**Accessible Information Communication Technology and Assistive Technologies and Persons with Disabilities**

**INTRODUCTION**

In line with the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), technology and accessibility can promote inclusion and help realize the full and equal participation of persons with disabilities in society and shape the future of sustainable development for all. This is especially important since one billion persons with disabilities globally encounter widespread barriers or lack of accessibility in built environments, transport and information and communication services, including relevant information and communications technology (ICT). These barriers often deny persons with disabilities access and inclusion into mainstream society. Furthermore, without access to digital infrastructure and accessible ICT, persons with disabilities are at risk to be excluded from statistics and surveys used to develop future programs and policies.

The use of ICT and accessible and assistive technology (AT) improve the quality of life of persons and children with disabilities by increasing access to education, employment, community activities and other services. ICT is a critical driver to ensure that the SDGs are achieved for persons with disabilities, however, ICT can only effectively contribute to the realization of the SDGs if considered in line with Article 9 on Accessibility of the UN Convention of the Rights of Persons with Disabilities (CRPD).

State parties to the CRPD have committed to ensure the right to access to ICT for persons with disabilities. It includes a commitment to “the strict application of universal design to all new goods, products, facilities, technologies and services should ensure full, equal and unrestricted access for all potential consumers, including persons with disabilities, in a way that takes full account of their inherent dignity and diversity. Accessibility of information and communication, including ICT, should also be achieved from the outset because subsequent adaptations to the Internet and ICT may increase costs.” The CRPD also highlights that the application of universal design makes society accessible for all human beings, not only persons with disabilities. But today the right to access even to digital infrastructure is often denied persons with disabilities. Even in countries with high levels of digital maturity, persons with disabilities living in special group homes are not given access to Internet, and without money to pay for equipment and online access, persons with disabilities are excluded.

As such, this paper explores the impact and benefits of policy and programmatic measures to improve the well-being and inclusion of persons with disabilities in society and development within the SDGs under review with linked recommendations.

**Goal 1 -** No Poverty - There are still more than two billion “unbanked” people in the world. Access to financial services has proven to be a pivotal step in helping people get out of poverty, and thanks to digital financial services, many are now participating in the digital economy for the first time.[[1]](#footnote-1) Support to persons with disabilities in different dimensions should be addressed by States to ensure the most marginalized have access to finances and accessible services in governmental and public services. Innovative technologies provide different accessibility features that can be easily integrated into existing systems and with accessible e-commerce platforms provides support to micro-entrepreneurs with disabilities.[[2]](#footnote-2)

**Goal 2 - Zero Hunger -** ICT gives farmers new ways of accessing information and services, including provision of extension services enhanced by mobile access to digital services, using technology to monitor farming practices and improving farmer/extension feedback.[[3]](#footnote-3) ICT services and e-agriculture services should be accessible to persons with disabilities in all aspects including early-warning systems, disaster response and humanitarian aid in areas affected by natural disasters, and drought and food shortages to eradicate hunger and rural development.

**Goal 3 - Good Health and Well Being –** Direct patient interaction, health informatics and telemedicine can all be improved through better connectivity and accessibility. E-health is developing quickly around the world, yet universal design is seldom applied to these services. Persons with disabilities have lower life expectancy rates and lower perceived health than persons without disabilities. Access to various services and technologies are often prerequisites for persons with disabilities to work, participate in community life and access health care. Assistive technologies are evolving quickly and can increase, maintain or improve the functional capabilities of individuals with disabilities. States should provide all the necessary support to both public and private service providers to ensure that assistive technologies are available and affordable to all persons with disabilities.

**Goal 5 - Gender Equality –** Target 5.b calls to enhance the use of enabling technologies and ICT to promote women’s empowerment, which includes women with disabilities who encounter multiple discrimination. It is also essential that all women not only benefit from technology, but also meaningfully participate in the process from design to application.[[4]](#footnote-4) Only by closing the digital gender gap shall the full potential of ICT as a catalytic and transformative tool for sustainable development be realized.

**GOALS 9 and 14: Industry, Innovation and Infrastructure.** Technology is an expansive industry with potential for rapid change and growth for societies, and consequently many countries give substantial financial support to innovation. Although 173 countries have ratified the CRPD, universal design is not included in research development and innovation of mainstream technologies.

**RECOMMENDATIONS**

* International standards need to consistently include accessibility features and be implemented and licensed fairly to all organisations.
* **States and partners must collaborate in fulfilling the obligations in relation to implementing and promoting universal design in research and development to enhance cost-efficient innovations, as stated in the CRPD.**
* ICT manufacturers and service providers must strengthen direct involvement of persons with disabilities in development to improve design and development of accessible products and services, including testing methodologies.
* Industry must ensure accessibility, conformity and interoperability of products and services.
* Stakeholders involved in standardisation must take responsibility, cooperate globally and harmonize accessibility practices through standards development that includes resources for participation of persons with disabilities through their organisations.
* Stimulating the introduction of ICT-enabled solutions adapted to the rights of persons with disabilities, increasing the availability of accessible ICT and promoting the affordability of assistive technologies in social, educational, economic and other domains.
* **Ensure that tools and standards for universal design and accessibility are specified in procurement and financing of innovation programs for e-health, education, innovation programs and other relevant areas.**
* **Ensure access to both public and back-end interfaces of ICT systems, products and services accessible to allow more persons with disabilities to obtain employment.**
* **Ensure equal access to ICT for girls and women with disabilities. Promote inclusion of women with disabilities in education for ICT professionals.**
* **Mainstream universal design approaches and accessibility in curricula for professionals, research and innovation programs and in procurement in both public and private organizations.**
* **Ensure that accessibility is understood and addressed as another key characteristic of the digital environment aligned with the CRPD for full implementation of human rights.**
* Mainstream a universally designed approach to policy makers, standardisers, developers, engineers, UX experts and more.
* ICT players should have leadership roles inside organizations on accessibility and ensure that their staff are trained accordingly.
* Protect the data of all citizens, in particular those of persons with disabilities, including those deprived of their legal capacity.
* Promote and support accessible e-skills training programmes, in which the needs of persons with disabilities and older persons are taken into consideration, as well as the affordability of the accessible ICT solutions.
* Develop and make use of independent quality certification on accessibility
1. https://sustainabledevelopment.un.org/hlpf/blog2017/week6 [↑](#footnote-ref-1)
2. http://documents.worldbank.org/curated/en/896971468194972881/pdf/102725-PUB-Replacement-PUBLIC.pdf [↑](#footnote-ref-2)
3. http://www.e-agriculture.org/news/using-icts-fight-hunger [↑](#footnote-ref-3)
4. http://www.itu.int/en/action/gender-equality/Documents/WSIS-Women-Empowerment-Background.pdf [↑](#footnote-ref-4)