How-To:
Digital Accessibility for Software

level access

The benefits of software accessibility

Digital accessibility is becoming an increasingly important consideration for software platforms and other digital products. Many organizations are now adopting digital accessibility as an immediate priority and embracing its benefits—including gaining market share, increasing procurement opportunities, reducing legal risk, strengthening brand reputation, improving customer experience, and boosting team productivity.

A variety of factors are driving interest in software accessibility:

- A sizable and growing market segment
- Accelerated supply chain digitization
- Legal risk
- Widespread adoption of DEI (diversity, equity, and inclusion)
- Better customer experience overall

- **A sizable and growing market segment:**
  People with disabilities represent a large consumer market. Globally, there are more than one billion people with disabilities, and working-aged adults with disabilities in the U.S. control $490 million in disposable income.

- **Accelerated supply chain digitization:**
  Digital technology has rapidly taken over the global supply chain, creating a wave of opportunity for B2B and B2G software companies. And as more organizations sell digital products into the public and private sectors, providing documented proof of products' accessibility is becoming a mainstream requirement.

  In certain instances, accessibility is a legal mandate. But in others, customers are simply expecting accessible products and seeking those vendors who provide them, often making accessibility a requirement in their RFPs. Vendors and service providers who can provide inclusive digital experiences will have the edge in this market.

- **Legal risk:**
  Litigation related to digital accessibility is on the rise. From 2017 – 2022, plaintiffs in the U.S. filed roughly 14,000 web accessibility-related lawsuits, and these numbers don't include the potential hundreds of thousands of legal demand letters sent each year. These suits claim violation of Title III of the Americans with Disabilities Act (ADA). Companies purchasing digital products to integrate into their infrastructures are unwilling to assume legal risk by integrating inaccessible technology.

- **Widespread adoption of DEI (diversity, equity, and inclusion):**
  As organizations continue to advance their DEI initiatives, those promising proactive and meaningful change need to include people with disabilities—the world's largest minority group.

- **Better customer experience overall:**
  A powerful approach to making products more usable for more people is to consider the needs of all users of all abilities.

The many benefits of accessible software, products, and services are clear. But how can you make your digital experience accessible, and maintain its accessibility over future releases and updates?

We've created this guide to help you get started on the path to software and digital product accessibility. In it, you will learn what goes into building an accessibility strategy, moving beyond the reactive "fix and forget" mindset, and weaving accessibility into all parts of your software or digital product's life cycle, including design, development, quality assurance (QA) testing, and monitoring.

We'll provide a three-step roadmap to software accessibility:

1 **Understand** software and digital product accessibility laws, guidelines, and standards.

2 **Evaluate** and **report** your state of digital accessibility.

3 **Shift to agile.**
Build digital accessibility into your product development life cycle.

(1) Understand software and digital product accessibility laws, guidelines, and standards

Familiarize yourself with legal requirements, guidelines, and standards for creating accessible software and digital products.

Accessibility laws

Many of today's existing digital accessibility best practices have grown out of government regulation. Some laws guarantee the civil rights of people with disabilities; others establish procurement requirements for specific agencies. Still others impose accessibility requirements on producers of products and providers of services.

The ADA requires that public programs and services be accessible to people with disabilities and that they provide accessible, "effective communication," regardless of what medium is used for that communication. For example, if a software program is used in a course at a postsecondary institution, the essential content that it delivers should be made accessible to qualified students who have disabilities.

The ADA also covers issues related to nondiscrimination based on disability in employment decisions and requires that employers provide reasonable accommodations that may involve access to software and other electronic and information technology.

Section 504 of the Rehabilitation Act of 1973 requires that programs and services that receive federal funding make those options available to people with disabilities and provide reasonable accommodations. This includes accessible digital content.

Section 508 of the Rehabilitation Act of 1973 ensures that electronic and information technology developed, procured, maintained, or used by the federal government be designed to be accessible to people with disabilities. If you're part of a vendor organization selling software, for example, to the federal government, you must prove that software is accessible.

The FCC's Telecommunications Act, Section 255 requires telecommunications equipment manufacturers and service providers to make their products and services accessible to people with disabilities.

Accessibility guidelines

Making software and digital products accessible means considering the wide variety of users and their various needs and preferences. There are many standards and guidelines that contribute to the details of accessibility, but we've consolidated the essential items below.

Web Content Accessibility Guidelines (WCAG)

Where digital accessibility guidelines are concerned, WCAG is the benchmark. WCAG now incorporates more than 80 documented accessibility success criteria. Although initially created to address web-based accessibility, the majority of WCAG standards can also effectively be applied to digital products, platforms, and software applications, including mobile apps.
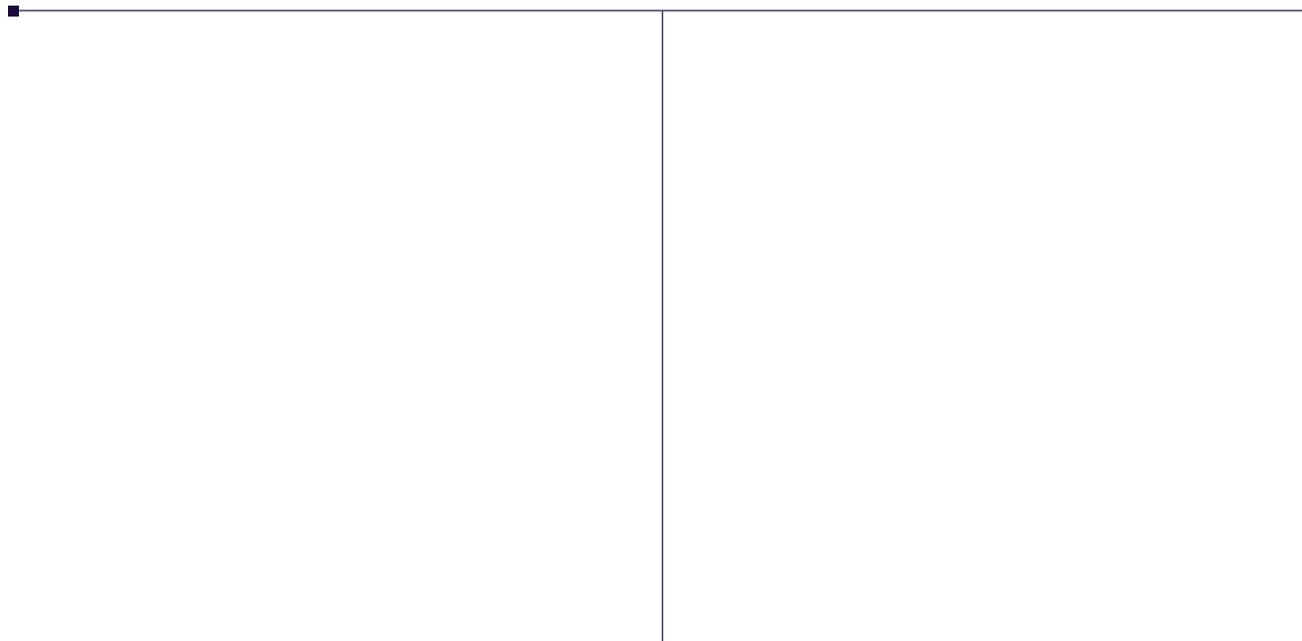
The principles of WCAG

To guide you in developing processes for digital product accessibility, consider WCAG's four principles of accessibility, commonly described using the acronym POUR:

Perceivable

Digital experiences must present content to users in ways they can perceive. For example, it's important to present information so that a user can adjust color contrast or font size, or view captions for videos.

Operable

User interface components and navigation must be functional for users in ways they can operate. For example, a user must be able to perform required interactions using a keyboard or voice commands, not just using a mouse.

Understandable

Information and user interface operations must be understandable. For example, information and instructions should be clear, and navigation methods should be easy to understand and use.

Robust

Content must be robust enough so that it can be interpreted reliably by a wide variety of users and types of assistive technologies. As technologies evolve, code and content should remain accessible for users of common and current assistive devices and tools.

Additional guidelines

Beyond WCAG, and depending on the product and its intended market, additional accessibility guidelines may be applicable to your software or digital product:

- Authoring Tool Accessibility Guidelines (ATAG): specific to software and services that web developers, designers, and authors use to produce content

- User Agent Accessibility Guidelines (UAAG): intended for accessibility of user agents such as browsers, browser extensions, media players, readers, and other applications

- ISO/IEC 30071-1: code of practice for creating accessible information communication technology (ICT) products and services

Accessibility standards

The U.S. Access Board has developed specific technical and functional performance criteria for electronic and information technology, which includes software, to comply with Section 508 of the Rehabilitation Act and Section 255 of the Telecommunications Act. Although these standards specifically apply to federal agencies and those doing business with a federal agency, they provide a model of accessibility that has been widely adopted as mainstream in the private sector as businesses create policies to meet their legal obligations. The accessibility standards for software applications include the following (many of which are similar to WCAG success criteria):

- When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.

- Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.

- A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that assistive technology (AT) can track focus and focus changes.

- Sufficient information about a user interface element, including the identity, operation, and state of the element, shall be available to AT. When an image represents a program element, the information conveyed by the image must also be available in text.

- When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.

- Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.

- Applications shall not override user-selected contrast and color selections and other individual display attributes.

- When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.

- Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

- When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.

- Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.

- When electronic forms are used, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.

(2) Evaluate and report your state of digital accessibility

Now that you understand the impact, regulatory space, and guidelines, how do you evaluate the current state of your software or digital product's accessibility? Thorough testing is a critical first step.

Functional accessibility testing

To understand whether your product is accessible for people with disabilities, it's essential to conduct digital accessibility testing. This typically consists of functional testing and may include some level of automated testing if your product has an HTML element to it.

Functional testing involves conducting a critical path analysis to understand your most important user flows—that is the specific paths users take to complete core tasks. Professionals will then test those flows using AT, reporting on any barriers they experience. For the most comprehensive, authentic results, user flows should be tested by native users of AT, using strategic combinations of AT and browsers. Additionally, ongoing re-evaluation and validation

of fixes as implemented are necessary to ensure your product remains accessible.

Functional testing requires technical expertise and knowledge of each applicable standard, which is why it's best to align with an accessibility partner. This partner should regularly deliver focused, immediately actionable test results detailing any accessibility barriers testing revealed, and provide support to help prioritize and streamline the remediation of issues. The right partner will also help you implement ongoing monitoring so you can swiftly identify and address any new barriers that emerge before they impact a significant number of users.

Documentation and reporting

Documentation is another important step in prioritizing digital accessibility.

Accessibility statement

An accessibility statement is a public information page that details various aspects of your accessibility efforts. These details may include what you're doing to maintain and increase access provided, whether you are inviting feedback from visitors about how your experience can be improved upon, and if you are offering multiple ways visitors may submit questions and comments, including a phone number and email address.

An accessibility statement signals your compliance with anti-discrimination laws that you may be compelled to follow. For instance, businesses that request a listing with the federal government's Vendor Accessibility Resource Center are asked to supply a link to their online accessibility statement about Section 508 expertise and compliance.

VPAT® and ACR for compliance

The most common document to validate product accessibility compliance is a Voluntary Product Accessibility Template (VPAT). A completed VPAT is known as an ACR (Accessibility Conformance Report). VPATs enable contracting officials and procurement teams to assess how commercial products and services support accessibility. They also allow product manufacturers and vendors to report how well their product meets applicable accessibility standards.

Although this tool was developed to assist federal contracting officials in assessing the accessibility of products from potential vendors, the private sector has adopted the VPAT as required documentation in all procurement processes and modern-day RFPs.

The Level Access approach to VPATs

Level Access experts are experienced in assessing digital accessibility and completing VPATs. Beyond simply populating the VPAT document and submitting the report, our comprehensive, actionable approach to evaluation includes partnering with your team to remediate any issues, and providing ongoing monitoring to ensure you maintain accessibility as your product evolves.
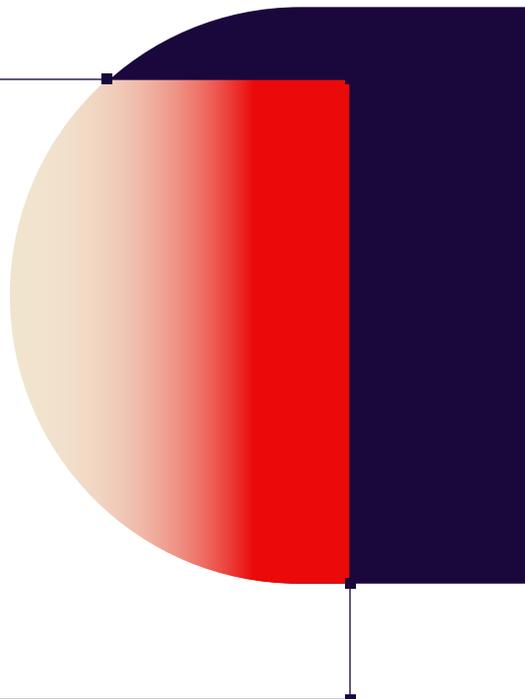
3   Shift to agile: Build digital accessibility into your product development life cycle

Reduce the need for reactive remediation by proactively embedding accessibility into software design and development.

Setting processes in place for testing and reporting on your software or product's state of digital accessibility is important. But moving forward, how do you ensure accessibility barriers don't move into production in the first place? The answer is to take an agile approach: address accessibility early, often, and iteratively throughout the product development life cycle, beginning with ideation and design.

Many software and digital product companies are entrenched in a break/fix cycle when it comes to digital accessibility. They direct resources toward fixing issues later in the process, rather than preventing them altogether. Continuing with this approach keeps you in an inefficient, reactive cycle of addressing issues once they're live—draining development hours, driving up costs, and making it challenging to sustain momentum.

More ideally, accessibility is infused in the early stages of planning, design, and development. Practicing agile accessibility means your entire team is proactively working accessibility standards and considerations into creative and technical processes, making it an essential part of every sprint and every feature release.

With an agile approach:

- Leadership prioritizes accessibility.

- Team members are trained on accessibility as it applies to their roles.

- Digital accessibility is not a stand-alone function, but is embedded into each existing process.

- Team members integrate accessibility into the product roadmap, keeping it top of mind as they design, build, and test products, instead of as a one-time checklist completed at the end of a project.

- Accessibility testing and monitoring happens strategically and regularly.

Training

Ongoing training is a critical component of every successful digital accessibility program for a number of reasons:

- As technology and standards evolve, continuing education will keep your team aware of the most up-to-date information.

- A company-wide training program supports efficient workflows, reducing the introduction of accessibility errors down the line.

- Employees are more likely to understand and empathize with the needs of customers if they're made aware of the varied ways in which people interact with a product.

- It reinforces that your company is committed to a culture of diversity, equity, and inclusion.

- An empowered team is a more resilient team that will stick with you on your product journey, avoiding the costs of recruiting new hires.

How Level Access can help

Prioritizing accessibility in your software development life cycle makes a tangible difference in the lives of people with disabilities, and it's becoming a mainstream requirement for product procurement and sales. Given the dynamic nature of digital products and the complexity of design, it's important to align with a solution partner who will not only help make your software and digital products accessible, but also keep them accessible as they evolve.

Level Access works with companies by taking a holistic approach to accessibility. Our comprehensive solution includes an extensive range of digital accessibility testing, technology, services, and training, including:

- Review and evaluation of wireframes and UX

- Conducting a critical path analysis to clearly understand your most important user flows

- Testing those flows using a variety of AT on a variety of browsers (people with disabilities who are native AT users are among those conducting these tests)

- Regularly delivering focused, immediately actionable test results detailing any accessibility barriers our testing revealed, which includes guidance to fix those issues

- Partnering with your team to help resolve issues

- Providing regular monitoring and re-evaluation to ensure you maintain accessibility compliance as new features of your product are released

- Completing a VPAT, delivering an objective, unbiased ACR, helping you satisfy procurement requirements in both the public and private sectors

- Updating your ACR, when applicable, to demonstrate accessibility improvements over time

- Assisting with the development of an accessibility statement

- Conducting ongoing training with your team to ensure accessibility is woven throughout product design and development

Talk to our expert team

If you're ready to validate the accessibility of your software platform or digital product, and establish an accessibility policy that aligns with your product development, engage with our team.

Request a demo of our comprehensive platform.

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