



# WEB ACCESSIBILITY RESERACH

Web Development

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# Web Accessibility Research

Web accessibility means that websites, tools, and Technologies are designed and developed so that people with disabilities can use them. More specifically, people can perceive, understand, navigate, and interact with the Web. Web accessibility encompasses all disabilities that affect access to the Web, including auditory, cognitive, neurological, physical, speech, and visual.

Accessibility benefits everyone, including people with temporary impairments (such as a broken arm) and older individuals with changing abilities. The Web Content Accessibility Guidelines (WCAG) set the standards for accessibility, focusing on four key principles: Perceivable, Operable, Understandable, and Robust (POUR).

**1. Perceivable: Providing Alternative Text for Non-Text Content:** A fundamental aspect of web accessibility is ensuring that content is perceivable to all users. This includes providing alternative text (alt text) for images, which helps visually impaired users who rely on screen readers.

- Example of Good Practice: The BBC News website adheres to accessibility standards by including descriptive alt text for images. This ensures that users who cannot see pictures still receive the context needed to understand the content.
- Example of Poor Practice: Instagram, despite improvements, still lacks comprehensive alt-text descriptions for all user-uploaded images. If a user does not provide a manual description, those relying on screen readers might receive limited or no information about the image.

**2. Operable: Keyboard Navigation and Focus Indicators:** Websites should be operable without requiring a mouse, which benefits users with motor disabilities. Proper keyboard navigation ensures that all interactive elements, such as links and buttons, can be accessed through the keyboard.

- Example of Good Practice: The GOV.UK website provides excellent keyboard navigation, ensuring that users can tab through menus and links logically. It also uses Visible focus indicators, make it clear which element is currently selected.
- Example of Poor Practice: Some e-commerce sites, like Zara's website, have been criticized for failing to provide clear focus indicators. This makes it difficult for users who rely on keyboard navigation to determine which part of the page they are interacting with.

**3. Understandable: Readable Text and Predictable Navigation:** Web content should be clear, and website functionality should be predictable to ensure users do not struggle to understand or navigate.

- **Example of Good Practice:** Apple's website uses simple language and consistent navigation. Users can easily predict where links will take them, improving their overall experience.
- **Example of Poor Practice:** Complex legal websites, such as some government tax portals, often contain dense jargon, making it difficult for users to comprehend important information.

**4. Robust: Compatible with Assistive Technologies:** A robust website must work across different devices and be compatible with assistive technologies like screen readers.

- **Example of Good Practice:** The Microsoft website is designed to work well with screen readers and other assistive technologies, ensuring an inclusive experience.
- **Example of Poor Practice:** Some restaurant websites still use PDFs for menus without alternative accessible formats, preventing screen readers from reading them properly.

Web accessibility is crucial in creating an inclusive digital world. While many organizations have significantly progressed in implementing accessibility features, others still lag. By adhering to WCAG guidelines, businesses can improve user experiences for all visitors, making the Internet a more inclusive space.