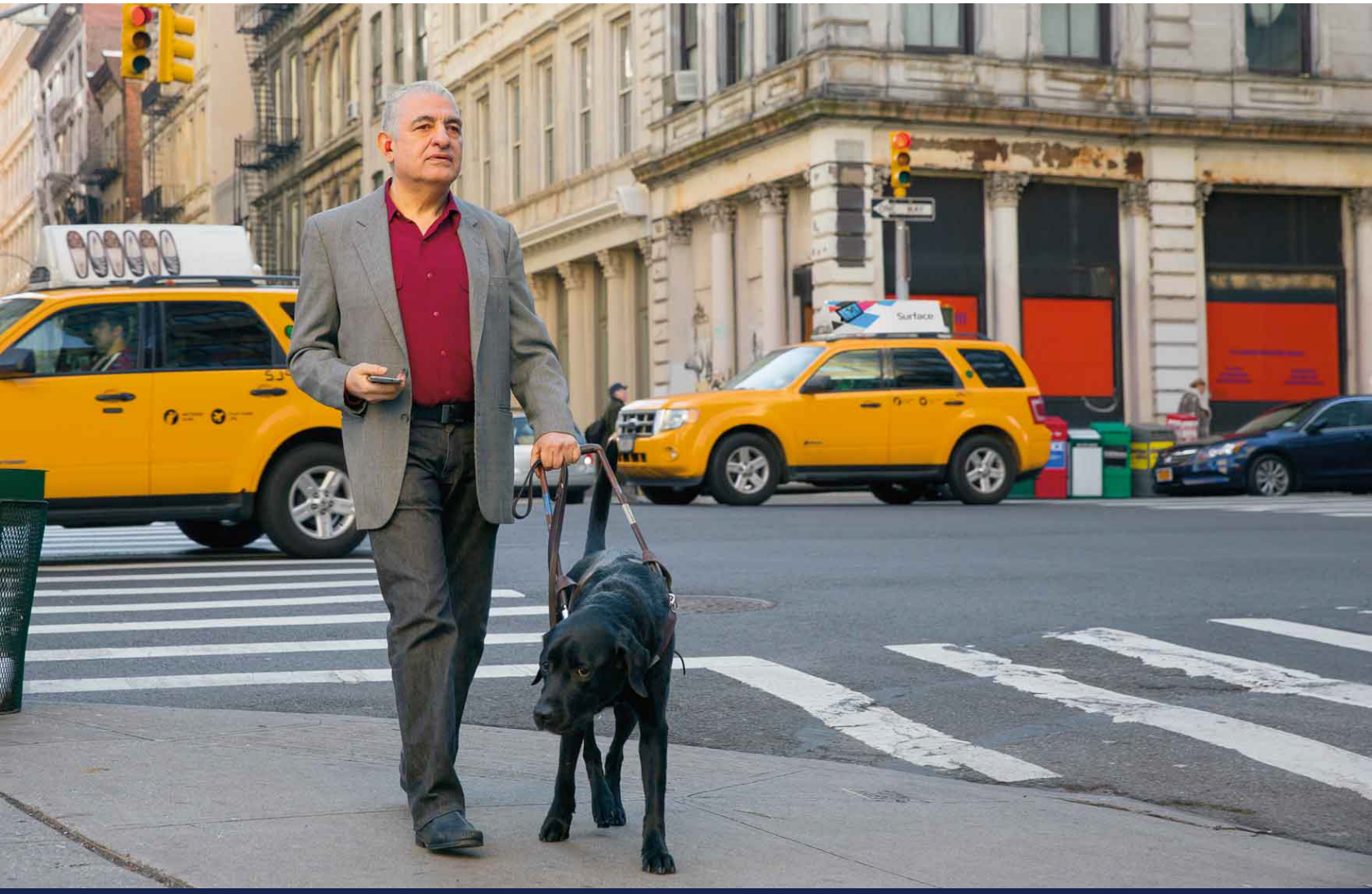
Microsoft



Accessibility

Building Global Trust Online, 4th Edition

Microsoft Perspectives for Policymakers

Contents

Who Benefits from Accessible Technology

— and How Great Is the Need?

THERE ARE
~1 BILLION PEOPLE
with disabilities worldwide

THAT'S 15% of the global population[1]

OF THOSE BILLION, NEARLY 20%
(~200 million) have severe disabilities[2]

And everyone can benefit from assistive technology[3]

Types of disabilities and impairments

VISUAL
285 MILLION PEOPLE *worldwide (4%) have a vision impairment*

39 MILLION are blind
246 MILLION have low vision[4]

HEARING
360 MILLION PEOPLE *worldwide (5%) are deaf or hard of hearing*[5]

SPEECH
6-8 MILLION AMERICANS
(2-3%) have some difficulty understanding or using language[6]

DEXTERITY
ABOUT 2.9 MILLION PEOPLE IN THE UK
(24% of disabled people) have a dexterity disability[7]

COGNITIVE/ INTELLECTUAL
15.2 MILLION AMERICANS
ages 15+ (5%) have a cognitive or intellectual disability[8]

Accessible technology can also benefit people with situational disabilities who are:

Struggling to hear a call in a noisy airport or restaurant

Unable to read small text on a device

Using a mouse or keyboard in a tight space

Read on to learn more about the need for accessible technology

[1] World Report on Disability. World Health Organization and The World Bank, 2011. whqlibdoc.who.int/publications/2011/9789240685215_eng.pdf | [2] ibid | [3] www.gartner.com/newsroom/id/2638315 | [4] www.who.int/mediacentre/factsheets/fs282/en | [5] www.who.int/mediacentre/factsheets/fs300/en/index.html | [6] www.nidcd.nih.gov/health/statistics/pages/vsl.aspx | [7] Family Resources Survey 2011/12. United Kingdom. www.gov.uk/government/publications/family-resources-survey-201112 | [8] www.cdc.gov/aging/pdf/cognitive_impairment/cogimp_poilicy_final.pdf

Accessibility

Key Points

- Accessibility features make it easier for everyone to use technology and to personalize their computers to meet their needs and preferences.
- For many people who live with physical or cognitive disabilities, accessibility features are what make computer use possible.
- Microsoft is committed to developing innovative accessibility solutions through four key areas of focus: product accessibility, leadership and awareness, innovation, and collaboration.
- Policymakers can support accessibility by enacting policies that promote people-centric design; pointing to voluntary, technology-neutral industry standards; and letting the marketplace determine the best balance of built-in features, services, and third-party technologies.

As technology becomes increasingly important in day-to-day living—for work, commerce, and communication—it is vital that everyone, regardless of ability or age, be able to enjoy the benefits of the digital world. Accessible technology enables people to personalize the settings on their computers and other devices to make them easier to use.

For many people with physical or cognitive impairments, accessibility features are what make computer use possible. For example, adjustable display settings and text-to-speech features benefit people who have low vision. Hands-free technology benefits those with mobility impairments who have difficulty using a keyboard or a mouse. Simplified visual displays and picture-to-speech features can make computer use easier for people who have cognitive impairments.

Accessible technology is also helpful to those who want to customize their computing experience to address temporary situational needs, such as a noisy environment or bright sunlight.

In addition to built-in accessibility options that let people personalize their computer settings, accessible technologies also include assistive products, such as screen readers, magnifiers, and specialty keyboards. Innovative hardware and software products and built-in accessibility settings are essential tools for computer users who have visual, dexterity, speech, and other impairments, as well as those with situational limitations.

Microsoft Approach

Microsoft is committed to developing innovative accessibility solutions through four key areas of focus:


PRODUCT ACCESSIBILITY


LEADERSHIP & AWARENESS


INNOVATION


COLLABORATION

Many Microsoft products have built-in accessibility and personalization options:

WINDOWS 8 works on touch-only devices and offers touch-compatible updates to accessibility features such as Narrator and Magnifier. The Windows 8 Ease of Access Center helps people manage an array of accessibility options.

OFFICE 2013 provides integration with Windows 8 accessibility features and offers other accessibility features, such as Read Mode in Word 2013 and the Accessibility Checker for documents, spreadsheets, and presentations.

OFFICE 365 offers keyboard accessibility and high-contrast modes, and it supports display modes that make the Word Web App and PowerPoint Web App accessible to screen readers.

More than two decades ago, Microsoft began its leadership in the field of accessibility and its commitment to developing innovative accessibility solutions. The company helps raise awareness by providing information about its accessibility offerings—including demos, tutorials, and guides—on the Microsoft Accessibility website and in the Microsoft Accessibility Update newsletter.

Microsoft Accessibility website

Microsoft Accessibility Update newsletter

Microsoft promotes accessibility innovation in the development community and works with industry organizations to advance accessibility. The Microsoft Accessibility Developer Center provides tools and guidance for developing accessible applications and web content. Microsoft engages in accessibility-related research and development projects, including large-scale nationwide studies and targeted usability studies.

Microsoft collaborates with a wide range of organizations to help raise awareness of the importance of accessible technology. Microsoft has built strong relationships with organizations such as G3ict, UNESCO, Trust for the Americas, and national disability groups in many countries.

Policy Considerations

Governments and policymakers can help encourage the development of accessibility solutions by supporting the following priorities:

- **DEVELOP AND HARMONIZE GLOBAL STANDARDS** Market-led accessibility standards that are globally harmonized—along with procurement policies that reference them—are the foundation of a robust ecosystem of interoperable technologies.
- **ENSURE TECHNOLOGY NEUTRALITY** Technology-neutral policies help promote innovation, help eliminate barriers to trade and market access, encourage enhanced competition, and help prevent bias in government procurement.
- **PROMOTE DIGITAL INCLUSION** Governments should create policies and programs that advance digital inclusion for people with disabilities and older adults—particularly in education, the workplace, and government services.
- **FOCUS ON OUTCOMES** Governments should promote people-centric design by focusing on desired outcomes rather than specific features.
- **SUPPORT INTEROPERABILITY** Interoperability is a key feature of Microsoft accessible technologies. Microsoft advocates public policies that allow for a variety of complementary ways to achieve it. Governments should allow technology vendors and purchasers to choose the solutions that best suit their needs.

Accessibility and People-Centric Design

Key Points

- Advances in technology are enabling more personalized and relevant experiences for users. This approach—known as *people-centric* design—helps everyone, including people with disabilities, use computing devices and services more easily.
- People-centric design greatly expands the ways people can interact with products, services, and devices—to include voice commands, touch, and gestures.
- Microsoft believes that natural user interfaces, machine learning, scenario-based engineering, and other elements of people-centric design will not only expand opportunities for people with disabilities, but will also help a broad range of users who have temporary situational impairments.
- Government policies should encourage market-driven advances in people-centric design that emphasize general outcomes and avoid narrowly prescriptive rules that can hinder innovation.

The technology industry has been investing in new, more natural ways for people to interact with technology. Devices and services are behaving in increasingly intelligent ways by anticipating users' needs, understanding their intentions, and adapting to their immediate surroundings.

This new approach, known as *people-centric design,* includes several key elements:

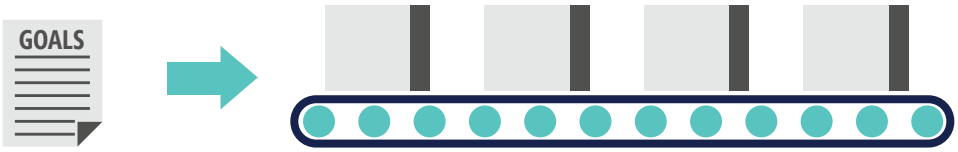
CONTEXTUAL AWARENESS	Accounting for the user's circumstances in assisting with, automating, or completing tasks.
SENSORY INPUT	Processing natural inputs (such as vision, voice, and gestures) and communicating back to the user in a natural and context-appropriate way.
LANGUAGE AND INTELLIGENCE	Understanding key aspects of natural language, inferring the user's intentions and goals, and engaging in dialogue with the user.
ANTICIPATORY PROCESSING	Factoring in the user's past and concurrent actions and workflow to assist with tasks.
ENVIRONMENTAL AWARENESS	Using data about a device's current and past environments to assist with tasks.
AUGMENTED INTERACTION	Using 3-D, immersive, and telepresence technologies to create the most natural environment for human-computer interaction.
ADAPTIVE BEHAVIOR	Transitioning seamlessly among devices and contexts so the user doesn't have to switch modes manually.

Devices and services that combine all of these attributes can make interacting with a computer easier not only for people with disabilities and those with age-related impairments, but also for those with temporary constraints—such as drivers who cannot safely look at a device screen, or people who are in noisy environments where sounds are difficult to distinguish.

Microsoft Approach

Microsoft believes that the opportunity is ripe for more people-centric innovation in devices and services. Given the right policy landscape, the new interaction paradigms can lead to a cycle of innovation that addresses key concerns for policymakers related to education, employment, public health, and more. These innovations will help expand opportunities for people who have disabilities and will also help a broad range of users who have temporary situational impairments.

Underlying this new wave of innovation is *scenario-based engineering*—a design process that looks at what users want to accomplish in specific situations and builds the technology to address those use scenarios.



Microsoft is committed to engaging with the accessibility community, policymakers, and the technology industry to promote this important trend in digital inclusion and incorporate people-centric design into the devices and services of the future.

Policy Considerations

Policymakers can help foster a regulatory environment that is open to the advantages of people-centric design by adhering to the following principles:

- **FOCUS ON OUTCOMES INSTEAD OF FEATURES** Public policies often designate "disabilities" as a category of needs that engineers should address, and accessibility features are simply added on to technology designed for mainstream users—but most people have needs that fall somewhere in between. Policies should emphasize general outcomes and scenario-based engineering instead of mandating specific features for people with specific disabilities.

- **PROMOTE INTEROPERABILITY AND USER CHOICE** Policies should promote market incentives and interoperable solutions that leave room for older technologies and encourage the development of new ones. Policymakers should avoid defining specific roles and responsibilities for certain industry players, which drives up the cost of developing accessible technologies. They should also avoid mandating or developing unique standards, instead pointing to existing voluntary, market-driven industry standards.

- **EDUCATE CONSUMERS AND THE PUBLIC** Policymakers should encourage education and public discourse about accessible people-centric products and services.

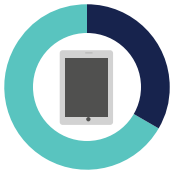
Accessibility and the Cloud

Key Points

- For people with disabilities—including visual, dexterity, cognitive, and speech impairments—access to computing and the Internet starts with a personal device that offers accessibility settings and can customize the user experience.
- Microsoft envisions a world of accessible, connected devices that can understand and interpret users' needs, preferences, and immediate surroundings. This experience, in combination with cloud-based services, will allow preferences to follow users wherever they go and on whatever device they use.
- Policymakers should support existing standards for accessibility and cloud computing that encourage a vibrant, market-driven ecosystem of accessible devices, software, and services.

For people who live with disabilities—more than 1 billion people worldwide, according to a World Health Organization report—the ability to use computers and access the Internet can be crucial to being an active part of the workforce and of society as a whole. At the same time, it has become common for people to own multiple devices and to move among them throughout the day. A 2013 Pew Research Center study found that more than half of American adults have a smartphone and more than a third own a tablet computer. For users with impairments, it is important to have a uniformly accessible experience across all the devices they use.

MORE THAN HALF
of American adults have a smartphone



MORE THAN A THIRD
own a tablet computer

The cloud can be helpful in this respect by serving as a repository of user preferences and settings, and by providing that information to cloud-connected devices. It can also provide a way to sync devices when those settings change. However, the physical device remains the key to delivering a personalized user experience. The device is where technological advances—such as machine learning and natural user interfaces that respond to touch, voice, vision, and gestures—are revolutionizing accessibility. Devices are adapting to, and even anticipating, users' needs.

As the population ages, and as assistive technologies and services become more sophisticated, technology companies must be allowed to continuously innovate and integrate machine learning, natural user interaction, and cloud services to advance digital inclusion.

Microsoft Approach

For more than 25 years, Microsoft has been introducing accessibility features into software products. These include options in the Windows operating system and other products that help users personalize the computer display, mouse, keyboard, and sound and speech settings.

Microsoft has also worked closely with companies that specialize in accessibility products such as:

SCREEN READERS

MAGNIFIERS

SPECIALTY KEYBOARDS

Built-in accessibility features in personal computing devices include those that read text aloud, add captions to video, and allow hands-free entry of information using speech. For example, Microsoft first introduced Windows Speech Recognition in 2006 in Windows Vista. More recently, Microsoft added speech recognition technology to the Kinect motion-sensing device for Xbox. These tools make

hands-free, voice-activated commands possible for users, including those who have temporary injuries, permanent disabilities, or situational limitations that prevent them from using the keyboard or mouse.

These "building blocks" in mobile devices and personal computers foster the growth of a vibrant accessible technology ecosystem. They will also lead to increasingly intuitive and adaptive user interfaces, as well as complex capabilities such as data visualization and real-time simulation of 3-D environments.

Microsoft envisions a world of accessible, connected devices that can understand and interpret users' needs, preferences, and immediate surroundings. This fully adaptive experience, in combination with cloud-based services, will allow preferences to follow users wherever they go and on whatever device they use.

The key characteristics of these next-generation accessible devices include multi-modal interaction (including speech, touch, gesture, and eye gaze), contextual awareness (sensing factors such as ambient noise, lighting level, whether the user is in a car, and the user's mood), and the ability to be personalized for each individual.

In some scenarios, cloud-based tools can be helpful by adapting content, translating between languages, or using crowd-sourced services to improve the accessibility of photos, graphics, or webpages. However, there will continue to be a need for powerful assistive technology within each device in order to provide a consistent experience of the device and all its capabilities.

Policy Considerations

Policymakers can encourage growth of a market-driven accessible technology ecosystem for all users on all devices by focusing on the following priorities:

- **SUPPORT EXISTING ACCESSIBILITY STANDARDS** A healthy market-driven ecosystem of many products, business models, and development approaches is the best environment for encouraging accessibility. Policymakers can help by supporting standards such as ISO/IEC 40500 (W3C Web Content Accessibility Guidelines 2.0), which covers all web-based user interfaces, instead of crafting new ones in response to the growth of cloud computing.

- **SUPPORT GLOBALLY HARMONIZED STANDARDS** The speed of innovation in the technology sector can outpace legislative measures that are meant to encourage accessibility and promote cloud services. Globally harmonized standards are the best way to encourage a broad array of interoperable products—not laws that prescribe specific features or services and exclude others.

- **PROMOTE MARKET INCENTIVES** Policymakers can help reduce the cost of developing accessible technologies by promoting market incentives and a broad ecosystem of interoperable solutions. Policies that favor user choice, technology neutrality, and interoperability will leave room for older technologies while spurring the development of new ones.

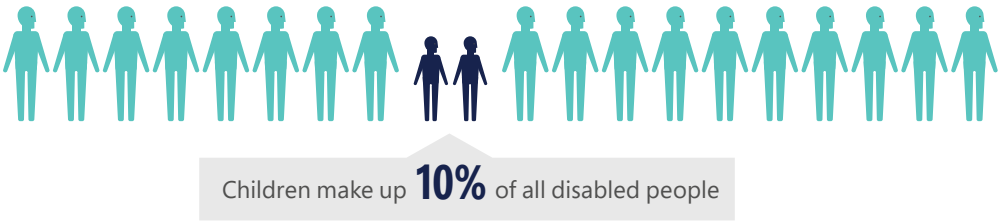
- **ENCOURAGE PUBLIC-PRIVATE PARTNERSHIPS** Governments, industry, and consumer advocacy organizations can deliver the greatest benefits to users of all abilities by collaboratively exploring new ways that devices and cloud services can help users with accessibility needs.

Accessibility in Education

Key Points

- More than 100 million children around the world live with a moderate to severe disability, according to some estimates.
- Accessible technologies are helping to expand access to education for children with disabilities, as well as provide new learning and job training opportunities for adults with disabilities.
- Microsoft is dedicated to building accessibility into its products, providing accessibility resources for educators, and advancing model policies that can help guide governments in making education more inclusive for all.

Of the more than 1 billion people worldwide who live with some form of disability, more than 100 million are children, according to a World Health Organization report. Barriers to education for children with disabilities contribute to high rates of unemployment and poverty among adults with disabilities.



Fortunately, accessible technologies are making it easier for all students—including those with vision, hearing, mobility, dexterity, language, and learning impairments—to gain equal access to education as well as acquire technology skills that are important in many jobs and careers. These technologies are also providing new job training opportunities for adults with disabilities.

For example, touch interfaces, word-prediction features, and speech recognition can help students who have dexterity challenges. Adjustable display settings and text-to-speech features can help those with low vision. Technology can also help students with disability-related social challenges by providing opportunities to communicate and collaborate with their peers in new ways.

Microsoft Approach

Microsoft has worked with government agencies, nonprofit organizations, advocacy groups, and industry leaders for more than two decades to advance inclusiveness in education.

The company has identified five key priorities in helping to make education accessible to all:

- **ACCESS TO DIGITAL CONTENT** including e-books, websites, and distance learning programs
- **ACCESSIBLE TECHNOLOGY** products and services, including tools for creating accessible content
- **INCLUSIVE CURRICULA** that consider the needs of all students and facilitate collaboration
- **REASONABLE ACCOMMODATION** for students through accessible technology
- **TRAINING AND INFORMATION** for educators, students, and their families

Microsoft provides a number of educational resources, including accessibility guides for educators, curriculum resources, teacher-training workshops on accessibility, and articles and videos about how students with disabilities are using technology to enhance their learning.

Microsoft also supports the development of model policies that can help guide governments in making education more inclusive. One example is the Model Policy for Inclusive Information and Communication Technologies (ICT) in Education, which was jointly developed by UNESCO and G3ict in 2013. This document supports educational practices that conform to the United Nations Convention on the Rights of Persons with Disabilities and includes policy guidance, strategic blueprints, and budgeting and funding advice.

Policy Considerations

Governments and education policymakers can help advance the use of accessible technologies in schools and promote innovation in inclusive education by focusing on these priorities:

- **UPDATE GOVERNMENT POLICIES** National education authorities and ministries should work to update national and regional policies to promote the use of accessible technology in education.

- **INCORPORATE ACCESSIBLE TECHNOLOGIES IN CLASSROOMS** This includes adopting school technology procurement policies that reference international technical accessibility standards, ensure technology neutrality, allow for flexibility in design, permit both built-in and third-party solutions, and consider the total cost of ownership.

- **ENSURE FULL USE OF EXISTING ACCESSIBILITY FEATURES** Most mainstream technology tools that are used in schools—such as computers, tablets, and PCs—have a wealth of features and allow for personalized settings that can help students access curricula and collaborate with peers. Making full use of these features can vastly improve accessibility in education.

- **IMPROVE TEACHER TRAINING AND SUPPORT** Teachers need additional skills and knowledge to understand the value of accessible technology in the classroom. Educational authorities and ministries should provide awareness and skills training for all teachers.

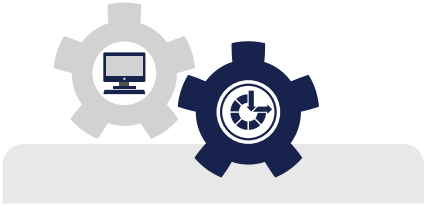
- **STAY CURRENT WITH NEW TECHNOLOGIES** To help make education more engaging and inclusive, governments and educators should stay current with technology trends such as mobile learning, cloud-based solutions, touch screens, interactive user interfaces, and the use of game consoles for learning.

An Association of Accessibility Professionals

Key Points

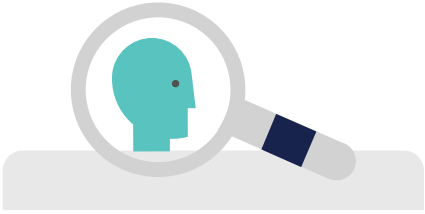
- The technology industry is working to address the needs of people with disabilities and temporary impairments, but many organizations are either unaware of the available accessibility tools or they lack the expertise to use those tools.
- Accessibility has been advanced primarily by self-taught practitioners without the benefit of internationally recognized standards, professional certifications, or a pipeline of university-trained developers and engineers with expertise in accessibility.
- Without an international community of trained accessibility experts who share a body of knowledge and can help educate businesses, it will be difficult to further advance the cause within the technology industry.
- Microsoft is taking a leadership role in the formation of the International Association of Accessibility Professionals (IAAP), which aims to transform accessibility from a grassroots effort into an internationally recognized profession.

As technology becomes an increasingly vital part of everyday life, more devices, services, and software now incorporate accessibility features. But innovation in this area has been piecemeal, and accessibility remains an afterthought for many organizations that rely on or produce technology, for a number of reasons:



Many organizations do not fully understand the mainstream value generated by investments in accessibility features and technologies.

The adoption of accessible technologies has been hindered by the cost and complexity of integrating them into existing devices and software, and there are limited venues for professionals to share information or offer peer support.



Corporations, governments, and educational institutions that want to make their devices, services, and software accessible have difficulty finding designers and developers with sufficient expertise in this area.

There are no internationally accepted professional standards or curricula related to accessibility with which to guide and train developers and engineers.

Microsoft Approach

The technology industry, accessibility advocates, and government leaders have been struggling for years to find more effective ways to encourage the development of innovative accessibility solutions in devices, services, and software. In 2011, Microsoft participated in a year-long study (with support from the U.S. Department of Labor's Office of Disability Employment Policy), whose findings support the conclusion that an international association of accessibility professionals would be a step in the right direction. Microsoft is taking a leadership role in the formation of the International Association of Accessibility

Professionals (IAAP), which will provide the strategic leadership, global perspective, and sustained investment needed to transform accessibility into an internationally respected and recognized profession. The diverse array of founding members includes companies and organizations such as AT&T, Barclays, Scotiabank, Adobe, Hewlett-Packard, AbilityNet, and Ai Squared.

The major goals of the organization are:

To create a globally recognized set of training materials related to accessibility. These could be organized as separate courses for business leaders, designers, developers, and other professions.

To create a global community of individuals and organizations that spreads awareness of the need for accessible technology and offers resources to support the accessibility profession.

To provide a global forum for accessibility professionals to share information, offer peer support, and track accessibility-related developments in technology and public policy.

To develop and administer one or more professional accessibility certifications and offer continuing education to help practitioners augment their expertise as the field evolves.

The IAAP's mission, strategic objectives, governance structure, and other details have been finalized, and the association plans to launch and begin accepting members in the spring of 2014.

Policy Considerations

Policymakers can raise awareness of the need for accessible technology and encourage the development of resources for developers and engineers by focusing on the following priorities:

- **SUPPORT IAAP MEMBERSHIP AND EFFORTS** Policymakers should encourage organizations and businesses to join the IAAP and support the effort to build a globally recognized accessibility profession.

- **MAKE THE CASE FOR ACCESSIBILITY** Policymakers are in a unique position to promote digital inclusion and can help corporations, government entities, and educational institutions understand the broader societal value and economic benefits of investing in accessible technology and accessibility professionals.

- **PROMOTE THE NEED FOR TRAINED PROFESSIONALS** Recognizing the shortage of accessibility experts is the first step toward promoting investment in training and resources for developers and engineers. Policymakers can promote dialogue about this shortage and the need for a supported profession.

- **ENCOURAGE PUBLIC-PRIVATE PARTNERSHIPS** Governments, industry, and consumer advocacy organizations can deliver the greatest benefits in the area of accessibility through collaboration to establish appropriate principles and professional standards.

Implementing the U.N. Convention on the Rights of Persons with Disabilities

Key Points

- About 15 percent of the global population lives with some form of disability, according to the World Health Organization.
- The United Nations Convention on the Rights of Persons with Disabilities (CRPD) advances the rights of people with disabilities and includes digital accessibility as a prerequisite to enjoying all human rights and fundamental freedoms.
- Microsoft supports the effective implementation of the CRPD, and it works with industry trade groups and nongovernmental organizations to advance the goals of the treaty.
- Governments should look to global best practices and globally harmonized standards in creating accessibility policies and programs that broaden digital inclusion.

The United Nations Convention on the Rights of Persons with Disabilities (CRPD) is an international human rights instrument whose purpose is "to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity." As of late 2013, 158 countries had signed the treaty and 138 had ratified it. Parties are required to "adopt all appropriate legislative, administrative and other measures for the implementation of the rights recognized" in the treaty as well as to "take into account the protection and promotion of the human rights of persons with disabilities in all policies and programmes."

The CRPD includes accessibility of information and communications technology (ICT) as a prerequisite for people with disabilities to fully enjoy all human rights and fundamental freedoms. This is the first time that digital accessibility has been elevated as a requirement comparable to accessibility of other forms of information and communication, as well as accessibility of transportation and the physical environment.

The CRPD specifically addresses equal access to ICT in Article 9, which states, in part:

> *To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications,* ***including information and communications technologies and systems,*** *and to other facilities and services open or provided to the public, both in urban and in rural areas. [emphasis added]*

Article 9 further states that parties "shall also take appropriate measures to…[p]romote access for persons with disabilities to new information and communications technologies and systems, including the Internet."

In defining "discrimination on the basis of disability" and "reasonable accommodation," Article 2 of the treaty states:

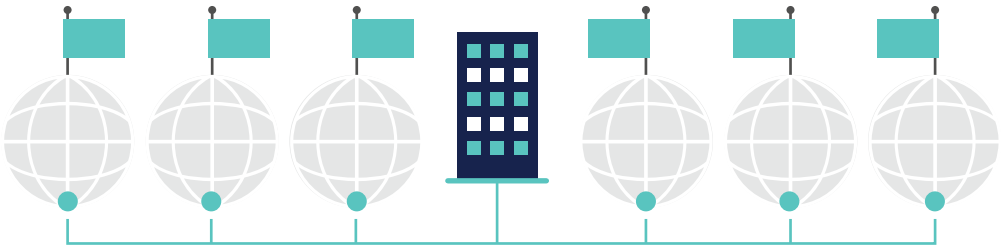
> *"Discrimination on the basis of disability" means any distinction, exclusion or restriction on the basis of disability which has the purpose or effect of impairing or nullifying the recognition, enjoyment or exercise, on an equal basis with others, of all human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field. It includes all forms of discrimination, including denial of reasonable accommodation;*
>
> *"Reasonable accommodation" means necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms.*

Although ICT is not specifically mentioned in these definitions, it is integral to political, economic, social, cultural, and civil engagement, including participation in education and the workplace.

Microsoft Approach

Microsoft strongly supports effective implementation of the CRPD by governments that have signed and ratified it. Microsoft also collaborates with industry trade groups and other nongovernmental organizations to advance the broad deployment of accessible technologies and products.

One example of such collaboration is the Microsoft partnership with six leading international organizations to encourage the UN to consider disability and accessible technology explicitly in its future development plans. The partnership produced a report, "The ICT Opportunity for a Disability-Inclusive Development Framework," which serves as a roadmap for broad digital inclusion that includes persons with disabilities around the world. In addition to Microsoft, the partners were the Broadband Commission for Digital Development, the Global Initiative for Inclusive ICTs (G3ict), International Disability Alliance, International Telecommunications Union (ITU), Telecentre.org Foundation, and UNESCO.



Microsoft also promotes accessibility and personalization in its products and services. For example, Windows 8 can be used on touch-only devices. And, like Office 2013, it includes touch-friendly accessibility features such as Narrator and Magnifier. Office 2013 also includes the Accessibility Checker, which helps users create an Office document that someone with a disability can easily read and access.

Policy Considerations

Governments and policymakers can advance effective implementation of the CRPD by focusing on these priorities:

- **CREATE PROGRAMS BASED ON INTERNATIONAL BEST PRACTICES** Countries that have signed or ratified the CRPD should look to global best practices, such as those created by G3ict and other international organizations, when they create accessibility policies and programs.

- **BROADEN DIGITAL INCLUSION THROUGH FOCUSED POLICIES AND PROGRAMS** Governments should work to make their own websites accessible and ensure that their education systems address the needs of students with disabilities.

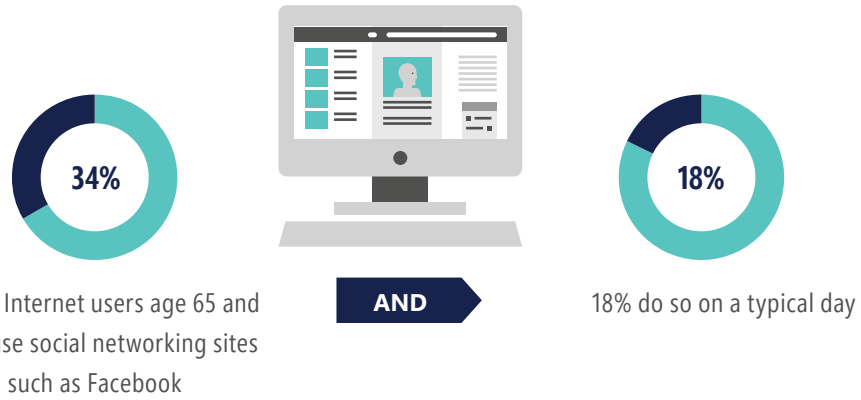
- **CREATE POLICIES THAT COMPLEMENT GLOBAL STANDARDS** Accessibility policies and programs should reference globally harmonized accessibility standards to ensure a robust ecosystem of interoperable technologies and promote innovation.

Technology and Older Adults

Key Points

- As people age, vision, hearing, and dexterity impairments can affect their computer use. Tools and features that address these issues and allow personalization can make it easier and more comfortable for older adults to see, hear, and use their computers and other devices.
- Microsoft helps address the computing needs of older adults by building accessibility features into its products, offering training resources, and collaborating with organizations that help older adults use technology to maintain independence, productivity, connectivity, and enjoyment.
- Microsoft offers educational resources about safety and security to help older adults learn how to use computers more proficiently, avoid online scams, and make their computers more secure.
- Microsoft supports the work of governments to help promote digital inclusion, ensure technology neutrality, and promote interoperability among accessible technology products.

Older adults are increasingly embracing the digital world. According to a Pew Research Center study, as of February 2012, one-third (34 percent) of Internet users age 65 and older use social networking sites such as Facebook, and 18 percent do so on a typical day. As more people use computers and interact online, it is increasingly important that technology be accessible to everyone, regardless of age or ability level.



34% of Internet users age 65 and older use social networking sites such as Facebook

18% do so on a typical day

By age 50, many people have vision, hearing, or dexterity impairments that can affect their use of technology. For example, persons with low vision may have difficulty seeing default screen fonts or may experience increased visual fatigue. Those with discomfort in their hands and arms may have difficulty typing or using a mouse for long periods.

Accessibility options and assistive technologies can help these users improve their computer experience by enabling them to adjust display, mouse, keyboard, sound, and speech options. Education and training can help older adults learn how to use computers more proficiently, avoid online scams, and make their computers more secure by installing antivirus software and setting up automatic updates.

Microsoft Approach

Microsoft is committed to making the benefits of technology and the digital world available and accessible to people of all ages through products, training, and collaboration.

Many Microsoft products include options that promote accessibility and personalization. For example, older people with vision impairments can benefit from the Narrator and Magnifier tools in Windows 8 and the various display features in Office 2013.

Microsoft provides training through tutorial materials and participation in events and conferences:

THE MICROSOFT ACCESSIBILITY WEBSITE provides demos, tutorials, and guidance on how to make computers easier to see, hear, and use.

THE MICROSOFT DIGITAL LITERACY PROGRAM helps novice computer users become proficient in basic computing skills.

THE MICROSOFT SAFETY & SECURITY CENTER provides guidance for safer Internet use. Brochures such as "Stay Safer on the Internet" include advice specifically for older computer users.

Microsoft collaborates with organizations such as AARP and SeniorNet to better understand and meet the needs of older adults. Microsoft also partners with governments, standards organizations, and the technology industry to help shape policy and solve shared challenges in making technology easier to use.

Policy Considerations

Governments can help advance digital inclusion for older adults by promoting the following policies:

- **ENSURE TECHNOLOGY NEUTRALITY** Establish technology-neutral policies that do not favor one technology over another and that help lead to greater innovation, eliminate barriers to trade and market access, encourage enhanced competition, and prevent bias in government procurement.

- **SUPPORT INTEROPERABILITY** Interoperability among systems is a key contributor to accessibility. Public policies should promote interoperability and allow technology vendors and purchasers to choose the solutions that best meet their needs.

Resources

GENERAL

Microsoft Accessibility: **www.microsoft.com/enable**

Microsoft Accessibility Update newsletter:

www.microsoft.com/enable/news/subscribe/default.aspx

Microsoft Safety & Security Center: **www.microsoft.com/security**

Microsoft Digital Literacy program: **www.microsoft.com/digitalliteracy**

Russia-U.S. Bilateral on Cybersecurity: Critical Terminology Foundations:

www.issuu.com/ewipublications/docs/russia-us-terminology/1?e=9392629/5358103

ACCESSIBILITY IN EDUCATION

Microsoft Accessibility in Education: **www.microsoft.com/enable/education**

ACCESSIBILITY PROFESSIONALS

International Association of Accessibility Professionals: **www.accessibilityassociation.org**

Assistive Technology Industry Association: **www.atia.org**

ACCESSIBILITY AND OLDER ADULTS

Microsoft Accessibility Guide for Individuals with Age-Related Impairments:

www.microsoft.com/enable/aging

SeniorNet: **www.seniornet.org**

GLOBAL INITIATIVES AND PARTNERSHIPS

UN Convention on the Rights of Persons with Disabilities:

www.un.org/disabilities/default.asp?id=259

e-Accessibility Policy Toolkit for Persons with Disabilities: **www.e-accessibilitytoolkit.org**

Global Initiative for Inclusive ICTs (G3ict): **www.g3ict.org**

Trust for the Americas: **www.poeta-accesible.org**