**What are the different challenges facing persons with disabilities and specific needs (e.g. lack of ICT skill sets etc.) in accessing and using the Internet?**

People with various abilities clearly face various challenges when accessing the Internet. People who experience visual impairments may face challenges due to a lack of compatibility of Web content with the screen reader they use, a software application that provides computer-synthesized speech output of items appearing on the screen, as well as equivalent text provided in the back-end code. Screen readers usually have issues when designers fail to place appropriate text tags on links, graphics, tables, or forms.

People who experience motor impairments, such a limited or no use of their hands or fingers, may face barriers due to a cluttered layout, links and buttons that are too small, as well as other important navigability considerations such as requiring the use of a pointing device, that may make entire functions and sites unusable for them. For people who have hearing impairments, a lack of textual equivalents of audio content can many times cut out entire portions of content from a site and interactive Web chats and additional conferencing features might be entirely impossible. People who experience communication and speech impairments may also be excluded from interactive Web chats and other conferencing features. For people with cognitive impairments such as dementia, autism, or traumatic brain injury - problems with layout, design, and navigability make the difference between the ability to use a site or not. People with specific forms of learning disabilities might face the same barriers as those with visual impairments, or people with cognitive impairments. For people with seizure disorders, the flicker rates and flash may actually jeopardize their health!

A person's experiences with the Internet many times vary depending upon the form of disability they experience. The same web site often offers opportunities for one group while excluding another entirely. A student who uses a wheelchair might find that the ability to take online educational courses makes the educational process easier for them. Yet if the course web site is not designed to be accessible for students who experience limited hand mobility - participation in the course might be limited, or even impossible.

In the same way, a web-enabled mobile device with a touch screen might appear miraculous to a person with a hearing impairment, yet be a nightmare for a person with a visual impairment if it is not designed to provide alternative methods for interacting with it. The Internet and the technologies related to it present a complex series of issues for people with disabilities, not only as an overall population, but as separate populations within the whole related to the specific disabilities people experience.

**What possible approaches and examples of good practices are available to address these challenges?**

There are known and achievable ways to address the access barriers mentioned. Many developers of web sites and related new technologies; however, just do not consider people with disabilities when they either create or update their products. Interestingly, the inaccessible web sites and technologies that are the results of this blatant disregard of accessibility run against federal civil rights laws for people with disabilities. A number of the issues of inclusion and exclusion online for people with disabilities have been considered in both policy and law, yet the conceptions of disability under the law, exemptions from compliance, limited enforcement, as well as the inability of the law to keep pace with technological development, all hinder the impact that the laws in America have had to date.

Despite the barriers people with disabilities face, the Internet has been viewed as having incredible potential related to promoting social inclusion of people with disabilities. In the year 2015, people with disabilities who were able to access and use the Internet were reporting noticeably larger benefits from the Internet in some areas than the general population. Adults with disabilities in the year 2015 were more likely to believe the Internet:

Improved the quality of their lives

Made them better informed about the world

Helped them meet people with similar interests and experiences

Gave them more connections to the world than the general population

At this time, some Internet technologies are significantly benefiting people with particular forms of disabilities. Other technologies are offering potential opportunities to every person with a disability.

Smartphones, while excluding a number of people with disabilities, have helped many others who experience speech, hearing or other types of communication impairments and find themselves with the ability to use the phones to communicate face-to-face more efficiently than they had been able to previously. In the same way, using video chat, people with these forms of disabilities may now converse with others over the phone in new ways.

For a larger population of people with disabilities, the Internet has a great amount of potential to create new means of interaction and communication through online communities devoted to specific forms of disabilities. A person who may never encounter someone else who experiences a similar disability in their physical environment may now interact directly with others who have similar disabilities anywhere in the world. For people whose disabilities limit their ability to leave home, the Internet has the potential to provide them with a much larger world of interaction. People with disabilities even have the choice to live their online lives as people without disabilities if they want to.

Beyond the clear communication and social benefits, the Internet offers people with disabilities an array of new ways to pursue employment and education. For people who may find it hard or even impossible to travel to a building for work or education, the Internet provides the ability to do either right from home. The potential benefits may be the best benefits in the long term for promoting social inclusion of people with disabilities given that the current levels of employment and education of people who experience disabilities is exceptionally low when compared with the rest of the population in America.

Due to the importance of these types of engagement with technology, the lack of equal access to the Internet will become an increasingly serious issue in the future. As more activities in the areas of employment, education, communication, and civic participation move primarily and then exclusively online, people with disabilities must be included. Inaccessible online education alone might seriously erode the ability of people with forms of disabilities to have a place in modern society.

**What are the gaps in addressing these challenges and how can these gaps be filled?**

we can all play our part in helping to increase and enhance the ability of persons with disabilities to use the Internet. Below are examples of activities that will help to make a difference. Some are achievable only through high-level policy directions, while others are more practical. Each individual action contributes to the whole to make Internet products and services more accessible and more useful for persons with disabilities and

others in the general population You can:

• Stimulate the development of technologies that enhance usability for persons with disabilities by, for example, taking into consideration Universal Design principles.

• Learn more about the W3C's Web Accessibility Initiative and make use of its accessibility guidelines on web accessibility, authoring tools and user agents.

• Encourage your governments to abide by the Articles in the UN Convention on the Rights of Persons with Disabilities if they have signed and ratified the Convention. If your governments have not yet signed or ratified, we can encourage them to do so.

• Support the Global Public Inclusive Infrastructure initiative to enhance interoperability between network systems and assistive technologies.

• Ensure that accessibility is embedded in your organisation's mission statement and is supported at a senior management level.

• When developing technical standards and guidelines, consider using objective criteria to determine whether there is an impact on persons with disabilities. Include disability representatives on working committees where there may be an impact or potential benefit.

• If tendering for the supply of software or hardware, learn whether there are any accessibility features and list them in the tender documents.

• If you are a decision maker in a corporation, become a signatory to the Business Taskforce on Accessible ICT's Accessible Technology Charter.

• Develop a Disability Action Plan for your organisation, whether governmental, non-profit or corporate with an implementation plan and assigned responsibilities across all sectors of the organisation.

• Consult on an ongoing basis with disability experts and representatives from disability organisations who have the lived experience of disability.

• Organise disability awareness training within your organisation.

• Seek out and make use of accessibility guidelines when planning meetings and conferences, whether face-to-face or online. This includes the provision of real-time captioning.

• Use accessibility guidelines when developing communications materials such as ensuring that videos are captioned, and using user-friendly fonts and colours in printed material.

**What is the role of governments in addressing these challenges and gaps?**

In addition to International obligations for national governments to increase accessibility for persons with disabilities arising from international instruments, national governments and regulatory authorities are taking action. A number of countries have created or modified general communications legislation to include clauses on accessibility. Other countries have created specific legislation to promote accessibility. For example, the United States has passed the 21st Century Communications and Video Accessibility Act of 2010.

In some countries, regulatory authorities may use Universal Service Obligation (USO) funds to assist persons with disabilities. These funds usually cover the costs of providing ICT services in rural and remote regions, but they may also have the capacity to incorporate provisions to fund services for persons with disabilities in all parts of a country. For example, a pilot project using Universal Service Obligation funds has started in India to help persons with disabilities to access ICT in rural communities.

Another approach at the national level is to incorporate accessibility criteria in ICT public procurement processes. Doing so encourages companies that tender for supply of hardware and software to governments to offer products that are more accessible for persons with disabilities in order to win contracts. The pioneer of this approach was the US Government, through the Section 508 guidelines for suppliers. The European Union's Public Procurement Directive includes accessibility criteria, and under Mandate 376 has directed European standards organizations to develop an online toolkit to support government agencies in accessible ICT procurement.

King Saud University (KSU) In its efforts to help persons with disabilities and specific needs; developed a policy for websites accessibility and made available related sources for the public (https://accessibility.ksu.edu.sa/ar/sources-knowledge).

### **Contact Details**

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