

## Accessibility Concepts: Top 10 Takeaways

### Business Drivers

Business drivers for accessibility include, but are not limited to, minimizing legal risk and avoiding employee discrimination, conforming to the law, avoiding revenue loss, optimizing risk vs. cost, innovation, and social responsibility.

### Motor Disability

A motor disability is a type of disability that limits a person's physical functioning. Some types of motor disabilities include Spinal Cord Injury, loss or injury to limbs, dexterity and/or strength disabilities, Muscular Dystrophy, Multiple Sclerosis, Spina Bifida, Parkinson's Disease, and many others. Some examples of assistive technology used by people with motor disabilities include Voice Recognition software, alternative keyboards and mice, alternative pointing devices such as mouth sticks or head pointers, switches, and many more. The type of assistive technology is based on the user's preferences, environment, and goals and will vary based on the needs of the user.

### Blindness

Legally blind is defined as having vision of 20/200 acuity or less. Enabling access to the web for users who are blind often incorporates many aspects of accessibility design including keyboard access and programmatic identification of information and relationships. Many users who are blind use screen readers such as JAWS and NVDA to access the web. Additionally, Braille displays can be used along with a screen reader to provide additional input.

### Low Vision

People with low vision have some degree of visual perception with visual acuity less than 20/200 after correction. Some users with low vision have difficulty perceiving color and may have challenges with contrast, glare, or visual fields. Challenges can arise for people with low vision when backgrounds contain images or colors that provide insufficient color contrast. Users with low vision often use screen magnifiers such as ZoomText or platform level text enlargement settings to assist with accessing content on the web. Screen magnifiers enlarge the contents of the screen, help find and track the mouse pointer, enable font and image smoothing, and enable color replacement and contrast.

## Auditory Disabilities

Auditory Disabilities include people who are Deaf or Hard of Hearing. One major challenge for people who are Deaf or Hard of Hearing is multimedia without synchronized captions. Captions provide text (typically at the bottom of the screen) to communicate what is being spoken as well as important sounds and speaker identification. Some assistive technologies used by people who are Deaf or Hard of Hearing include assistive listening devices, Communication Access Real Time Translation (CART) for live events, real-time text, TTY/TDD, and video chat.

## Speech Disabilities

People with Speech Disabilities have difficulty communicating (either in expressive or receptive language). A major challenge for people with Speech Disabilities is voice assistants and Interactive Voice Response (IVR) systems. Alternative navigation methods for IVR systems, such as being able to respond with numbers pressed on the keypad, help users with Speech Disabilities when encountering IVR systems. Some common assistive technology used by people with Speech Disabilities includes speech synthesizers, speech generating devices, or type to voice assistant features.

## Cognitive Disabilities

Cognitive disabilities span a wide variety of disability types, including: Autism, Developmental disabilities, Traumatic brain injury, Attention deficit disorder, Learning disabilities, Dyslexia, and Short-term memory disabilities. Some of the many approaches which can assist users with Cognitive Disabilities include: adding settings and tools to remove backgrounds and distractions, increasing contrast between UI elements and colors, providing simple and consistent navigation and labeling in applications and websites, and using text-to-speech or captioning to provide more than one mode of receiving information.

## Laws and Regulations

Some of the most prominent laws, regulations, and standards related to accessibility include Web Content Accessibility Guidelines 2 (WCAG), Section 508, EN 301549, The Americans with Disabilities Act (ADA), the Accessibility for Ontarians with Disabilities Act (AODA) the Twenty-First Century Communications and Video Accessibility Act (or CVAA), and Section 255 of the Communications Act.

## Section 508

Under Section 508, if Information and Communications Technology (ICT) is developed, purchased, used, and maintained by the US Federal government, then the Federal government must provide comparable access to people with disabilities. Many state and local governments have legislation which either mimics Section 508, or directly requires compliance with the same standards. It includes standards for a variety of categories including software, web content (referencing WCAG 2.0), non-web documents, and hardware such as computers, mobile devices, and kiosks. The documentation, support and training materials for a product or service must also be accessible.

## WCAG 2

WCAG 2 forms the basis of most international web accessibility standards including Section 508 in the US and EN 301549 in Europe and is a set of guidelines for producing accessible web content. The WCAG were developed and supported through the Web Accessibility Initiative (WAI) at the World Wide Web Consortium, or W3C. The effort to create WCAG and other accessibility guidelines is a collaborative effort of working groups and interest groups comprised of industry, advocacy, and governmental organizations.