ESSENTIAL ACCESSIBILITY

How-To:

Digital Accessibility For Software

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The benefits of software accessibility:

Although digital accessibility has been around for decades, it has only recently begun to receive mainstream attention as an important element for software and digital platforms, products, and services. Many organizations are waking up to the fact that embracing accessibility leads to multiple benefits—including additional market share, meeting product procurement requirements, reducing legal risks, strengthening brand reputation, improving customer experience, and boosting team productivity.

A variety of factors are driving the interest in software and digital product accessibility:

- **A sizable and growing market segment:** People with disabilities represent a large consumer market. Globally, there are close to two billion people with disabilities, and the disability market controls more than $13 trillion in disposable income.

- **Accelerated supply chain digitization:** The COVID-19 crisis brought about years worth of changes in just a few months to the way companies in all sectors and regions do business. According to a McKinsey Global Survey of executives, companies have accelerated the digitization of their customer and supply-chain interactions and of their internal operations by three to four years. And the share of digital or digitally-enabled products in their portfolios has accelerated by seven years.

This transition to a mostly digital supply chain has exposed both customers and vendors to digital accessibility's challenges and opportunities. For the increasing number of companies selling digital products and software into the public or private sector, documented proof of their products' accessibility is becoming a mainstream requirement.

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

- **Legal risk:** We've seen a rising rate of ADA-related lawsuits. From 2017 – 2021, plaintiffs in the U.S. filed more than 10,000 web-related lawsuits, and these numbers don't include the suspected hundreds of thousands of legal demand letters served. 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 this legal risk by integrating an inaccessible product experience.
- **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 your product 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 software 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 "one-and-done" mindset and weaving accessibility into all facets of your software's lifecycle including design, development, QA testing, and monitoring.

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Step 1: Understand software accessibility laws, guidelines, and standards:

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

Accessibility laws:

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

The Americans with Disabilities Act of 1990 (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 individuals 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 a vendor selling software, for example, to the federal government, you must prove it's 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.

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Accessibility guidelines:

Making software fully accessible means considering the wide variety of users and their various limitations 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:

Where digital accessibility guidelines are concerned, WCAG (Web Content Accessibility Guidelines) is the benchmark. WCAG incorporates more than 70 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: Software must present content so that users of different abilities can perceive it in different ways. 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 operable to users in ways they can operate. For example, this would mean required interactions can be performed using keyboard or voice commands.

Understandable: Information and user interface operations must be understandable. For example, this would mean information and instructions are clear and navigation methods are 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.

? Did you know:

WCAG incorporates more than 70 documented accessibility success criteria.

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 Communications 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 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 assistive technology. 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.

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Step 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 accessibility? Thorough testing is a critical first step.

Manual and functional testing:

To understand whether your product meets applicable criteria, such as WCAG, and is accessible for individuals with disabilities, it's essential to conduct comprehensive testing. This includes both manual and functional testing and may include some level of automated testing if your product has an HTML element to it.

Manual evaluation and functional testing involve conducting a critical path analysis to understand your most important user flows, engaging professionals—including individuals with disabilities—to test those flows, and producing a comprehensive audit revealing any identified issues. Additionally, ongoing re-evaluation and validation of fixes as implemented are necessary to ensure your software remains compliant.

Manual testing requires technical expertise and knowledge of each applicable WCAG success criteria, which is why it's best to align with an accessibility partner. This partner will regularly monitor, audit, and help prioritize the remediation of any issues that are present or new issues that appear.

Results from a comprehensive manual evaluation will determine your best next steps when it comes to fixing identified issues. Options for addressing issues include:

- ✔ Build up your in-house expertise; however, this approach can be time-consuming and expensive.
- ✔ Hire an outside consultant, but keep in mind consultants are not a full-services solution. They are typically focused on independent projects, which can become costly.
- ✔ Work with an accessibility partner on a continuous basis. A best-practice approach is to engage a partner that collaborates with your team, providing access to accessibility experts who will continuously monitor for issues, help prioritize fixing them, and provide guidance for remediation work.

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Documentation and reporting:

Documentation is another important element when it comes to 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.

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eSSENTIAL Accessibility's approach to VPATs

eSSENTIAL Accessibility's experts are experienced in assessing accessibility and completing VPATs. Our approach extends beyond simply populating the VPAT document and submitting the report. We take a comprehensive approach to testing and analysis:

- ✔ Conduct a critical path analysis to clearly understand your most critical user flows.
- ✔ Test those flows using a variety of assistive technologies (AT) on multiple browsers. Individuals with disabilities who are native AT users are among those conducting these tests.
- ✔ Deliver a comprehensive audit of any accessibility barriers our testing revealed, which includes guidance to fix those errors.
- ✔ Partner with your team to help resolve the more complex errors.
- ✔ Provide regular monitoring and re-evaluation to ensure you maintain accessibility compliance as new features of your product are released.
- ✔ Deliver an objective, unbiased, fully accessible ACR.

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Step 3: Shift left: Build digital accessibility into your product development lifecycle:

Incorporate accessibility considerations into every process for a more efficient, thorough approach.

It's likely your company is entrenched in a break/fix cycle when it comes to digital accessibility, making it challenging to move to a strategy of organization-wide, embedded accessible processes. With a break/fix approach, resources go 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.

More ideally, accessibility is infused in early stages of design and development. The longer a platform takes root and expands, the harder it can be to implement changes—both culturally and technically. A shift left means your entire team is working accessibility standards and considerations into processes early and often as part of every sprint and every feature release.

With a shift left 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.
- Manual and automated accessibility testing happens strategically and regularly.

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Training:

Ongoing training is a critical component to every successful 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 different 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.

Conclusion:

It's clear: prioritizing accessibility in your software development lifecycle not only makes a tangible difference in the lives of people with disabilities, it's becoming a mainstream requirement for product procurement and sales.

It's important to understand that accessibility is never 100% and is always ongoing. With the dynamic nature of digital products, the evolution of technology, and the complexity of design, it's important you view accessibility health not as a one-and-done project, but as a continuous journey.

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How eSSENTIAL Accessibility can help

eSSENTIAL Accessibility works with companies by taking a holistic approach to accessibility. Our comprehensive solution includes an extensive range of digital accessibility audits, tests, services, and training, including:

- Review and evaluation of wireframes and UX
- Conducting a Critical Path Analysis to clearly understand your most critical user flows
- Testing those flows using a variety of AT on a variety of browsers (individuals with disabilities who are native AT users are among those conducting these tests)
- Delivering a comprehensive audit of any accessibility barriers our testing reveals, which includes guidance to fix those errors
- Partnering with your team to help resolve the more complex errors
- 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 product design and development are woven throughout the development process

Request a demo of our Accessibility-as-a-Service platform today.

Talk to our expert team

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

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