Amnet
Energizing Relationships

DECODING WCAG 2.1

Understanding the differences between WCAG 2.0 and 2.1 and its implication

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Executive Summary

Approximately 17% of the world's population is visually challenged, 2.6% has an intellectual disability, and 1% require a wheelchair for mobility.[1] Plus, the world's aging population of 80 years and over will nearly triple from 143 million in 2019 to 426 million by 2050.[2] Considering the growing importance of web accessibility vis-à-vis the increasing population with varying degrees of disabilities, the World Wide Web Consortium (W3C) created Web Content Accessibility Guidelines (WCAG) to provide an actionable framework. The first version was published almost two decades ago. A revised and enhanced version (2.0) was published in 2008.

WCAG 2.0 was the gold standard and served as a foundation for international accessibility laws. However, since its release, rapid advances in digital and smart technologies have reshaped our world in an unprecedented manner, transforming the way we communicate and access information. The older version needed an upgrade to accommodate the new and evolved accessibility requirements. As a result, WCAG 2.1 was published as an extension or advanced version of WCAG 2.0. With the addition of new success criteria, the guideline accommodates various accessibility dynamics and covers a wide range of barriers and web technologies to maximize accessibility.

A Sneak Peek into the Emergence of WCAG

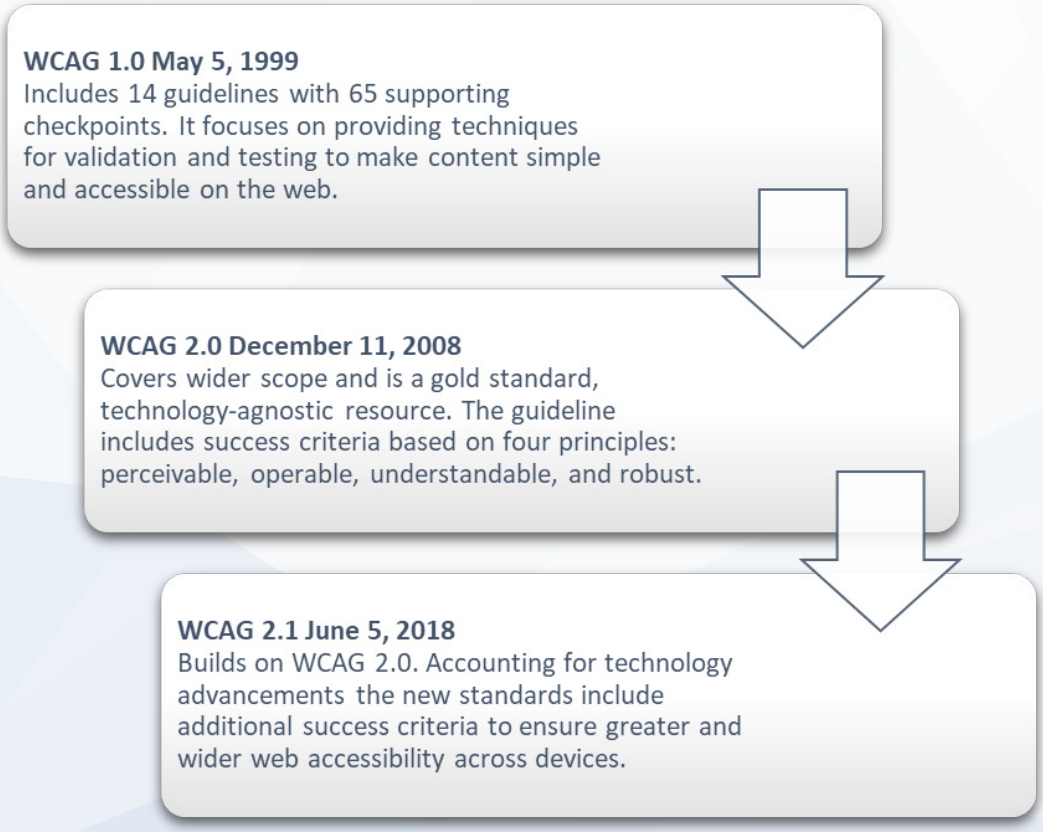
WCAG was developed by the Web Accessibility Initiative (WAI) group of the W3C. The idea was to create a shared comprehensive web content accessibility guideline that could be used globally to ensure that digital content is accessible to every user with varying degrees of abilities.

The first draft—WCAG 1.0—was published in May 1999 and comprised 14 guidelines and 65 associated checkpoints that form the basis to determine conformance with the guidelines.[3]

Fast forward to December 2008, when W3C published WCAG 2.0 to make content accessible to a wider range of people with cognitive, physical, and learning limitations. WCAG 2.0 remains a widely accepted standard for accessibility that was recognized as such by the International Standards Organization (ISO) in 2012 (ISO/IEC 40500:2012).[4]

WCAG 2.0 is a highly stable, viable, and informative standard for accessibility, but with rapid and pervasive digitization of information gaps in WCAG 2.0 had to be bridged to make it relevant and comprehensive. This resulted in WCAG 2.1, released in June 2018. The new version does not replace WCAG 2.0, rather it is an evolved resource that includes an extensive range of testable success criteria to ensure greater digital accessibility.

WCAG TIMELINE



The Shift from WCAG 1.0 to WCAG 2.0

Given the pace of technological advancements and use of the internet worldwide, it should come as no surprise that W3C developed an updated version (WCAG 2.0) with a wider scope almost a decade after the first standard (WCAG 1.0) was published. While WCAG served as a reliable guideline until 2008, it then started to fall short of meeting the growing and evolving digital content accessibility requirements. Moreover, the scope of WCAG was also somewhat restrictive, making a few checkpoints redundant in meeting accessibility needs of users with advanced or different disabilities. At the same time, other checkpoints became incompatible with newer operating systems. These issues prompted a fundamental shift in the way accessibility guidelines were developed.

Unlike WCAG 1.0, WCAG 2.0 does not concentrate on techniques to ensure digital accessibility. Instead, it focuses on fundamental challenges of accessibility for people with cognitive, learning, and physical limitations. WCAG 2.0 focuses on four guiding principles to make web content more accessible to users with disabilities as well as older people with changing abilities due to aging. Web content must be perceivable, operable, understandable, and robust.[5]

The Newest Release: WCAG 2.1

WCAG 2.0 is a well-written, reliable, and referenceable standard that aims to help content providers make everything digitally accessible. But after 10 years, it was time to revisit and update the guidelines to accommodate rapid development in digital technology. Enter WCAG 2.1, an advanced version that builds on WCAG 2.0. It is imperative to note that WCAG 2.0 still remains a reliable resource. However, with the latest update, W3C aims to provide more exhaustive guidelines to boost accessibility across devices (mobile) for users with varying degrees of cognitive limitations, poor vision, and other disabilities.

WCAG 2.1 includes technology-agnostic testable guidelines as success criteria. The new recommendations are supported by an extensive repository of materials. The documentation, which is available for free online, includes “Understanding WCAG 2.1” and “Techniques for WCAG 2.1” and provides interpretation of success criteria as well as implementation techniques and other general information.[6]

The publication of WCAG 2.1 does not replace WCAG 2.0, and content providers are still formally required to conform to WCAG 2.0. W3C recommends and encourages using WCAG 2.1 to develop digital content and web accessibility policies to maximize accessibility and ensure future applicability.

Three Levels of Compliance

The majority of international policies and regulations related to accessibility are based on WCAG, which provides an actionable framework that includes standards and technical guidance to help companies make their websites and apps accessible. To ensure accessibility compliance, the guidelines include three levels of conformance that categorize various success criteria and minimum accessibility expectations across each checkpoint.

The three levels of conformance are:

A (low) – The minimum level of compliance. To conform to Level A, websites and apps must satisfy every success criterion listed.

AA (midrange) – The second level of conformance addresses the most common and greatest barriers to making content accessible. To meet the requirements for Level AA, content must meet all Level A and AA success criteria.

AAA (highest) – The final and highest level of conformance. All success criteria for Levels A, AA, and AAA must be met.

Most of the standards fall under conformance levels A and AA. The Level AAA success criteria enable companies to account for various situations and limitations, extend reach, and maximize accessibility. That said, it is not mandatory to meet level AAA as some of the criteria may not be applicable for certain web content. In order to ensure legal compliance, it is enough for the organizations to satisfy the first two levels of conformance.[7]

The Difference Between WCAG 2.0 and WCAG 2.1

Since the new update is an extension of WCAG 2.0, the differences are basically the new features added to fix the gaps in 2.0. The significant changes boil down to three new key focus areas and seventeen new success criteria that provide a road map to extend accessibility and its reach.

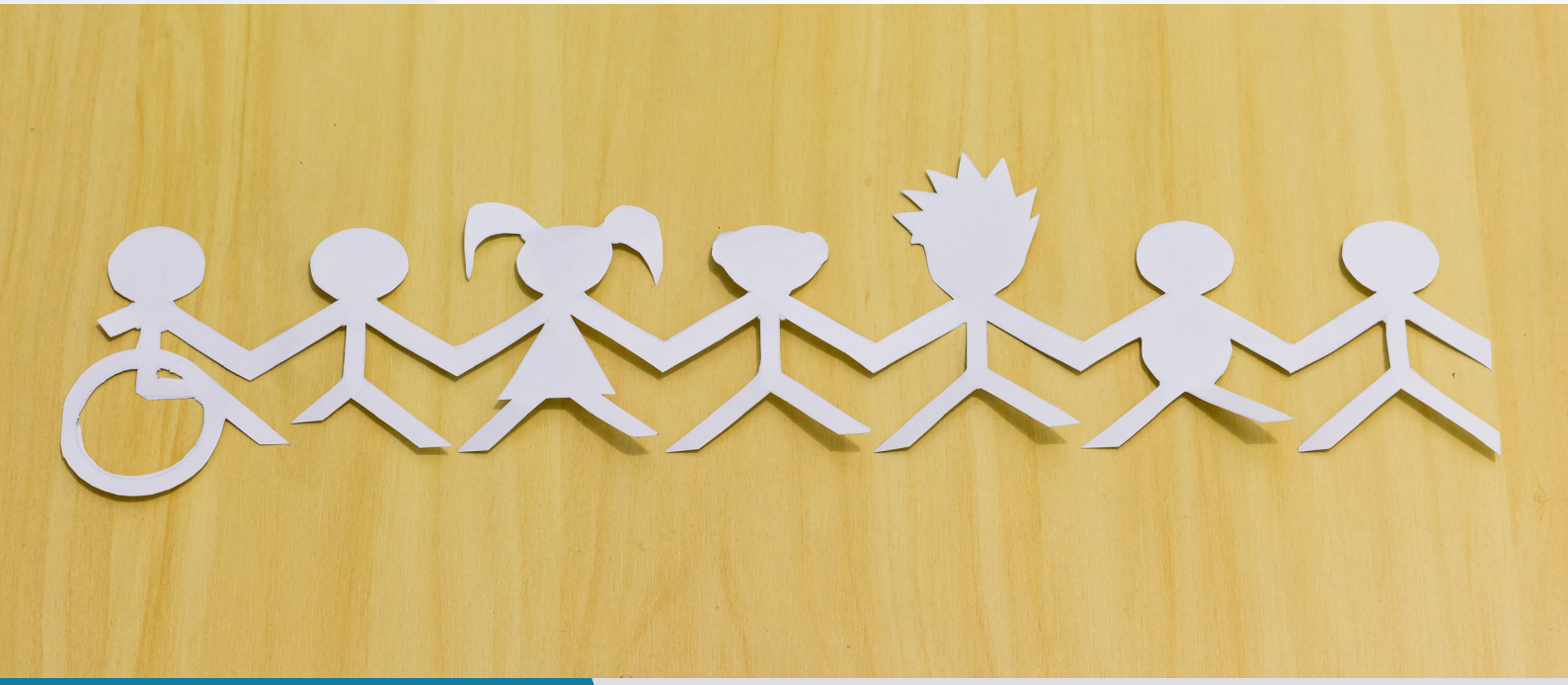
The new focus areas of WCAG 2.1 include:

Mobile Accessibility – From mobile phones, TVs, wearables, watches, appliances, and automobile systems, it is the age of smart devices. As a result, "mobile accessibility" needed reimagining in order to ensure seamless accessibility of content across all devices.[8]

Low Vision – The Low Vision Task Force (LVTF) was created to address accessibility challenges for people with impaired vision and offers an enhanced framework to support WCAG 2.0 guidelines. It focuses on making digital content accessible for people with visual impairment due to varying factors, including aging and colorblindness.[9]

Cognitive and Learning Disabilities – This area includes a wide range of learning and developmental limitations, such as autism, attention deficit hyperactivity disorder (ADHD), and dyslexia, among others. WCAG 2.1 specifically focuses on providing a road map to improve accessibility and user experience for people with cognitive disabilities.

The seventeen new success criteria included in WCAG 2.1 is an extension to three of the four core principles.[10]



Perceivable

1. **Orientation (Level AA)** – With smartphones and tablets becoming the go-to devices for accessing information, digital content should support both landscape and portrait display in case a device is mounted on a fixed display orientation.
2. **Identity Input Purpose (AA)** – This refers to personalization of metadata to enable users with cognitive limitations to understand and use form input. The content should use programmatically associated tools to identify the input labels and ensure similar symbols and terms are used by the browser to autocomplete.
3. **Identify Purpose (AAA)** – This refers to providing purpose, context, and meaning to symbols, links, buttons, and form fields.
4. **Reflow (AA)** – Content should be mobile-responsive, which is especially important for sight-impaired users. This criterion recommends avoiding designs that require scrolling in horizontal display orientation. Instead, pages should reorganize when screen size changes or users zoom in, without any loss of information, display quality, or functionality.
5. **Non-Text Contrast (AA)** – Graphic content, infographics, and other visual content should have a ratio of 3:1 to make the non-text components easily understandable.
6. **Text Spacing (AA)** – Users with impaired or low vision should be able to override the spacing between lines, words, characters, and paragraphs without any loss of information/content or functionality.
7. **Content on Hover (AA)** – Should allow users to access the additional content on hover as well as dismiss the menu when not needed. The additional content (on hover) should not obscure the page view.

Operable

8. **Character Key Shortcuts (A)** – Help users who rely on speech-to-text technologies to customize or turn off keyboard shortcuts to more easily interact with and access the content without triggering unrelated functions based on the shortcut.
9. **Timeouts (AAA)** – This works in parallel to the older success criterion "Timing Adjustable," but specifically focuses on notifying the user about a period of inactivity (page timeout) that results in loss of data.
10. **Animation from Interactions (AAA)** – Users should be able to disable animation unless it is fundamental to conveying the information or to the functionality of the website/application.
11. **Pointer Gestures (A)** – The complexity of path-based or multipoint gestures can restrict some users' ability to meaningfully interact with a website/application, therefore users should be able to carry out all these functionalities with a single pointer.
12. **Pointer Cancellation (A)** – Ability to abort the pointer function to help users avoid triggering any actions by accidentally clicking or tapping.
13. **Label in Name (A)** – Labels in a user interface component with visible text should have corresponding accessible name or programmatic label for users who rely on such labels to access information and interact with pages easily.
14. **Motion Actuation (A)** – Users should be able to carry out similar actions through a user interface component as can be done by motion or gestures, such as shaking the device to undo text.
15. **Target Size (AAA)** – The target of the pointer action must be at least 44 by 44 CSS pixels for it to be clearly visible for users with low vision.
16. **Concurrent Input Mechanisms (AAA)** – The content should allow users to switch between input modalities such as from keyboard to mouse or voice recognition.

Understandable

No new success criteria have been added.

Robust

17. **Status Messages (AA)** – Users of assistive technologies must be alerted through programmatically determined status messages without disrupting their ongoing work.

As mentioned earlier, the WCAG 2.1 initiative was launched to improve accessibility guidance. It is backward-compatible with WCAG 2.0. What this means for business owners is that when you conform to WCAG 2.1, you automatically comply with WCAG 2.0.

Accessibility Noncompliance Lawsuits

While WCAG guidelines are not legally enforceable, they have made their way into international accessibility regulations and form the basis for international accessibility law across the United States (US) and the European Union (EU).

The Americans with Disabilities Act (ADA) published by the Department of Justice (DOJ) encourages organizations to use WCAG 2.0 level AA as a guide to ensure compliance with the regulation.[11] The EU's Web Accessibility Directive incorporated WCAG 2.1 into its toolkit to guide organizations on how to comply with the directive.[12]

While these directives have been in place for years, websites often tend to overlook web accessibility and its impact. This is evident from the statistics gathered by the Chicago-based law firm Seyfarth Shaw, which indicate that accessibility lawsuits show no sign of slowing down, see Figure 1.[13]

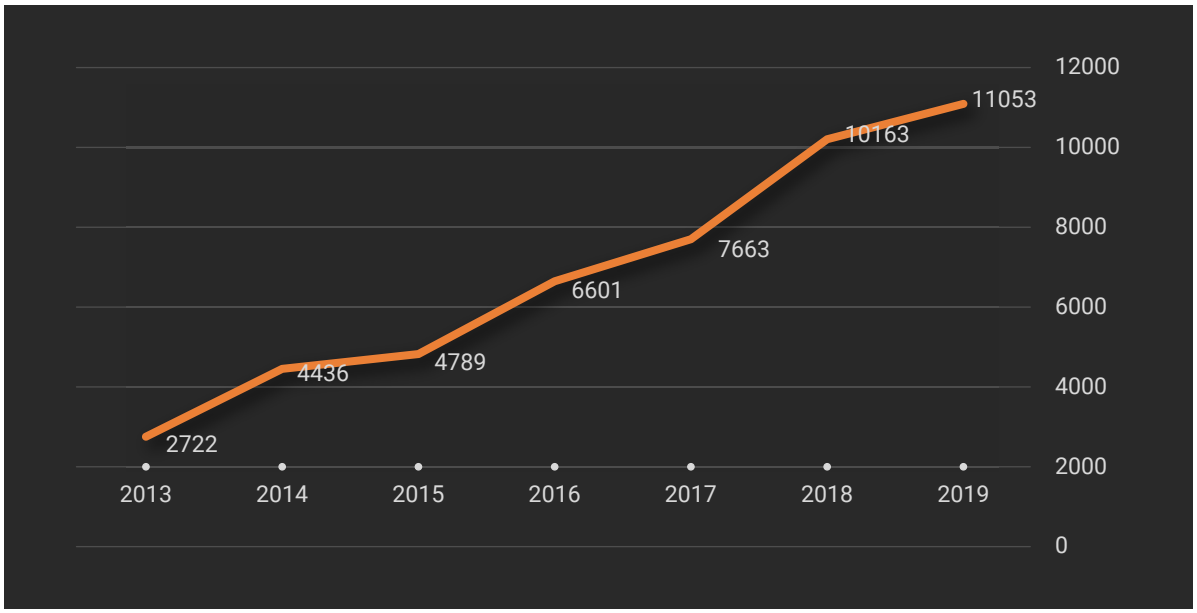


Figure 1: Year-on-Year Total Number of Title III Federal Lawsuits from January 2013 to December 2019

It is important to note that there has been a steady rise in the number of accessibility lawsuits filed each year in the US. In other words, noncompliance with the disability act is starting to severely impact businesses. Some of the most prominent lawsuits include the following:

- **2019:** One of the most talked-about ADA noncompliance lawsuits was the class action suit filed against the superstar Beyoncé's Parkwood Entertainment. The lawsuit claims the website failed to accommodate visually impaired users, making it difficult for them to access key features and information.[14]
- **2018:** Fox News Network failed to meet WCAG 2.0 standards. The plaintiff, Luc Burbon, is visually challenged and was unable to access services at Fox News's physical locations (including live broadcasts and tapings that audiences can attend) due to lack of alternative text on their website, which resulted in confusing or missing information.[15]
- **2018:** Another major ADA class action suit was filed against Amazon.com. Claimant Cedric Bishop alleged that Amazon's website was inaccessible to blind and visually impaired users because it was not compatible with screen readers. In addition, missing alternative text made it difficult to access information.[16]

All these cases were ultimately settled and dismissed on the condition that the websites would make necessary changes to conform with WCAG requirements. Today, every website is regulated by states' accessibility regulations and noncompliance can result in costly lawsuits and damaged reputations. Therefore, ensuring WCAG conformance is a smart investment that can help avoid noncompliance issues and also make websites and apps more accessible to a wider audience.

How to Conform to WCAG 2.1 Standards

It is imperative to understand the current guidelines and your site's or app's level of accessibility. A comprehensive accessibility audit should be performed on every website and application. This exercise will help identify any gaps or issues that should be addressed. Issues should then be prioritized based on the severity and impact of the accessibility barriers.

In order to effectively conduct audits and remediate accessibility issues, testers, developers, and content creators need to be thoroughly trained across a variety of accessibility concepts and techniques. In addition to this, development teams need to be equipped with automated and up-to-date tools so they can integrate accessibility testing throughout development and fix the issues prior to launching a new site or app or an update of an existing one.

Accessibility requirements are dynamic and complex, so it is helpful for organizations to consult accessibility experts who are equipped to formulate and implement remediation strategies that are best suited for business-specific needs.

Future-proofing your Digital Content

Making your digital content accessible ensures inclusivity. Plus, from a business perspective, it helps people with varying degrees of disabilities to equally interact, communicate, and participate, maximizing your market reach and ensuring a better user experience.

W3C works tirelessly to update their guidelines, which demonstrates the criticality of making digital content accessible. Besides websites and apps being bound by legal requirement, it is important to focus on the fact that we live in a hyperconnected world. The internet has revolutionized our day-to-day communication and has become an integral part of our lives. A wide range of human activities now require digital access, including education, entertainment, banking, retail, food, healthcare, and government services. It is therefore critical that web developers guarantee content is accessible to one and all. Making digital content accessible ensures that people who are differently abled are not discriminated against and can easily engage with dynamic digital content and improve their overall quality of life.

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For companies that need to make their content accessible, Amnet provides born accessible content and also remediates existing content. Amnet helps clients to stay ahead of the curve and take part in enabling digital equality in compliance with regulatory requirements such as ADA, WCAG 2.1 and Section 508. Amnet is a Benetech certified accessible vendor.

Accessibility Resource Center

To accelerate our initiative of digital equality, we have created a not-for-profit Accessibility Resource Center.

www.theaccessibilityresourcecenter.org

Users access this portal to utilize free and valuable "do it yourself" tools and to stay abreast of the latest guidelines.

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