Flywheel Strategic Inc.

Digital Accessibility: Your Readiness Guide

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Digital Accessibility:
Your Readiness Guide

We build accessible websites compliant with AODA and accessibility legislation worldwide. Here, we outline the elements of accessibility you should know, provide an overview of the accessibility landscape worldwide and offer easy-to-implement tips and tricks to help your company work on exceeding the minimum requirements in Ontario for **January 1, 2021.**

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What Is It and Why Does It Matter?

The goal of web accessibility is to ensure that online content and web experiences are available to as many people as possible. Content needs to be presented on the web in different ways to accommodate users with a variety of abilities. This approach ensures that people with various impediments have full web access.

Ultimately, web accessibility comes down to inclusive practice; ensuring that all users have equal access to both content and functionality online. Building digital tools with these considerations in mind will give everyone the best possible experience.

Around the world there are various regulations that dictate how online content must be published so that it can be consumed effectively by users with accessibility needs. The province of Ontario is among the jurisdictions with the highest standards. The Accessibility for Ontarians with Disabilities Act (AODA) establishes accessibility standards for employment, transportation, information, and communication.

This current legislation applies to all companies with 50 or more employees, and dictates that all new sites must conform to WCAG 2.0 Level A. **This will be expanded to all companies regardless of industry or size after January 1st, 2021.**

Accessibility legislation doesn't just apply to pages on your website—it applies to all content published online, including images, videos, charts, PDFs and other documents!

Where Did It Begin?

- **1994** Tim Berners-Lee —British computer scientist and inventor of the world wide web— founded the World Wide Web Consortium (W3C) at MIT.
- **1999** The first Web Content Accessibility Guidelines were developed (WCAG 1.0). There were 14 core principles, each with checkpoints determining levels of priority (A, AA and AAA).
- **2006** In November, the United Nations undertook a Global Audit of Website Accessibility.
- **2008** WCAG 2.0 was released, consisting of 4 core principles with a total of 61 testable success criteria used to determine the overall accessibility level of a website. WCAG 2.0 continued using the same level of conformance as WCAG 1.0 (A, AA, and AAA)
- **2012** In October, WCAG 2.0 was accepted by the International Organization for Standardization.
- **2014** In Ontario, legislation came into effect requiring new and significantly refreshed websites to be accessible, with all websites required to meet WCAG standards by 2021.

While some form of web standards have been in place since the early days of the Internet, it is only in recent years that compliance has become a real priority globally. The original Web Content Accessibility Guidelines (WCAG 1.0) were essentially a list of suggestions rather than requirements; however, in the past few years there has been a shift towards creating a much more inclusive and accessible environment online - for many businesses around the world, it's no longer an option to opt-out.

"The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect."

Tim Berners-Lee, W3C Director & Inventor of the World Wide Web

The Current State of Accessibility Worldwide

Accessibility policies exist around the world, varying from country to country. However, it's important to note that most have adopted standards based on the Web Content Accessibility Guidelines outlined above. If you would like to learn more about the history, and current state of accessibility in your region, click here.

As of January 18, 2018 it is now required by law to make new and significantly refreshed websites accessible in Ontario if the organization has over 50 employees or is in the public sector.

Beginning January 2021 all websites created - or considerably updated - from 2012 must meet WCAG 2.0 Level AA criteria, Excluding criteria 1.2.4 (live captions) and 1.2.5 (pre-recorded audio descriptions). This legislation currently applies to open websites only, and is not applicable to intranet/internal systems; however, it is best practice to ensure all company assets are kept fully accessible and inclusive regardless of legal requirements.

The current web accessibility standard is WCAG 2.1, an extension of the former WCAG 2.0, recognized as the universal standard for website accessibility worldwide. The four primary guidelines in WCAG 2.1 outline that websites must be deemed:

Perceivable
Websites must be presented to users in a way that they can clearly perceive.

Operable
Users must be able to perform all required interactions.

Understandable
Website content and the operation of the user interface must be easily understood.

Robust
Content must be easily interpreted by a wide range of users and assistive technologies.

WCAG 2.1 introduced even more considerations that have become necessary as technology advances, such as accessibility across a variety of screen sizes (e.g. mobiles and tablets) and associated features such as touch technology. Create other functional elements, such as cashless payments, with accessibility in mind to ensure they meet criteria both now and in future.

How Can I Tell If My Website Is Accessible?

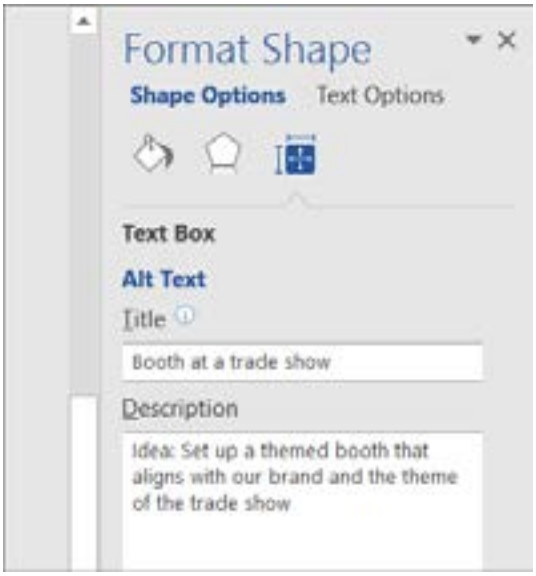
Common Mistakes

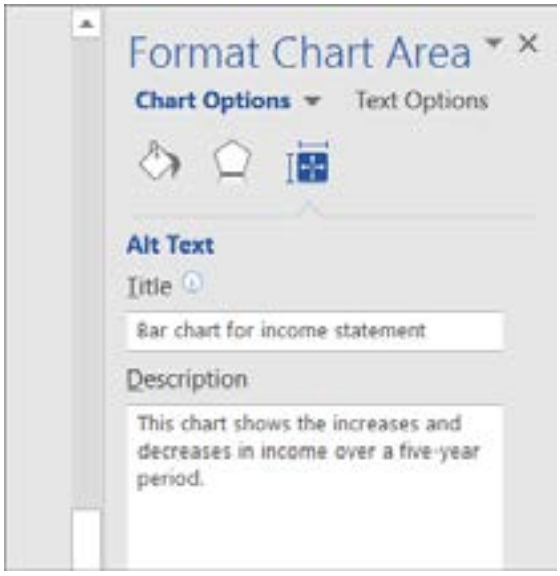
Later, we'll go into detail on the numerous ways to evaluate your website and identify accessibility issues, but some common web accessibility mistakes include:

1. NON-TEXT ELEMENTS MUST HAVE TEXT ALTERNATIVES

Visually impaired users may not be able to see images, but their experience and comprehension of the page should not be affected as a result. Adding text descriptions for images on your website ensures that it's fully understood, both with or without the image.

The descriptive text included here must also accurately represent what the image communicates. This is where manual site review and user testing become important when doing a web accessibility audit. Automated accessibility checkers will overlook the meaning of the text descriptions.





2. PAGES AND LINKS REQUIRE EASILY UNDERSTOOD TITLES

Read More, Click Here, and Learn More are common labels for links directing users to another page or section of information. However, these labels are ambiguous and create a serious problem for accessibility. Users relying on screen readers cannot quickly glance back to the preceding paragraph to evaluate what these links may refer to. Adding descriptive labels that clearly outline the information a visitor will receive after a click is more helpful. This also allows users to differentiate between generic titles and links on any given page.

3. HEADINGS MUST BE USED CORRECTLY

Users with screen reader rely on heading structure to navigate content. By using headings (<h1>, <h2>, etc.) correctly and strategically, the content of your website will be well-organized and easily interpreted by screen readers. Many people often mistake heading structure as a styling or aesthetic decision, but there are much more important considerations such as accessibility and SEO that are impacted by this structure. Headings (<h1> tags) should be used only for the title of the page, and subsequently be followed by <h2>, <h3> and others in order so as not to confuse screen readers.

4. VIDEO CONTENT MUST INCLUDE THE OPTION OF CAPTIONS, AUDIO DESCRIPTIONS, AND VOLUME MUST ALWAYS BE ABLE TO BE CONTROLLED.
Closed captioning of audio content that is synchronized with video will allow users with hearing difficulties to better understand the video. Additionally, text transcripts of the audio and visual content will make your video accessible to those unable to see the video. These techniques also help all users in situations where they can't turn on their volume like in some offices.

5. WEBSITES MUST BE USABLE BY KEYBOARD ALONE (WITHOUT A MOUSE, TOUCHPAD OR TOUCH-SCREEN).
Many users with motor disabilities and visual impairments rely on a keyboard, so all content should be easily accessible and navigable with only the use of a keyboard; with considerations made for lengthy navigation (e.g. skip to main content) and custom widgets where required.

6. TIME LIMITS ON CONTENT MUST BE ABLE TO BE CONTROLLED OR EXTENDED IF REQUIRED.
Security concerns or other factors sometimes require a time limit on content for a variety of activities, e.g. filling out a form; however, certain users may require different amounts of time depending on their physical, visual or cognitive abilities. The option to turn off, control or extend the time limits should be available to accommodate this.

7. MOTION AND TWO-WAY SCROLLING CANNOT IMPAIR FUNCTIONALITY
Some examples of accessibility criteria include the option to disable motion animation triggered by interaction and presenting content without requiring scrolling in two dimensions (vertical and horizontal). Exceptions are allowed if the animation or two dimensional scrolling is essential to the functionality or information being conveyed.

Best Practices / Approaches

At Flywheel, accessibility considerations are baked into our process. We take this approach to avoid complications and ensure accessibility compliance, regardless what the legislation states in your district. When writing and creating content, whether it is copy, video, imagery, forms or multimedia, ensure that you follow accessibility guidelines.

Use a Content Management System (CMS) that actively supports accessibility. Sitefinity is an excellent example of a CMS that makes content input and accessibility easy, with WordPress, Kentico and many others also available. Once you have chosen your CMS, ensure that you follow accessibility guidelines when adding any modules, widgets and plugins. Elements such as toolbars and video players should also be checked to ensure that they support accessibility requirements such as header formatting and closed captioning. Lastly, remember to test and test again; use the tools we have provided below as a resource, and remember to place an equal level of importance on actual user feedback.

To help you be proactive in reviewing accessibility considerations, we have included a checklist of some common content-related errors to watch out for when creating and updating your website.

Remember, this is not a comprehensive list. Always ensure your website is evaluated fully before it goes live and on an on-going basis, and whenever content and functionality is added or changed.

How to Evaluate Your Website

The first thing you need to do before you evaluate your website is determine what accessibility level you would like to achieve. As mentioned previously in this guide and detailed further in the Addendum, there are different requirements around the world. Regardless of regulatory requirements - accessible design is just good design.

Evaluating your website can be done with increasing comprehension:

Single page checking.
Use a tool such as FireEyes or Chrome DCV Tools to scan an individual page.

On demand site audit.
Occasionally launch a tool like SortSite and use it to scan your entire site.

Continuous monitoring of your site.
Use a comprehensive service like Siteimprove for real-time alerts of accessibility issues.

At Flywheel, we do all of the above. During development or when updating a specific page, we check sections of a website as work is completed. Once an entire project is built, we perform a full site scan to confirm the whole system is accessible after all the pieces are put together. For select clients we repeat that effort on a fixed schedule to ensure compliance is maintained.

For a live site, the best way to maintain your accessibility compliance is to use Siteimprove. Our partners at Siteimprove offer visibility into every aspect of your website, including live accessibility data and automatic assessments, meaning that errors never fall through the cracks as you add and update your website content. At Flywheel, we're skilled at helping you use and understand these tools.

USER TESTING

It is also essential to get a sample of real user feedback on any website, including accessibility considerations. Feedback from human users will inform small details where improvements could potentially be made. Elements of your website may pass the technical "success criteria" outlined by accessibility guidelines, but may not be practically usable for people with specific disabilities. User testing determines how well the content can be used for its intended purpose.

REVIEW MILESTONES AND ACCESSIBILITY UPDATES

Keep a record of the work your company has completed with regards to accessibility; this will allow you to easily test and track changes regardless of who is looking after your website, and will also be helpful if your organization is ever requested to demonstrate that is compliant.

Use these tools and assistive technologies to review your website to ensure both the design and functionality are at least as accessible as your local regulations require.

Accessibility Toolkit and Resources

There are many online tools and resources you can use to check if you are on track with web accessibility. The most comprehensive of these include Siteimprove; however, here is a toolkit of other useful resources to check specific elements of your content and functionality.

FUNCTIONAL EVALUATORS

This free report from the Bureau of Internet Accessibility gives you an overview of how your website fares when tested against the WCAG A/AA checkpoints. The following tools also evaluate your website from a functional perspective:

- Evaluate single HTML pages for compliance using AChecker.
- Identify known, likely and potential accessibility problems by page with DYNOMapper.
- Check for broken links, browser compatibility and web standards compliance with PowerMapper.
- Users with minimal accessibility knowledge can take a proactive approach towards accessibility using WorldSpace Assure to create issue reports for developers.

SCREEN READERS

Screen readers are software programs that allow blind or visually impaired users to read the text that is displayed on the computer screen with a speech synthesizer or braille display. A screen reader is the interface between the computer's operating system, its applications, and the user. Some examples include:

- VoiceOver for Mac, iPhones, iPads and iPod touch.
- ChromeVox extension for Chrome.
- Other more comprehensive (paid) screen readers include NVDA and JAWS.

COLOUR CONTRAST CHECKERS

In order to ensure that your website is fully accessible to people with less than 20/20 vision, it's important that there is enough contrast between various elements on your website and online content. The following tools provide an assessment against WCAG 2.0 colour contrast success criteria, allowing you to make adjustments to designs and colour palettes where necessary.

- WebAIM Contrast Checker | VisionAustralia | Accessibility Color Wheel
- Identify RGB codes from a live website using ColorZilla if unsure of your website's colours.

MOBILE ACCESSIBILITY

Evaluate your site's accessibility using Accessibility Scanner.

ACCESSIBILITY IN PDFS AND DOCUMENTS

- Windows offers an Accessibility Checker to identify issues in Word documents, Excel spreadsheets, Outlook emails and Powerpoint presentations.
- Adobe Acrobat Pro can verify accessibility and identifies issues using FullCheck.

A list of accessibility resources can be found on the Web Accessibility Initiative website.

Digital Accessibility:
Your Content Checklist

Text

- Check font sizes and ensure text is legible
- Ensure colours have sufficient contrast
- Ensure styling, content order and navigation is logical and has a consistent focus
- Add clearer descriptions to links like "Click here"
- Ensure your site is navigable solely by keyboard
- Ensure colour is not exclusively relied upon to communicate information

Multimedia

- Add clear alt tags on images and page titles
- Add audio descriptions to all multimedia elements
- Allow users to avoid flashing content or any content that may affect photosensitivity
- Use animation according to guidelines
- Add alternatives for inaccessible CAPTCHAs
- Allow users to control time limits on all content

Site-Wide

- Check all digital files (even PDFs and presentations)
- Ensure that the information and structure can be separated from the presentation
- Listen to your website with a screen reader
- Test with both online tools and real users

How We Can Help

Interested in learning more about accessibility? Here's how we can help:

- Website and online content accessibility audit
- Recommendations for meeting compliance requirements
- Content development and best practices
- Technical accessibility implementation
- PDF Accessibility
- Content cleanup
- Accessbiility training

Flywheel can educate you and your staff on the finer details of accessibility legislation and ensure that you understand the impact it may have on your organization in preparation for 2021. We provide tips and reference guides to assist you in creating and editing new content. The technical infrastructure and templates for your website will be built to be accessibility compliant. And during the content population of your website, we will audit and review your site to validate content.

Addendum: A Global Guide

Canada

The importance of accessibility has long been recognised in Canada, with the first guide of standards, known as Common Look and Feel (CLF) guidelines, being released in May 2000.

These were subsequently replaced with new standards in line with WCAG 2.0, bringing Canada in line with internationally recognized guidelines. To support this effort, the Canadian Web Experience Tooklit (WET) was launched, including reusable components for building and maintaining websites that are compliant with accessibility requirements. Of course, each province has its own regulations...

In Ontario, the Accessibility for Ontarians Act (AODA) specifies that everyone has fair and equitable access to programs and services, with Section 14 "Accessible Websites and Web Content" determining the requirements to ensure that web content follows the technical requirements of WCAG 2.0. Similarly, the Accessibility for Manitobans Act was passed in 2013, and includes an Accessible Information and Communications Standard to ensure the accessibility of information online. Nova Scotia and British Columbia have both expressed accessibility as a core concern for upcoming legislation.

United States

The Department of Justice in the United States published the Americans with Disabilities Act (ADA) in September 2010. These standards state that all electronic and information technology must be made accessible and set minimum requirements for both newly designed and significantly altered state and local government. They do not apply to the private sector, but do set a minimum standard that all businesses should try to adhere to where possible.

In January 2017, the US government announced revisions to the original guidelines. With these revisions, all public-facing official agency business content, as well as specific categories of non-public-facing content that is official agency business, must now be accessible.

Read on for more details about accessiblity requirements worldwide.

Europe

Europe handles web accessibility both through the European Union and national governments. The European Union introduced the Web and mobile accessibility directive, developed to make the websites and mobile apps of public sector bodies more accessible, which entered into force on December 22, 2016.

FINLAND	The "Act on Electronic Services and Communication in the Public Sector" (enacted in 2003) outlines generic standards for information and communications technology but does not outline specific accessibility standards or guidelines. "JHS 190 - Public Network Design and Development" provides guidance on public administration website design and recommends the use of WCAG 2.0 level AA.
FRANCE	"Law N° 2005-102 Article 47" (enacted 2005) outlines the rights of those with disabilities and was modified by "Law N° 2016-1321 Article 106" (enacted 2016) to outline accessibility legislation as it pertains to persons with disabilities. State services, local authorities, and public institutions "dependent on" online public communication services must be accessible and any online public communication service has to indicate whether it complies with accessibility regulations.
GERMANY	The "Act on Equal Opportunities for Persons With Disabilities" (enacted 2002) introduced non-discrimination law for persons with disabilities. Section 12, "Barrier-Free Information Technology" introduced broad web accessibility rules for public authorities but this was expanded upon in 2011 with the "Federal Ordinance on Barrier-Free Information Technology." This legislation outlines specific guidelines derived from WCAG 2.0 with which bodies under federal or provincial government administrations must comply.
IRELAND	"The Equal Status Acts" of 2000 and 2004 introduced broad anti-discrimination legislation, including discrimination on the basis of a disability. This act indicates that providers of services must "do all that is reasonable to accommodate the needs of a person with a disability" (Section 4). "The Disability Act" (enacted 2005) outlines specific accessibility requirements for public sector organizations such that "the contents of the communication are accessible to persons with a visual impairment to whom adaptive technology is available" (Section 28). The National Disability Authority also produced the "Code of Practice on Accessibility of Public Services and Information Provided by Public Bodies" which sets out that websites should be reviewed to ensure they achieve an AA WCAG 2.0 rating.
ITALY	The "Ministerial Decree 8 July 2005" (updated in 2013) sets out a series of specific accessibility requirements based on WCAG 2.0 while "Law 9 - N.4 Provisions to support the access of disabled people to IT tools" outlines broad accessibility requirements.
NETHERLANDS	Accessibility requirements outlined in Chapter 9 of legislation "EN 301 549" (enacted 2016) are mandatory for digital services of the central government, municipalities, provinces, water boards, educational and healthcare institutions, all websites and web-apps, and any services "for which the (semi-) government organization itself is the client or responsible."
NORWAY	The "Regulations on Universal Design of ICT" (enacted 2013) outlines that web solutions must be in accordance with WCAG 2.0 at varying levels which are defined in the legislation.
SWEDEN	The "Discrimination Act" (enacted 2008) enacts broad non-discrimination laws but does not include specific web accessibility guidelines or rules.

SWITZERLAND	The "Federal Law on the Elimination of Inequalities for Persons with Disabilities" (enacted 2002, updated 2017) indicates that "access to [internet] services should not be made difficult for the visually impaired" but does not outline specific guidelines or rules.
UNITED KINGDOM	"The Equality Act" (enacted 2010) outlines broad non-discrimination laws. These laws address web accessibility to the degree that those concerned with "the provision of information" must take "steps for ensuring that - in the specified circumstances - the information is provided in an accessible format" (Section 20), but do not outline any specific guidelines or rules.

Asia & Oceania

In Asia, web accessibility has seen growing importance, although the degree of legislation surrounding web accessibility differs by country. Countries such as Japan, South Korea, Thailand, and Vanatu have accessibility legislation that is either based on or compliant with WCAG 2.0. Conversely, some countries have legislation surrounding accessibility but are not compliant with WCAG 2.0, while others may have legislation surrounding the rights of those with disabilities but no legislation specific to web accessibility.

AUSTRALIA	The "Disability Discrimination Act: Advisory Notes on World Wide Web Access" (created in 2002, updated in 2014) contain guidelines for web accessibility based on WCAG 2.0. Australian government departments and agencies are required to adopt the AA WCAG 2.0.
CHINA	The "Law on the Protection of Persons with Disabilities" (1990, enacted 2008) outlines the rights of those with disabilities but features no specific mention of accessibility requirements for information/communications technology. The "Voluntary Web Accessibility Standard" (2008), recommends a voluntary set of web accessibility guidelines derived from the WCAG 2.0.
INDIA	The "National Policy on Universal Electronic Accessibility" (2013) focuses on ensuring digital accessibility for persons with disabilities. The "Rights of Persons with Disabilities Act" (2016) mandates that the public and private sector must conform to accessibility standards laid out in the document. The "Guidelines for Indian Government Websites" (2009) is WCAG 2.0 compliant and provides a set of standards that all government websites must follow.
JAPAN	"JIS X 8341" includes accessibility guidelines for those with disabilities and was developed in 2004. In 2010, "JIS X 8341-3" was updated and is compliant with WCAG 2.0. The guidelines outlined in this legislation are mandatory for government agencies (both local and national) but are voluntary for private companies.
NEW ZEALAND	The "Web Accessibility Standard" (2013) and the "Web Usability Standard" (2013) indicates WCAG 2.0-based guidelines with which the public sector must comply (although not the private sector). The standards apply both to public-facing and internal-facing web pages.
PAKISTAN	The government of Pakistan has drafted the "National IT Policy" in 2016 although as of 2018 this legislation has yet to be implemented. This draft of this piece of legislation addresses accessibility through Component 8: Persons with Disabilities although it is unknown if this will be WCAG 2.0 compliant.
PHILLIPPINES	The Philippine Web Accessibility Group is mandated by the Philippine Government to promote full accessibility of all government websites.

REPUBLIC OF KOREA	The "Anti-Discrimination and Remedy for Persons With Disabilities Act" (enacted 2008) includes accessibility requirements for public and private information communications technology. The "National Informatization Act" (2009) also covers accessibility and usage standards for people with disabilities and the elderly.
SRI LANKA	The Sri Lankan ICT Agency developed the "Web Standards for Developing Government Website of Sri Lanka" (2013), which addresses web accessibility issues but is not compliant with A WCAG 2.0.
THAILAND	Provision 20 of "The Persons with Disabilities' Empowerment Act B.E. 2550" (2007) indicates the right of persons with disabilities to have access and be able to use public services and facilities including information communications technology. The Ministry of Information and Communications Technology also developed the "Thai Web Content Accessibility Guidelines" based on WCAG 2.0 in 2010.
VANATU	"Right to Information Web Accessibility Guidelines for Web Developers and Content Managers" (2016) was developed in accordance with WCAG 2.0 standards.
VIETNAM	Article 43 of the "Law on Persons with Disabilities" (2010) simply "encourages agencies, organizations, enterprises and individuals operating in information technology to ... develop information technology reserved for persons with disabilities" but makes no specific mention of WCAG 2.0, specific guidelines, or enforcement of Article 43.

The Americas

Countries in the Americas have legislation that covers the rights of people with disabilities as well as including broad provisions for the accessibility of information and communication technology. However, specific guidelines (for instance, those based or derived from WCAG 2.0) are less frequent.

ARGENTINA	"Law No. 26653" was enacted in 2010 and states that entities belonging to the federal government must facilitate access to their websites to all persons with disabilities. This piece of legislation has no specific guidelines or reference to WCAG 2.0.
BRAZIL	The federal government introduced a paper with guidelines surrounding accessibility in 2005. In 2007, these guidelines became mandatory for all federal websites. The current version of the paper follows WCAG 2.0 guidelines and is maintained by the Brazilian Ministry of Planning, Budget, and Management.
CHILE	"Law N° 20422" (enacted in 2010) states that the government of Chile must promote and apply action measures in order to boost work inclusion and non-discrimination of people with disabilities. This includes the creation and design of procedures, technologies, products, and work services; however, the law has no specific requirements for web accessibility.
MEXICO	The Federal Telecommunications and Broadcasting Law (enacted in 2014) includes broad provisions for accessible design regarding information and communication technology. Compliance was required by August 2017. In 2015, it was announced that all websites belonging to the Federal Public Administration of Mexico would become accessible to individuals with disabilities, but there is no a deadline for completion.

The Middle East

Web accessibility has seen growing importance in the Middle East. While enforceable legislation remains rare, more and more organizations are issuing guidelines surrounding web accessibility in the Middle East.

KUWAIT	The Central Bank of Kuwaiti features a set of accessibility recommendations for websites, and its own websites feature accessibility features for persons with disabilities.
QATAR	The Center for Assistive Technology (MADA) in Qatar places importance on increasing web accessibility in the country and empowering persons with disabilities at large. MADA provides both funds to improve access to assistive technologies and supplies a set of guidelines for building an accessible website based on WCAG 2.0.
OMAN	The Information Technology Authority e-Accessibility Policy mandates that all government agencies and government-owned companies must "ensure that public information and e-services are accessible by persons with disabilities." The ITA also recommends that websites and e-services comply with WCAG 2.0.
UNITED ARAB EMIRATES	The UAE passed the "UAE Disability Act Under Federal Law No. 29" (enacted 2006), which provides broad anti-discrimination legislation. Moreover, the UAE federal government also issued a set of guidelines for accessibility that are intended for use by UAE federal government websites and affiliated entities.

Africa

The African Charter on Human and Peoples' Rights was set up in 1987 and a subsequent protocol to the Charter came into effect in 2005. This Charter acts as a broad human rights instrument intended to protect human rights and basic freedoms in Africa and includes provisions for those with disabilities. Countries such as Swaziland, Lesotho, South Africa, Botswana, Angola, Kenya, Namibia and Ghana outline human rights through constitutions and other legislation, but whether people with disabilities are a protected class varies by country. Countries such as Egypt have designed government sites based on WCAG guidelines, legislation surrounding web accessibility is rare across the continent.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