING ACCESSIBLE WEBSITES
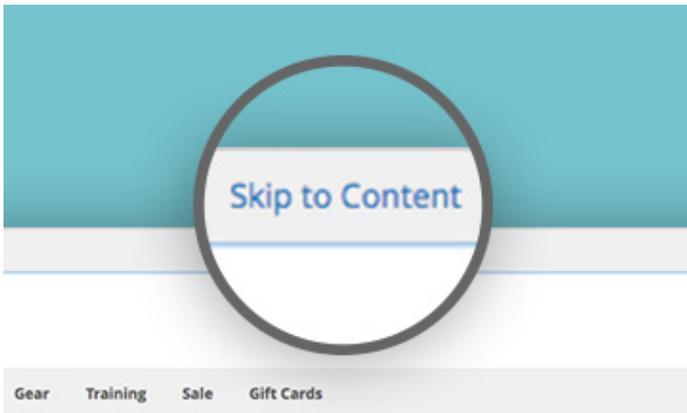
SKIP TO CONTENT

Most website content is placed approximately in the middle of browsers in order to give ample space for site navigation, logos, assistive links, advertising, and so on. People with no sight impairments, by habit, skip over these elements and go straight to the good stuff.

Assistive devices have similar features, but implementing them can be tricky. Aria (a protocol that allows assistive device to convey appropriate information to people with disabilities) and HTML5 both provide clues as to where the "good stuff" is, but often require appropriate guidance from a qualified accessibility consultant in order for them to work correctly.

HTML MARKUP

Accessibility of web content requires semantic (i.e. descriptive) information about widgets, structures, and behaviors, in order for assistive technologies to work. Designing HTML Markup that is descriptive can be challenging, especially for complex sites.

To be sure, HTML5 provides new elements for things <nav> and <article>, which screen readers leverage to provide hotkeys for users, allowing them to jump back to a navigation element.

Complexity arises when a page has multiple navigation elements (e.g. My Account, top nav, footer nav, etc.). In many cases, HTML5 semantic elements alone aren't enough, and Aria is required.

ARIA

Accessible Rich Internet Applications (ARIA) is a protocol designed by the web standards body, W3C, and is used to achieve some baby steps toward accessibility. As mentioned above, the protocol allows assistive devices to convey appropriate information to people with disabilities. It covers everything from descriptions of menu content to interactivity.

Aria uses "landmarks" for telling browsers where content is. Landmarks can also be used for banners, navigation, search, and many other elements.

Many software packages have prepackaged the Aria protocol. For instance, Magento 2.0 offers Aria elements such as menus, navigation, and widgets. Unfortunately, most sites have live content regions that are open to interpretation, based on the needs of the store. Accommodating these regions often requires the aid of third-party developers to correctly implement Aria.

KEYBOARD NAVIGATION

Many people with eyesight impairment rely on their standard keyboards to navigate websites. TAB keys, along with HTML "taborder" allows sites to provide navigation assistance to people who are unable to use a mouse.

"Skip to Content" links are generally best practice today. Website owners now have the option to hide those links and display them only when a user presses the TAB key. This arrangement allows disabled people to freely access them as desired.

ALT TEXT

Alt text" is the text website owners can provide in HTML source code in order to offer a visual or audible cue in the browser as to the contents of the element (e.g., if the element is an image the alt text may describe it). Modern browsers interpret the alt text and provide accessibility features that play back the alt text via audio browser

But implementing alt text takes skill in order to avoid problems, such repetition and other issues that lead to poor brand experiences.

CONCLUSION

Developing an online store that meets ADA compliance or is up to standards like those outlined in WCAG 2.0 is both rewarding and challenging. In all likelihood, it will be a legal requirement.

The process will inevitably begin with an audit of your site, so that you can identify the issues you will need to address. You will then need a set of tools to help you ensure your site is fully accessible.

Most website owners engage the services of accessibility consults to help them design and implement that aspect of their sites. Something Digital can help you with an ADA audit to provide you with a list of objectives to help you and your business make the most of a compliance exercise.

ADDITIONAL RESOURCES

• Microsoft recently released its Inclusive Design website detailing its vision for equitable digital experiences. https://www.microsoft.com/en-us/design/inclusive.

• Salesforce has a User Experience team who have developed some thought leadership in this space as well. Their UX blog has a dedicated section to learning about and improving leadership in accessible site design: https://medium.com/salesforce-ux/tagged/accessibility

• US Government's Section 508 website is particularly helpful and has a great getting started guide. https://www.section508.gov/content/build/website-accessibility-improvement

• This blog post talks about managing the compliance requirements of an e-commerce site.https://magento.com/resources/pci-ada-and-coppa-oh-my-managing-growing-compliance-burden-digital-commerce

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