



**NATIONAL GAP ASSESSMENT OF DIGITAL
ACCESSIBILITY
IN THE REPUBLIC OF KENYA**

PREPARED

BY

inABLE

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1. FOREWORD

Since the beginning of the COVID-19 pandemic, the world faced an unprecedented situation that forced billions of people worldwide to shift to the digital ecosystem as the main tool to access vital information and services.

It is essential that governments ensure that this vital information is perceived and made available to all citizens without any discrimination based on gender, age, ability, or location, so that everyone is aware of the measures necessary to protect themselves and survive these exceptional circumstances of crisis. Private sector stakeholders faced the same requirements to continue operating and existing; it was an immediate requirement to adapt to the new forms of doing business, educate, and market their products and services.

Within this global context, it became evident that if Information and Communication Technologies (ICT) are not appropriately designed to ensure that accessible features are included in digital information, products and services, there will be people that are left out.

The abrupt surge in application and demand for technological solutions during the COVID-19 crisis has amplified the divide between the digitally “connected” and “unconnected”, worsening the uneven access to opportunities among people and making those with limited access to technologies much more vulnerable than ever.

Specifically, limited access to digital technology hinders older persons from receiving important information delivered online as well as support and services including telemedicine, online shopping, and banking. Particularly, during the country or city lockdowns, the risks and challenges associated with social isolation and loneliness among older persons could be intensified much more profoundly for those without digital access.

Furthermore, the lack of accessibility in any forms of digital technology prevents persons with disabilities from accessing critical information affecting their health, security, and social protection as well as social and economic activities. The trend becomes worse when the COVID-19 pandemic has created a new working and educational and socializing culture whereby people utilize online conference tools, and many online platforms remain inaccessible for persons with disabilities, including those who need accurate real time captioning, such as persons who are deaf or hard of hearing.

Ensuring accessibility benefits not only persons with disabilities but also older persons who might not be adept at utilizing ICT, and those whose native language are not language used in the country and areas they live in. The design approach supporting this idea is universal design.

Therefore, the COVID-19 pandemic made it even more evident that the ICT must be accessible and, to achieve this goal, Governments must include ICT accessibility considerations in their laws, policies, regulations, strategies, and standards as the key enabler to guarantee equal and equitable access to public information and services.

To ensure that all persons, including those with disabilities, are included in this digital transformation process and no one is left behind, ICT products and services should be developed applying universal design principles and accessibility considerations as key enablers of digital inclusion. The COVID-19 pandemic represents a challenge of unprecedented dimensions, with a particularly strong impact on vulnerable populations including older persons, persons with disabilities, persons with low literacy and refugees. In many countries

the largest part of the population, having been forced to shelter at home for several weeks, has had to adapt to teleworking, online learning and doing their shopping online almost overnight.

This sudden and almost immediate shift made evident that persons with disabilities and older persons are at a higher risk than ever before of facing digital accessibility barriers to safely shop online for food and other items, access emergency communications and health services, and participate in distance learning and working opportunities safely via the Internet.

Also, countries Governments were urged to develop national emergency communication plans designed in ways they met the needs of persons with disabilities and older person, to ensure well-managed preparedness for and speedy and efficient response efforts in the event of new pandemic outbreaks or any other emergency situations.

With the COVID-19 pandemic, digital accessibility became a critical issue for those socially vulnerable and a critical enabler to the health, safety, and wellbeing of persons with disabilities and older persons more than ever before.

The Government of the Republic of Kenya is encouraged to act and develop and implement ICT accessibility and digital inclusion policies that prevent massive exclusion of and discrimination against vulnerable populations, including persons with disabilities older persons, in future emergency situations.

2. ACKNOWLEDGEMENTS

The “Information and Communication Technology (ICT) Accessibility Policy Review of the Republic of Kenya” report is a result of the direct assistance provided by inABLE to the Government of the Republic of Kenya to ensure digital inclusion and sustainable development.

The report was developed by inABLE (Mr. Ricardo Garcia Bahamonde, Mr. Wilson Macharia, Digital Accessibility Consultants, with valuable inputs received from Irene Mbari Kirika, Mr. George Siso, Mr. Julius Mbura and Mr. James Angoye, who conducted the Focus Groups.

3. INTRODUCTION

The exclusion and marginalization of persons with disabilities is a human rights issue as well as an economic issue for countries. When a significant section of society, estimated at 15 percent of the world’s population, faces obstacles in receiving an education, transitioning into the labor market, and becoming economically self-sufficient, it not only undermines their rights and dignity but adds significantly to a country’s welfare burden (WHO and World Bank 2011). Information and Communication Technology (ICT) is increasingly enabling persons with disabilities to level the playing field in access to lifelong education, skills development, and employment (Broadband Commission for Digital Development et al. 2013). There are two major trends that are reshaping the pattern on using technology to promote inclusion and full participation of persons with disabilities.

The first is that the Internet and Information and Communication Technology (ICT) are becoming common and popular channels for the delivery and implementation of governance, welfare, socioeconomic development, and human rights programming (Samant, Matter, and

Harniss 2012). They are transforming pathways to poverty reduction by enabling direct interactions between producers and markets globally, new methods of delivering personalized public and social services quickly, different channels for income generation, and innovations in asset accumulation and access to finance (Omole 2013; Spence and Smith 2010). The internet also enables multiple channels to access and contribute information, with a global reach, which can improve transparency, accountability, and monitoring of development programs and services. Multiple delivery channels are being used for communication and service delivery including email, text messaging, voice communications, and video.

The second is that a growing number of mainstreams, everyday ICT such as mobile devices and desktop computers increasingly offer functionalities that facilitate communication and information access for persons with disabilities. Features such as text-to-speech and voice recognition, ability to change contrast and color schemes, touch and gesture input, and screen magnification which in the past required specialized standalone software and hardware are embedded within off-the-shelf ICT devices. Digital technologies enable persons with disabilities to receive information and content in the format that they can perceive and prefer. For example, a person with visual impairments can use speech-to-text functionality or software to read a website, a person with hearing impairments can use SMS or instant text messaging to communicate, and a person with mobility impairments can use voice recognition to operate and navigate their digital device.

This presents an important opportunity to break the traditional barriers of communication and interaction that persons with disabilities face and which hinder their full participation in society. A recent survey of 150 experts from over 55 countries ranked websites and mobile devices and services as the technologies that can contribute the most to the social and economic inclusion of persons with disabilities (Broadband Commission for Digital Development et al. 2013). The experts also perceived the highest impact of ICT for individuals with disabilities to be on independent living, employment, education, and access to government services.

However, the advancements in technology are insufficient by themselves to bridge the gaps in the socioeconomic inclusion of persons with disabilities. The adaptation, operationalization, and implementation of ICT for inclusive development remains dependent on other factors within the ecosystem (Samant, Matter, and Harniss 2012). Existing evidence shows that the success of using the internet and ICT for the inclusion of persons with disabilities is heavily impacted by stakeholders' knowledge and awareness of the ICT solutions available, laws and policies, and the capacity of various stakeholders to support accessible ICT services (Samant, Matter, and Harniss 2012). In fact, the use of the internet and ICT can widen the disparities between persons with and without disabilities if they are not designed to be accessible and inclusive.

Digital inclusion can contribute to bridge the digital divide between persons who have access to and use of Information and Communications Technologies (ICT) and vulnerable groups including persons with low income, those living in rural populations or remote areas, older persons, and persons with disabilities. Digital inclusion does not only mean owning and using a computer, having access to a broadband internet connection, or having a mobile device. Digital inclusion is a key element for a person to guarantee personal autonomy and advance towards achieving decent standards of living and prosperity through full participation in the economic, social, and cultural life.

In Kenya, the Persons with Disabilities Bill 2021 (introduced into the National Assembly on 17 February 2022) replaces the Persons with Disabilities Act 14 of 2001 (the Act) as a law

consistent with the provisions of the Constitution of Kenya of 2010, emphasizing the human rights aspect of the Constitution and adopting a more dignified and non-discriminatory approach. The Bill aims at obliging employers to reserve five percent (5%) of their employment opportunities for persons with disabilities and to avoid discrimination on the basis of disability, and to develop accommodating policies. The Bill also seeks to hold employers accountable by requiring them to submit an annual report to the National Council of Persons with Disabilities on the status of persons with disabilities in their organization.

The National Council for Persons with Disabilities¹ is charged with supporting the formulation of policies, programs and interventions aimed at ensuring the full social, economic and political participation of persons with disabilities as mandated by the Constitution of Kenya 2010. The National Council's Strategic Plan 2018-2022² is a roadmap to guide the implementation of the Council programs. The Plan's methodology is based in various key documents including the Constitution of Kenya, Persons with Disability Act, 2003, Vision 2030, Medium Term Plan III, Kenya's "Big Four" agenda, East Africa Community (EAC) disability policy, the Convention on the Rights of Persons with Disabilities and Option Protocol and the Strategic Plan 2013-2017. The Strategic Plan 2018-2022 is organized into five chapters:

1. Chapter One: the mandate of NCPWD, the rationale for developing the plan, overview of the Kenyan Vision 2030, the MTP III and "Big Four" Agenda.
2. Chapter Two: situational analysis including achievements under Strategic Plan 2013-2017 and scaling up of lessons learned to strategic issues of current plan. It also presents the SWOT, PESTEL and stakeholder analysis.
3. Chapter Three: strategic model of the Council, including vision, mission and value statements, key strategic issues, strategic objectives, and strategies for the strategic plan.
4. Chapter Four, the key drivers of the plan implementation are identified. The human and financial constraints, sources of funds are identified. The organizational structure and functions as well as actual responsibilities for plan implementation are presented. This chapter also identifies and prioritizes - 17 - anticipated risks and provides planned actions for mitigation, monitoring and reporting of those risks.
5. Chapter five provides the monitoring, evaluation, and reporting framework for this plan.

The United Nations Convention on the Rights of Persons with Disabilities (CRPD), adopted in 2006 and entered into force in 2008, is the fastest negotiated human rights treaty in history and the one with the most signatories with over 84% of countries (164) having signed it and 93% (182) have ratified it. The CRPD takes to a new height the movement from viewing persons with disabilities as "objects" of charity, medical treatment, and social protection towards viewing persons with disabilities as "subjects" with rights, who are capable of claiming those rights and making decisions for their lives based on their free and informed consent as well as being active members of society.³

¹ [National Council for Persons with Disabilities](#)

² [Strategic Plan 2018-2022](#)

³ [UN DESA. Convention on the Rights of Persons with Disabilities \(CRPD\)](#). Information as of February 2021.

The CRPD stresses that a person’s difficulty to fully participate in society is not because of the person’s functional limitation, but the result of the barriers that the person with an impairment faces in the physical and digital spaces and in other people’s attitudes towards his or her impairments.

While ICT are recognized as a facilitator throughout most of the CRPD, some dedicated Articles mention ICT as a human right jointly with the physical environment and transportation, specifically [Article 9 “Accessibility”](#), which imposes obligations on signatory states and private sector to take proactive action in removing barriers, to consider all accessibility aspects in facilities and services and to implement accessibility standards and guidelines.

Article 9 of the CRPD grants all individuals with disabilities the right to have access on an equal basis with others to facilities, goods, and services, including ICTs. It emphasizes that the “accessibility of ICTs is an integral part of the access rights of persons with disabilities, equal to the access to transport and to other facilities and services open or provided to the public,” thus calling for better “access to cultural materials in accessible formats” and the increased affordability of ICTs by promoting “the design, development, production and distribution of accessible information and communications technologies and systems at an early stage, so that these technologies become accessible at minimum cost.”⁴



Video 1. Treaty Bodies - Committee on the Rights of Persons with Disabilities (CRPD).
Source: [UN Human Rights](#)

The absence of accessibility is a barrier that impedes the ability of users from utilizing ICT products and services in equal conditions.

⁴ WSIS Forum 2019. [ICT Accessibility: The Key to Inclusive Global Communication International Telecommunication Union \(ITU\)](#)

[Article 4 “General obligations”](#) mandates states parties implement legislation, regulation and policies that not only prohibits ICT barriers that discriminate against persons with disabilities, but also encourages states to accessible ICTs.

The [2030 Sustainable Development Goals \(SDG\) Agenda](#) promotes that no one is left behind, including persons with disabilities. The SDG reinforces the role of Digital Inclusion in ensuring that all persons can access and use ICTs including persons with disabilities.



Figure 1. The 17 Global Goals for Sustainable Development. Source: [UN Department of Economic and Social Affairs Population](#)

4. PURPOSE OF THE REPORT

The main purpose of this report is to support the Government of the Republic of Kenya, in particular policy makers and related stakeholders, to jointly fulfil the Global Commitments and targets that will contribute to accelerate the achievement of the United Nations Sustainable Development Goals (SDGs) by 2030. This report will provide an updated overview on the status of ICT Accessibility and Digital Inclusion in Kenya, along with a comprehensive vision of ICT accessibility policies and strategies implemented in the country and a set of good practices and recommendations for national policy makers and stakeholders on how to ensure the inclusiveness perspective is included in key domains such as e-government, education, employment, and emergency communications, among others. Finally, the report will represent background knowledge for future national ICT accessibility initiatives as a means to advance towards improving digital inclusion in the country.

inABLE teamed up with Kenya Bureau of Standards (KEBS), ICT Authority, Communications Authority and National Council for Persons with Disability to undertake a process that led to coming up with standards on digital accessibility for persons with disability. The process included the Gap Analysis that seeks inform the standards development.

This Gap Analysis document explores the general situation of digital inclusion and ICT accessibility in Kenya, providing an overview of the current social, legislative, and institutional frameworks and policies and programs implemented, and provides general recommendations to create ICT accessibility policy frameworks and to promote accessible ICTs and the empowerment of persons with disabilities.

The document also analyses the current situation per key policy area, based on desk research and on the feedback provided by representatives of government bodies and by persons with disabilities and their representative organizations through surveys and focus groups. The goal is to determine the perception of persons with disabilities on the existing ICT accessibility barriers in Kenya, as well as expectations about ICT accessibility policies in Kenya, in addition to understanding the knowledge about ICT accessibility in Kenya by PWDs.

Finally, specific recommendations will be provided to improve ICT in each key.

The end goal is to contribute to make the Republic of Kenya more inclusive to persons with disabilities through the promotion of ICT accessibility as a tool to create new opportunities for social inclusion, improve human development, contribute to reducing poverty and influence and generate positive impact when they are used.

5. OVERVIEW OF DIGITAL INCLUSION AND ICT ACCESSIBILITY IN KENYA

5.1.1. Demographics

As of January 2021, it is estimated that Kenya had a population of 54.38 million, with:

- 28.2% living in urban centers
- 71.8% in rural areas.

According to statistics data from the Kenya National Bureau of Statistics (KNBS), in 2019, 2.2% (0.9 million people) of Kenyans aged 5 and above have some kind of disability, significantly lower than the 3.5% disability prevalence rate that the 2009 census indicated.⁵

There is also a significant disparity among disability prevalence rates compared to other surveys:

- The Kenya Integrated Household Budget Survey (KIHBS) 2015/16: 2.8%,
- Kenya National Survey for Persons with Disabilities 2007: 4.6%,
- The World Health Survey 2002-2004 (which used the Washington Group Questions): 10.3%.

According to the 2019 census:

- 1.9% of men have a disability compared with 2.5% of women
- prevalence of disability was higher in rural areas (2.6%) than in urban areas (1.4%).
- The prevalence rates by type of disability were:
 - visual: 24.9%
 - physical: 25.3%
 - hearing, speech and functional limitations: 10-14% of people
 - physical: 42%.

The 2019 census data was collected using the Washington Group Questions⁶, a positive indicator of a tendency to use accurate disability measurement methodologies that will allow for comparisons over time. Having accurate data is vital for the government, private sector and civil society to design and target disability-inclusive budgeting, policies and programming. The unrealistically low prevalence rates shown by disability statistics could be a result of, among other reasons, widespread stigma, questions translated incorrectly, a question asking about albinism, and the possibility of responding an “I don’t know” answer. Likewise, the 2009 Census 3.8% disability prevalence rate was still too low compared to other countries, probably as a result of a number of reasons including poor disability awareness training of census takers and the way data was collected (census questions asked directly about disability, which may lead to under-reporting of disability).

⁵ Source: Development Initiatives Poverty Research Ltd., May 2020. [Status of disability in Kenya: Statistics from the 2019 census.](#)

⁶ The Government incorporated the Washington Group Short Set of Disability Questions in the National Population and Housing Census 2019, to capture information on the Persons with Disabilities. The Census results indicated that 918,270 people aged 5 years and above had a disability, with more females with disabilities (523,883) than males (394,330), and a total of 9,729 persons with albinism. Source: Ministry of Public Service, Gender Senior Citizens Affairs and Special Programmes. [Status Report on Disability inclusion in Kenya 2021.](#)

However, that fact that official statistics may underestimate the true disability prevalence rates compared to similar-income countries, due to incorrect measurement methodologies put in practice, may have a very negative impact on persons with disabilities, these rates may end up being officially accepted and therefore persons with disabilities may move down in the priority list of the government's political agenda. As a result, programs and funding allocated to disability inclusion in education, employment, and accessibility key areas may experience substantial reductions.

Therefore, it is essential that improvements in the collection of disability data are introduced in order to perform adequate measurements of disability prevalence rates that reflect reality more accurately.⁷

5.1.2. ICT National Laws, Regulations and Policies supporting the Digital Inclusion of Persons with Disabilities and ICT Accessibility in Kenya

The digital landscape in Kenya especially with regard to persons with disability is undergoing rapid and positive changes. The changes are influenced by the emergence of laws and policies that champion for the rights of persons with disabilities and more specifically on the digital platform. Information, Communication and Technology serves to enable persons with disabilities live independently with minimal assistance. This section is a review of the various accessibility policies and laws that protect the rights of persons with disabilities in Kenya and their effectiveness across key sectors including Education, health, employment/labor market and social protection.

The Republic of Kenya signed and ratified the [United Nations Convention on the Rights of Persons with Disabilities \(UNCRPD\)](#), although it did not sign the Optional Protocol, which allows the Committee on the Rights of Persons with Disabilities to hear and see individual complainants from ratifying countries⁸. Kenya submitted its first state report to the CRPD Committee in April 2012.

The Preamble of the CRPD affirms the indivisibility and interdependence of all human rights,⁹ by reiterating that regard must be given to other provisions when interpreting the provisions of the Convention. In this regard, provisions such as articles 9 on accessibility and 21 on access to information and freedom of expression are directly relevant when determining the realization of the human rights of persons with disabilities. Article 9, which is primarily on accessibility, requires state parties to take measures to ensure to persons with disabilities access “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”.¹⁰ The measures should include the identification and elimination of obstacles and barriers that impede the full and effective participation of persons with disabilities at an equal basis with others. Article 9 further contains a broad expression of the accessibility obligations requiring state parties to ensure the physical accessibility of buildings and spaces open to the public; the provision of live assistance and intermediaries such as sign-language interpreters; accessible signage, including in Braille and

⁷ Source: Development Initiatives Poverty Research Ltd., May 2020. [Status of disability in Kenya: Statistics from the 2019 census](#).

⁸ [Optional Protocol to the Convention on the Rights of Persons with Disabilities](#).

⁹ CRPD Preamble (c).

¹⁰ CRPD Art 9(1).

easy-to-read formats; accessible information and communication technologies; and other forms of assistance and support needed to ensure access to information.¹¹

Article 21, on the other hand, focuses on the accessibility of information and communication. It expands the right to “freedom of expression an opinion, and access to information” to include the provision of information to persons with disabilities in “accessible formats and technologies appropriate to different kinds of disabilities in a timely manner and without additional cost”.¹² It further imposes a duty upon the state parties to facilitate the use of “sign languages, Braille, augmentative and alternative communication, and all other accessible means, modes and formats of communication” to enhance access by persons with disabilities in official interactions”. It also implores the state parties to encourage the private sector, including internet service providers and the mass media, to make their services accessible to, and to provide information in accessible and usable formats for, persons with disabilities.¹³

To ensure the effective implementation of these provisions, state parties are required to develop, adopt and monitor the implementation of minimum standards and guidelines for the accessibility of facilities and services open or provided to the public,¹⁴ To provide training for stakeholders on the accessibility issues facing persons with disabilities,¹⁵ and to promote the design, development, production and distribution of accessible information and communications technologies and systems at an early stage, so that such technologies and systems are accessible at minimum cost.¹⁶

The following Laws and Policies relate to Digital accessibility in Kenya:

- In the [Constitution of Kenya of 2010](#), [Article 54](#) requires persons with disabilities to be treated with respect and dignity; Article 54(e) states that persons with disabilities are entitled “to access materials and devices to overcome constraints arising from the person’s disability”. Further, it provides for the right to education, reasonable access to information and public transport, the use of sign language, braille or any other form of communication that is appropriate. The article also provides for the access to devices and materials that enable Persons with Disabilities to overcome barriers and disability related constraints. The Constitution also provides for the progressive implementation of representation of PWDs in elective and appointive positions in various organs, governmental or non-governmental. It is worth noting that this article should be read together with all the other provisions of the constitution. Article 100(b) requires that the Parliament “shall enact legislation to promote the representation in Parliament of persons with disabilities”. Article 232(1)(i)(iii) establishes that “the values and principles of public service include affording adequate and equal opportunities for

11 CRPD Art 9(1-2).

12 CRPD art 21(a).

13 CRPD art 21(c-d).\

14 CRPD Art 9(2)(a).

15 CRPD Art 9(2)(c).

16 CRPD Art 9(2)(h).

appointment, training, and advancement, at all levels of the public service, of persons with disabilities”.

- The [Persons with Disabilities Act of 2003](#) was developed to provide for the rights and rehabilitation of persons with disabilities; to achieve equalization of opportunities for persons with disabilities; and to establish the National Council for Persons with Disabilities, a state corporation under the Ministry of Labor and Social Protection which is charged with following up and enforcing the law by “mainstreaming disability issues in all aspects of socio-cultural, economic and political development.” Section 15(1) of the Act prohibits employers from discriminating against a person with a disability in relation to:
 - (a) “the advertisement of employment”, which should apply online advertisement”,
 - (b) “the recruitment for employment”, which should include any online or digital step involved in the recruitment process”,
 - (f) “the provision of facilities related to or connected with employment”, which should include technology-related ones.

Section (5) requires employers to “provide such facilities and effect such modifications, whether physical, administrative or otherwise, in the workplace as may reasonably be required to accommodate persons with disabilities”. Section 21 entitles persons with disabilities to a barrier- free and disability-friendly environment to enhance access to buildings, roads and other social amenities, and assistive devices and other equipment to promote their mobility. The Act is currently being amended to reflect development in the issues relating to PWDs as well as progressive laws such as the Constitution and the UNCRPD.

- The [National ICT Policy of 2019](#)¹⁷ the National ICT policy of 2019 seeks to facilitate universal access to ICT services and infrastructure across the country. The policy focuses on an *economical agenda* and *technological trends*. The Economic agenda recognizes ICT as a critical pillar in national development hence the need for government to invest in the private sector and promote entrepreneurship. The end goal for this being sustainable development. The Technology trend will focus on:
 - Mobile first: this will focus on ICT Infrastructure and Access, Universal Access and Accessibility. The policy states that the government will provide network; storage and processing infrastructure frameworks and guidelines that will see Kenya successfully compete on a global scale.
 - Market: This aspect acknowledges ICT as an enabler for economic development.

¹⁷ Ministry of Information, Communications and Technology, Kenya, November-2019. [National Information, Communications and Technology \(ICT\) Policy](#).

- **Skills and Innovation:** The policy states that the Government will support and enable the development of a robust technology entrepreneurship ecosystem in the country.
- **Public Service Delivery:** The ICT policy requires all arms of government to build, deploy, operate and manage locally built back-end and front-end systems to deliver services.
- The **[Kenya Information and Communications Act of 2013](#)** provides for the importance of ensuring information being released to the public is accessible to persons with different disabilities; Section 8 (1) directs licensees to ensure that PWDs can lodge complains and offer assistance where asked for¹⁸.
- The **[National Information Communications and Technology Policy Guidelines of 2020](#)** guidelines, developed to enhance the effective implementation of the ICT Policy 2019, also aim at providing an all-inclusive ICT environment by encouraging gender equality and accessibility to persons with disabilities. They expressly recognize the principles enshrined under the CRPD and the role of the government in ensuring their implementation.¹⁹ The Policy also provides for Information Management by: “Government Websites: All government websites and portals will conform to best practices in terms of accessibility for persons with disabilities, colors, layout and editorial style. Government websites will be updated daily, at a minimum.” It also promotes the use of community languages, Kenyan Sign Language, Braille and other communication formats and technologies accessible to persons with disabilities.
- The **[National Broadband Strategy 2018-2023](#)**: The overall objective of the Strategy is to provide quality broadband services to all citizens. The strategy provides for Broadband for persons with Disabilities acknowledging that broadband provides an important link to employment and education opportunities as well as inclusion in society²⁰.
- The **[Kenya Information and Communications \(Universal Access and Service\) Regulations of 2010](#)**: Section 3 (2) provides for the purpose of the Universal Service Fund,²¹ which includes ensuring “the *reasonable availability and affordability of basic and advanced communications systems and services to persons with disabilities, at the household and individual levels, particularly where the market is unable to deliver such services in a financially viable manner*”.

¹⁸ <https://ca.go.ke/wp-content/uploads/2018/02/Kenya-Information-Communications-Act-1.pdf> page 237

¹⁹ <https://ca.go.ke/wp-content/uploads/2020/10/National-ICT-Policy-Guidelines-2020.pdf>

²⁰ http://icta.go.ke/pdf/The_National_Broadband_Strategy.pdf page 14

²¹ <https://ca.go.ke/wp-content/uploads/2018/02/Universal-Access-and-Services-Regulations-2010-1.pdf> page 2

- The [National Plan of Action on Implementation of Recommendations made by the Committee on the Rights of Persons with Disabilities 2015-2022](#) dictates the activities that different government agencies are expected to undertake in order to implement these recommendations:
 - Article 9 “Accessibility” set the objective of ensuring to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, and to other facilities and services open or provided to the public, both in rural and urban areas.
 - Article 13, “Access to justice”, Recommendation 1, encourages the adoption of measures to ensure that all persons with disabilities have access to justice, including by establishing free legal aid for persons with disabilities who claim their rights, and by providing information and communications technology in accessible formats, including Kenyan sign language.
 - Article 21 “Freedom of expression and opinion and access to information”, Recommendation 2, promotes the strengthening of measures to grant persons with disabilities access to information and communications technology (ICT), including the provision of low-cost software and assistive devices to all persons with disabilities, including those living in rural areas.
 - Article 24 “Education”, Recommendation 4, suggests that measures are undertaken, including by encouraging public-private partnerships, to ensure the provision of assistive technologies in education.
 - Article 25 “Health”, Recommendation 2, advocates for the adoption of measures to establish accessible health-care facilities and technologies for persons with disabilities in urban and rural areas.

- The [Kenya Access to Information Act of 2016](#):
 - Section 5(2) requires that “Information shall be disseminated taking into consideration the need to reach persons with disabilities, the cost, local language, the most effective method of communication in that local area, and the information shall be easily accessible and available free or at cost taking into account the medium used”.
 - Section 8(2) states that “Where an applicant is unable to make a written request for access to information (...) because of illiteracy or disability, the information officer shall take the necessary steps to ensure that the applicant makes a request in manner that meets their needs.
 - Section 28(3) makes it an offence to:
 - (a) refuse to “assist a requester who is unable to write to reduce the oral request to writing in the prescribed form and provide a copy to the applicant in accordance with section 8(2)”, and
 - (d) fail to “provide information in a form that is capable of being read, viewed or heard by a requester with a disability”.

- In 2018, the government, through the [Communications Authority of Kenya](#), initiated a [project](#) aimed at providing Information and Communication Technologies (ICT) solutions for persons with disabilities, which aimed at:
 - creating ICT centers within post-primary school institutions for students with disabilities,

- creating a web portal to provide accessibility information and other useful resources for and about persons with disabilities,
- conducting an awareness raising campaign on ICT and disability, and
- developing guidelines on ICT and persons with disabilities.²²

The G3ict Digital Accessibility Rights Evaluation (DARE) Index²³ is a benchmarking tool, developed by G3ict, for disability advocates, governments, civil society, international organizations and policy makers to trace country progress in making Information and Communication Technologies (ICT) accessible for all, in compliance with Article 9 of the Convention on the Rights of Persons with Disabilities (CRPD). According to the 2020 DARE Index the [Kenya Country profile](#) indicates a score of 70/100, ranking:

- 11th globally (out of 137 countries analyzed),
- 2nd in Africa,
- 1st in the Peer Economic Development Group,
- 15th in implementation

6. ANALYSIS OF THE CURRENT SITUATION IN KEY AREAS AND RECOMMENDATIONS

Most of the sector specific policies recognize the need to enhance disability inclusion in various spheres. However, the policies hardly recognize the role of technology in realizing disability inclusion. Currently, only the education sector has a specific policy that highlights ways in which technology can be leveraged to make education inclusive and accessible for persons with disabilities.

6.1. Internet Access

6.1.1. Current status

According to the [Digital 2021: Kenya report](#)²⁴,

- Kenya's mobile penetration is 109% (with an 11% growth between January 2020 and January 2021) or 59.24 million mobile connections (many people use more than one SIM card)
- 98% of Kenya's mobile connections are prepaid SIMs
- Internet penetration rate is 40% (21.75 million Internet users).
- 96% of people connect to the Internet via a mobile phone.

²² CAK, ICT for People with Disabilities (Persons with Disabilities) 28 March, 2018, <https://ca.go.ke/ict-for-people-with-disabilities-Persons-with-Disabilities>

²³ Here you will find 137 individual country report cards for States Parties to the [Convention on the Rights of Persons with Disabilities](#) tracking their progress in implementing digital accessibility. Each country report includes key country facts, rankings and details of the country [DARE Index](#) scores (Digital Accessibility Rights Evaluation Index), as well as country information and resources on digital accessibility.

²⁴ Source: DataReportal. [Digital 2021: Kenya report](#)

- Regarding web traffic:
 - 74% comes from a mobile device
 - 25% comes from laptops and desktops
 - 1% comes from tablets.
- Of Internet users aged 16 to 64:
 - Almost 100% own a smartphone
 - 14.4% have a feature phone
 - 60% have a laptop or desktop computer
 - 20% have a tablet.
 - 14% have a smart watch
 - 4% have a smart home device.
- 11 million people use social media (about 20% of the population).
- 73% of Kenyans aged 15 and above have a mobile money account, of which:
 - 81.6% of these have an account with a financial institution
 - 5.7% have a credit card.
- 8.1% of men have a credit card, while only 3.5% of women do.
- 26% of Kenyans aged 15 and above make online purchases or pays bills online, of which:
 - 33.5% are men
 - 19.6% are women.
- In 2020:
 - 15.59 million Kenyans shopped online worth US \$1.1 billion.
 - Average online shopping spending per user was US \$70.

However, significant segments of population in Kenya, including many of those in rural areas, poor and uneducated women, and many persons with disabilities, cannot afford to use ICT and therefore remain excluded from enjoying the possibilities that ICT provides.

One of the guiding principles followed to develop the Kenya National ICT Policy is Ubiquitous Access, which involves “Fulfilling the goal of giving every Kenyan access to reliable, affordable, high-speed broadband connectivity”. Also, one of the main objectives of the Policy is “to create the infrastructure conditions for use of always-on, high speed, wireless, internet across the country.” One the thematic focus areas under which actions will be taken to meet this and other objectives is “Mobile first”, aimed to ensure that “every Kenyan can access inexpensive Internet and reasonable access to locally produced devices”.

The reference made to Ubiquitous Access to internet made in the Kenya National ICT Policy is related to the Universal Service concept. According to the International Telecommunications Union (ITU)²⁵, Universal Service is meant to ensure that telecommunication services are accessible to the widest number of people (and communities) at affordable prices, as per the following principles:

- Availability: the level of service is the same for all users in their place of work or residence, at all times and without geographical discrimination
- Affordability: for all users, the price of the service should not be a factor that limits service access

²⁵ ITU 2013. [Universal service funds and digital inclusion for all.](#)

- **Accessibility:** all telephone subscribers should be treated in a non-discriminatory manner with respect to the price, service and quality of the service, in all places, without distinction of race, sex, religion, etc.

In order to fulfil telecommunications-related universal service obligations, Universal Service Funds (USF) have been created in almost every country. Although USF have traditionally been used to build connectivity infrastructures in rural and remote areas, countries have increasingly use USF to promote ICT accessibility for persons with disabilities by providing access to telecommunications and broadband. There are several African countries that have brought USFs into policymaking or have used USFs to purchase assistive technologies, connect schools, sponsor part of the cost of broadband internet connection for families with persons with disabilities, providing library services to the blind, among other possibilities.

Examples of implementations of USFs in African countries that put some focus on disability inclusion include:²⁶

- **Burkina Faso:** USF are used to cover specific services for persons with disabilities and elder persons
- **Ghana:** USF have funded Easy Business Centers for Persons with Disability and the provision of educational institutions with internet access, computers, printers, scanners, etc.
- **Lesotho:** Universal Service recognizes the concerns of the people with disabilities or disadvantaged groups.
- **Mali:** USF prioritize health services, education and persons with disabilities.
- **Mauritius:** the 2013 USF was used to purchase Braille devices and personal computers for visually impaired students free of charge.
- **Nigeria:** the USF allocated resources for special services for persons with disabilities and elder persons and internet connectivity for schools.
- **South Africa:** USF provided funding for some access center programs catering to persons with disabilities.
- **Swaziland:** USFs included specific items for disabled users.
- **Tanzania:** USFs provided funding for projects aimed to cater to persons with disabilities.
- **Uganda:** The Universal Service obligation include the provision of services for people with disabilities.

In the European Union space, the [Universal Service Directive](#) sets the regulatory framework for telecommunications, establishing mandates for Members States including providing special measures for disabled users to ensure they enjoy services that meet their needs and are of an equivalent standard to those enjoyed by other users. Access provided must be similar from a functional standpoint but through different means.

Examples from EU Member States:

- **Bulgaria:** Law of Telecommunication sProm. SG. 88/7 Oct 2003, as amended SG. 19/1 Mar 2005, amended in 2010, establishes Universal Service obligations including access to fixed voice telephone services under special conditions and/or providing terminals for the disabled or underprivileged.

²⁶ ITU 2013. [Universal service funds and digital inclusion for all.](#)

- Czech Republic: Act No. 127/2005 on Electronic Communications establishes that the National Regulatory Authority (NRA) must mandate the Universal Service Obligation providers to provide access to telephone service and special tariffs for disabled persons.
- France: The Universal Service Decree stipulates that geographically averaged tariffs and reduced-rate social tariffs for specific categories of the population such as persons with disabilities. Universal service obligations include special provisions for disabled users.
- Poland: The Telecommunications Act of 2004 established Universal service obligations between 2006 and 2011 including the provision of
- Facilities for persons with disabilities.

6.1.2. *Recommendations*

- Hold public consultations with persons with disabilities and their representative organizations concerning the development of accessibility policies and regulations.
- Promote availability of accessible cell phones.
- Promote accessible print information.
- Install accessible public phones.
- Fund the customization of basic assistive technology tools in local language including text-to-speech, voice recognition and screen readers (with or instead of Ministry of Education).

In coordination with other sectors of government:

- Utilize Universal Service Funds to support ICT accessibility programs, e.g., in schools and vocational training centers.
- Collect disaggregated data on ICT use by disability and type of ICT.

6.2. *Web accessibility*

6.2.1. *Current status*

Despite Kenya as a country is generally recognized as relatively tech-savvy, persons with disabilities still struggle with accessing basic information online via web or mobile apps, since the majority of these platforms have not been developed with accessibility in mind. In Kenya, like in many other countries, the Covid-19 pandemic exposed a consequential digital divide and dire need for accessible digital platforms. As the world was forced to shift to digital platforms almost overnight, including to vital online services like virtual meetings, telework, home schooling or public health information delivered by governments, the lack of accessibility to these platforms and services meant millions of people, especially persons with disabilities, remained disconnected from them.

The [2019 Kenyan National ICT Policy](#) (which was a revision of the [2016 policy](#), which in turn followed the first policy published in [2006](#)), in its Accessibility section, the Policy states that “The Government will provide an ICT environment fully accessible to persons with disabilities. The Government of Kenya is fully committed to providing equal treatment to people with disabilities with respect to the use and benefit of ICT services, programs, goods and facilities

in a manner that respects their dignity and that is equitable in relation to the broader public”. The Policy mandates full accessibility for persons with disabilities through measures such as:

- ensuring that websites of government departments and agencies comply with international web accessibility standards and are accessible for persons with disabilities.
- ensuring that ICT services and emergency communications made available to the public are provided in alternative accessible formats for persons with disabilities.
- reviewing existing legislation and regulations to promote ICT accessibility for persons with disabilities in consultation with organizations representing them among others.

6.2.2. *Recommendations*

The Republic of Kenya is encouraged to decide where a web accessibility policy should be situated in its institutional, policy and legislative framework. Where legislation on web accessibility has been put in place, there is considerable variation in the sectorial context and type of legislative instrument utilized in different countries. Options include:

- Referring to web accessibility in the framework of specific legislation, e.g., in one or more of the following: ICT, e-Government, public procurement, health, education and/or other sector-specific legislation.
- Addressing web accessibility, explicitly or implicitly, in the framework of anti-discrimination and equality legislation that is directed towards equitable access to goods and services by persons with disabilities in more general terms. This approach can provide persons with disabilities, individually or collectively, with the right to seek redress if a public service provided over the Internet is not accessible to them.

An example of detailed, step-by-step language to include in a web accessibility policy can be found in the [ITU-G3ict Model ICT Accessibility Policy Report](#), starting on page 78.

6.3. E-Government

6.3.1. *Current status*

e-Government platforms and services should be inclusive and provide the same access opportunities to all citizens, regardless of the technologies used and the user’s capabilities.

The aforementioned [2019 Kenyan National ICT Policy](#) states that all government websites and portals will conform to best practices in terms of accessibility for persons with disabilities, colors, layout and editorial style. Government websites will be updated daily, at a minimum. To this aim, the Government will take measures to ensure that websites of government departments and agencies comply with international web accessibility standards and are accessible for persons with disabilities.

The Kenyan government has taken several initiatives that have set an example to the other African nations. The [Big 4 Agenda](#) is a 5-year plan aimed to meet Kenya’s [Vision 2030](#), which is geared to transform Kenya into a modern middle-income country by 2030. One of the six key enablers of the Agenda, Technology & Innovation, focuses on expanding current e-Government services across the country. The [2019 Kenyan National ICT Policy](#) is expected to support the e-government goals of the Agenda.

6.3.2. Recommendations

The accessibility of public service websites in European Union member states is regulated by a number of laws and, most prominently, by [Directive EU 2016/2102 on the Accessibility of the Websites and Mobile Applications of Public Sector Bodies](#) adopted by the European Parliament in 2016, which mandates all European Union member states to make all public sector websites and mobile applications accessible by 23 September 2021. In practical terms, this means that it is recommended that websites conform to the W3C Web Accessibility Initiative (WAI) Web Content Accessibility Guidelines (WCAG) 2.1. at AA level.

It is recommended that national regulations are largely aligned to international ICT Accessibility standards like the W3C WCAG 2.1.

- Consider harmonizing ICT accessibility provisions in laws from different sectors.
- For using each service or completing each transaction, include user instructions in an easy-to-understand format, or step-by-step video instructions.
- Consider adding new services to the e-Government portal that could be particularly relevant for the persons with disabilities.
- Make sure that policies include specific steps to develop and deploy e-Government solutions that are accessible and inclusive:
 - Build and consolidate a small accessibility leadership team:
 - Create a small team (CIO/IT department chief, front-end developers, User Experience designers, web content authors, visual designers, decision-makers from relevant departments, public procurement department officials, etc.) to guide the entire process of developing and deploying the new e-Government services, entire web portals or mobile applications.
 - Appoint an accessibility led to work with the team, influencing, motivating, and supporting them in all accessibility and digital inclusion-related issues.
 - Determine and Secure Budget to support the accessibility within the overall e-Government deployment project budget (just like with privacy and cybersecurity):
 - Allocate funding for critical items, such as personnel labor cost, training, software licenses, equipment, standards maintenance, external accessibility evaluations, and expert accessibility consulting if needed.
 - Resources to consult: the W3C Web Accessibility Initiative provides a useful resource titled “[Determine budget and resources](#)” that includes aspects to be considered when determining the budget resources required to carry out the activities planned.
 - Implement a user-centric development lifecycle:
 - create and use government-wide design guides that define and support improving accessibility and digital inclusion.
 - define specific and effective roles and responsibilities related to accessibility across the entire development lifecycle.
 - establish quality control plans to review and validate accessibility at each phase of the development process.
 - require the use of accessible development elements (e.g., pattern libraries, reusable accessible interface components, accessible wireframes for web pages, etc.).

- involve persons with disabilities to execute accessibility testing as part of project completion decisions.
- consider having external entities to support the Office in providing proof of conformance to global accessibility standards.

Examples of good practices worldwide:

- In the European Union space, eGovernment is a key component in promoting the participation and inclusion of all citizens and is expected to contribute to building a European citizenship and to drive change in public services through technology. The [e-Government Action Plan 2016-2020](#) included three policy priorities:
 - (i) to modernize public administration.
 - (ii) to build the digital internet market by enabling the mobility of citizens and businesses by cross-border interoperability; and
 - (iii) to facilitate the engagement of more administrations, citizens and businesses and promote the digital interaction between them.
- Malta:
 - The [Department of Information \(DOI\)](#) is committed to making online services on the [gov.mt portal](#) accessible to all as mandated by the anti-discrimination requirements of the Equal Opportunities Act (Persons with Disability) of 2000 (EOA). The DOI adheres to accessibility standard EN310549 and WCAG2.0 guidelines. Evaluations are done both manually and programmatically in compliance with WCAG 2.0 Level AA guidelines.
 - Since January 2020, the Government of Malta monitors the accessibility of all public entity websites to ensure they comply with the mandates set forth by the EU Web Accessibility Directive.
 - The [Foundation for Information Technology Accessibility \(FITA\)](#) created in 2000 by the Malta Information Technology Agency (MITA) is in charge of overseeing the accessibility of government websites by providing services and resources:
 - [Web Accessibility Guidelines](#),
 - [Web Accessibility for Public Entities: Legal Frameworks and technical standards](#)
 - [Quick Accessibility Audit checklist](#)
 - [Accessibility statement requirements and template](#),
 - web accessibility [evaluation](#) and [certification](#) services, and
 - [Recommendations on steps to follow](#) for compliance.
- Denmark:²⁷
 - As of June 2018, the Danish Act on Accessibility of Websites and Mobile Applications of Public Sector Bodies (Act no. 692 of 8 June 2018) that implements the EU Web Accessibility Directive (2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies) applies and makes it a requirement to comply with the European Standard EN 301 549 (which in essence require a compliance to WCAG 2.1).

²⁷ [Guidance on digital-ready legislation on incorporating digitisation and implementation in the preparation of legislation](#)

- The objective of the Act is to make the websites and mobile applications of public sector bodies more accessible to users and especially, but not exclusively, for persons with disabilities. Public sector bodies must fulfil accessibility requirements in the design and operation of the websites and mobile applications operated and maintained by the relevant institutions. According to the bill, the institutions must also publish a statement with indication of content that does not fulfil the requirements. It must also include contact information for use by the citizen in case of inaccessible content.
- A [development guide](#) (in English) has been made available with 27 requirements for user-friendliness and accessibility. The guidelines are mandatory for public sector services included in the set of services made mandatory-by-law to use online. In addition, a [portal](#) has been developed with information for non-Danish speaking foreigners who want to visit Denmark to study, work, etc.
- The [Danish Digitization Agency](#) oversees the accessibility of Danish public bodies' websites and mobile applications in accordance with the law on the accessibility of the websites and mobile applications of public sector bodies (Web Accessibility Act). Public bodies must state the extent to which their website complies with the requirements for web accessibility, as set out in the harmonized standard EN 301 549, either fully, partially, or hardly. Public bodies must describe how they have evaluated the site, whether themselves, by an external party or through some another method.
- Public bodies can refer to any reports and have to indicate any inaccessible content that either does not comply with the Web Accessibility Act, does not comply with the Web Accessibility Act, and falls under the exception of a disproportionately large burden (e.g., an extensive report), or is not covered by the Web Accessibility Act, such as subtitling videos that are broadcast live.

Resources:

- United Kingdom GOV.UK Service Manual. [Making your service accessible: an introduction](#)
- UK Government Digital Service. [The importance of creating inclusive government services](#)
- UK Government Digital Service. [Policy paper: Government Transformation Strategy](#)
- UK Government Digital Service. [Benefits of Accessible Design](#)
- European Parliament (2015). [eGovernment. Using technology to improve public services and democratic participation](#)
- The Government of Singapore published the [Digital Government Blueprint](#) to help build user-centric digital government services that cater to all citizens' needs, including those of persons with disabilities, by involving them during the design and development of digital government services.
- McKinsey & Company's "[Implementing a citizen-centric approach to delivering government services](#)" guide includes detailed steps for governments to design and deliver customer-centric services by understanding the needs of their citizens and translating those needs into targeted, effective service-delivery improvements to increase citizen satisfaction and reduce costs.
- USA.Gov, the Official Guide to Government Information and Services, published "[Journey Mapping Our Customer Experience](#)", a practical description of how to use

journey maps to visually represent a user's entire journey in a service, explore key interactions and experiences, and identify pain points and gaps in the user's experience.

- The United States Federal Government's [Usability.gov](https://www.usability.gov) portal provides resources and guidance on user-centered design process and tools for making digital content more usable and useful.
- **Leverage Public Procurement:** include accessibility language in call for tender or request for proposal documentation that clearly specifies the accessibility criteria to be met by the vendor, referencing national and/or internationally recognized accessibility standards (e.g., EN 301 549), and including specific obligations regarding conformance to ICT accessibility standards. Also:
 - include in contract language penalties if vendor does not meet accessibility standards.
 - require vendors to provide detailed responses to accessibility criteria.
 - perform testing prior to award.
 - track the provision of alternative means or of a remediation/accommodation plan when a fully accessible solution cannot be procured.

Resources:

- The European Standard EN 301 549:2018 "[Accessibility requirements for ICT products and services](https://www.iso.org/standard/68811.html)" describes the functional accessibility requirements applicable to ICT products and services, together with a description of the test procedures and evaluation methodology for each accessibility requirement in a form that is suitable for use in public procurement.
- The International Telecommunication Union (ITU) has partnered with G3ict to create a [Model ICT Procurement Policy for Governments](https://www.itu.int/ITU-T/ict/policy/policy.html). The policy language can be adopted in whole or adapted to improve existing government procurement policies. The complete procurement cycle is covered, from defining procurement personnel roles and responsibilities through to management of awarded contracts.
- Mandate 376. [What is ICT accessibility? Examples](https://www.gov.ca.ca/en/govinfo/mandates/376.html)
 - **Step 5 – Training:** provide general disability awareness training for all staff and vendors specific role-based training depending on the technical accessibility requirements of the role (e.g., for developers and IT professionals).
- In all government areas, e-service accessibility guidelines should be developed to provide:
 - Public consultations with persons with disabilities and their representative organizations concerning the development of accessibility policies and regulations.
 - Accessible e-government websites as per W3C-WAI standards and promotion of accessible private websites.
 - Accessible phone services.
 - Accessible electronic kiosks.
 - Accessible electronic documents across all areas of government.
 - Accessible digital signage.
 - Provisions for reasonable accommodation for the workplace.
 - Public procurement of accessible ICTs.
 - Benchmarking, measuring, and reporting progress on actions taken, as this is an essential tool for policymakers to assess the effectiveness of country policies and programs.

- For local governments:
 - Collaborate with local governments.
 - Ensure secure commitment to accessibility from the executive office.
 - Involve the local disability community in program efforts.
 - Identify and adopt comprehensive ICT accessibility standards.
 - Integrate accessibility into IT governance, project management, and procurement processes.
 - Train employees on adopted ICT accessibility standards.
 - Utilize tools that facilitate adherence to accessibility standards.
 - Test products using common assistive technologies.
 - Audit and report on progress regularly to ensure compliance.
 - Upgrade assistive technology tools and adapt accessibility standards regularly.

6.4. Mobile Communications and devices

6.4.1. *Current status*

Article 4 (g) of the UN Convention for the Rights of Persons with Disabilities requires member states to undertake or promote research and development of, and to promote the availability and use of new technologies, including information and communications technologies, mobility aids, devices, and assistive technologies, suitable for persons with disabilities, giving priority to technologies at an affordable cost (UN 2008).

Mobile phones have proven to be a very empowering technology for persons with disabilities. Through a combination of handset features, hardware add-ons, accessibility options in operating system and third-party software, accessible services, applications, and content, they have enabled communication and independent living for persons with disabilities and empowered them to control their lives and pursue their opportunities like never before. Attention needs to be given to ensuring that these products and services conform to accessibility specifications and good practices, significantly bolstered by policy or legislative compliance requirements.

Also, as nowadays almost any product a user may want is available in the marketplace, regulators and policymakers should make sure there is enough regulation covering customer service that is disability-conscious and aware of special needs users may have, and that can provide feedback on accessibility issues.

In Kenya, according to research by the GSMA²⁸, 82% of persons with disabilities own a mobile phone, lower than those for non-disabled persons in the country (higher than 100% as indicated above), more persons with disabilities own a basic phone than non-disabled owners. Women with disabilities have more limited access to smartphones than men with disabilities (21% of women with disabilities own a smartphone). Despite the huge difference the use of mobile accessibility features can make in a disabled user's experience, only 10% of persons with disabilities in Kenya use them, and only 22% of smartphone owners with disabilities use accessibility features. Visually impaired users are the user segment that has a higher usage (64%) of accessibility features available in smartphones.

However, those devices with the most advanced accessibility features remain largely unaffordable to most persons with disabilities due not only to the price tag of the device, but

²⁸ GSMA 2019. [The mobile disability gap: how do persons with disabilities access and use mobile in Kenya and Bangladesh?](#)

also to the cost of the services limiting the potential that mobile could have in supporting their daily tasks. Also, despite the advantages smartphone accessibility functions provide to persons with disabilities in supporting their daily tasks, many remain totally unaware of them or do not know how to use them or even the device.

In 2017, Safaricom, the Kenyan mobile operator, partnered with Kenya Union for the Blind (KUB) to identify and register blind customers as part of a “disability audit” of its mobile services, in order to collect and analyze usage data to improve their services for this user segment. By tracking mobile money usage data of 6,500 blind and visually impaired persons, Safaricom realized they were obtaining higher average revenue per user in mobile money services from this user segment than from non-disabled persons. Blind and visually impaired persons told Safaricom that many were being victims of fraud by agents helping them when cashing-in or -out with mobile money, as there was no voice notification indicating the balance in their mobile money account (only audio notifications for airtime balance). Therefore, Safaricom integrated Interactive Voice Response (IVR) to their mobile money services which drastically reduced fraud against blind and visually impaired customers. Safaricom has also implemented customer care in sign language.

Research by GSMA provided some examples²⁹ of the benefits mobile devices can provide persons with disabilities when accessing basic services:

- Education: when trying to do access the internet to perform autonomous academic research to write academic works, visually impaired and blind persons access can use the embedded accessibility features like voice output screen reading applications such as Voiceover (iOS) or TalkBack (Android). A mobile device can also be used to follow lessons and take notes by recording classes, re-listening to them and typing notes at their convenience (at desired speed), and study autonomously by downloading apps and searching the internet to learn independently.

6.4.2. Recommendations

- An example of detailed, step-by-step language to include in a mobile communications accessibility policy can be found in the [ITU-G3ict Model ICT Accessibility Policy Report](#), starting on page 30.
- When defining policies to ensure websites and applications are made accessible to persons with disabilities when using mobile devices, policymakers should follow proven accessibility standards, guidelines and best practices developed and used by the mobile phone industry community for many years. Examples of standards in different countries:
 - United States:
 - [FCC Order on Section 255](#)
 - [FCC rules on hearing aid compatibility](#)
 - [US Access Board Final Rule on Section 508 and Section 255](#)
 - [ITI VPAT: Voluntary Product Accessibility Template](#)
 - United Kingdom:

²⁹ GSMA 2019. [The mobile disability gap: how do persons with disabilities access and use mobile in Kenya and Bangladesh?](#)

- [Mobile Industry Good Practice Guide for Service Delivery for Disabled and Elderly Customers in the UK](#)
- The Mobile & Wireless Forum (MWF), integrated by member companies that recognize the importance of accessible mobile communications, created the [Global Accessibility Reporting Initiative \(GARI\)](#) not only to provide information on existing accessibility features on mobile devices available in the marketplace, but also as a platform on which policy makers, industry and disability organizations can exchange information and work together on improving accessibility of mobile phones, tablets and apps. GARI is currently being used by regulators in several countries with mobile accessibility related regulations to fulfil reporting requirements of manufacturers. Examples of best practices in government policies include:
 - Brazil: [Agência Nacional de Telecomunicações \(Anatel\)](#)
 - Belgium: [Belgian Institute for Postal services and Telecommunications \(BIPT\)](#)
 - Denmark: [Danish Energy Agency](#) (click on “Forbrugere med særlige behov”)
 - Finland: [Finnish communications regulatory authority \(FICORA\)](#)
 - France: [Autorité de Régulation des Communications Électroniques et des Postes \(ARCEP\)](#)
 - Mexico: [Instituto Federal de Telecomunicaciones \(IFT\)](#)
 - Portugal: [Autoridade Nacional de Comunicações \(ANACOM\)](#)
 - Romania: [National Authority for Management and Regulation in Communications \(ANCOM\)](#)
 - United States: [Federal Communications Commission \(FCC\) Accessibility Clearinghouse](#)

6.5. Television and digital content accessibility

6.5.1. Current status

The Convention on the Rights of Persons with Disabilities (CRPD) stipulates that Persons with Disabilities have a right to access to information through different mediums with Article 9 covering accessibility including ICTs while Article 30 covers television programs, films, theatre and other cultural activities.

The 2019 ICT Policy establishes that, with the emergence of online media, the Government will, among other measures, ensure universal access to, and viability of the public broadcasting service, and promote subtitling and dubbing to increase the reach of local programs. It also stipulates that the Government will require content producers for distribution and public consumption in Kenya to produce such content in accessible format.

The [Communication Authority of Kenya \(CAK\)](#) is the regulatory authority for the communication sector in Kenya, established in 1999 by the Kenya Information and Communications Act of 1998 with the mandate of facilitating the development of the Information and Communications sectors including broadcasting, multimedia, telecommunications, electronic commerce, postal and courier services. The Authority also has the responsibility of facilitating access to communication services by all in Kenya as well as monitoring the activities of licenses to enforce compliance with the license terms and conditions.

The Authority is mandated by 46 I (b) of the Kenya Information and Communications Act (KICA) to promote and facilitating the development of a diverse range of broadcasting services in Kenya, developing media standards, regulating and monitoring compliance with these

standards. The Authority developed the Unified Programming Code 2019 that incorporates the broadcasting content requirements for all licensees both Free-to-air (FTA) and subscription as per KICA S46I.

Broadcasters have a constitutional obligation to promote the understanding and enjoyment of programs by persons with disabilities in their programming and are encouraged to incorporate accessibility mechanisms such as captioning and qualified Kenya sign language interpreters in local children's programming. FTA broadcasters are encouraged to promote the development and use of Kenya Sign language for persons with disabilities.

Further to the requirements detailed in the Programming Code with regards to PWD obligations the following additional guidelines will apply:³⁰

- Public broadcasters must comply with the additional accessibility requirements and timelines as follows:
 - Within one year of operation ensure 100% closed captioning, subtitling, and sign language inserts during news and current affairs programs, emergency announcements and during programs of national interest.
 - Within 3 years of operation insert captioning in at least 60 minutes per week of Other Programming aired during the watershed period.
 - Within 5 years of operation Insert captioning in at least 120mins per week of Other Programming aired during the watershed period and ensure captioning in at least 50% of advertising.
 - By year 7 of operation insert captioning in at least 180mins per week of Other Programming aired during the watershed period and ensure captioning in at least 75% of advertising.
- Commercial and Community TV must comply with the additional accessibility requirements and timelines as follows:
 - Within one year of operation ensure 100% closed captioning, subtitling, and sign language inserts during news and current affairs programs, emergency announcements and during programs of national interest.
 - Within 4 years of operation insert captioning in at least 60 minutes per week of Other Programming aired during the watershed period.
 - Within 6 years of operation insert captioning in at least 120mins per week of Other Programming aired during the watershed period and ensure captioning in at least 50% of advertising.
 - By year 8 of operation insert captioning in at least 180mins per week of Other Programming aired during the watershed period and ensure captioning in at least 75% of advertising.
- 10.3 Subscription Broadcasting Service providers must comply with the following accessibility requirements:
 - Enable accessibility to broadcasting services by PWDs by enabling accessibility option at the Consumer Premise Equipment (Set Top Box (STB), decoder or Integrated Digital Television (IDTV)) level.

³⁰ Communication Authority of Kenya (CAK). [Consultation paper on proposed broadcasting guidelines](#).

- Ensure that the STB/IDTV gives the consumer the option to enable closed captioned, subtitling and signing by use of Remote Control of the Television/STB as appropriate.

Regarding the accessibility to broadcasting services by persons with disabilities:

- FTA broadcasters will provide captioning, subtitling, and Kenyan sign language inserts during news and current affairs programs, emergency announcements and during programs of national interest.
- Those providing Kenya sign language must prove they are duly qualified and certified by the Kenya Institute of Special Education, except for an international/Foreign channel.
- Captioning for other programming and adverts must be included as per the timelines prescribed in the Gazette Notice no. 6964 dated 13th July 2018 on additional person with disability requirements.

Recommendations

- Encourage private providers of audio-visual media services to adapt their contents and make them accessible to persons with disabilities, to the extent of their technical and financial capacities.
- Encourage private providers of audio-visual media services to revamp their websites to support text-to-speech conversion and font size scalability.
- The Ministry of Culture and Information should oversee that those public authorities inviting applications for public funding ensure that a criterion for the allocation of part of the funds should be that the produced media content be accommodated to and thematically designed for persons with disabilities.
- Introduce amendments to relevant laws that mandate all public administrative bodies (at a national and local level) to include minimum content accessibility requirements.
- Ensure persons with disabilities, socially disadvantaged citizens, as well as citizens in geographically remote areas should be able to exercise their right of access to information of public interest, in the most convenient way for them, or take any other steps to realize this right, for instance, filing a complaint with the Ombudsman or equivalent figure in Kenya. All Kenyan citizens have the right not only to be informed about issues of public interest but also actively seek information.
- Consider improving means of electronic communications with citizens, as established by Article 57 of the Law on General Administrative Procedure (public authorities are required to publish information about the clients' option to communicate with the public authority by electronic means and to have electronic documents delivered to them, and about how this is done).
- Provide further financial and technical support for sign language interpreting services and for the civil society organizations that cooperate in this.

Recommended steps for countries pursuing to implement policy frameworks that promote television/video programming accessibility for persons with disabilities include:

- Adopt a television/video programming accessibility policy, either as a stand-alone document or integrated into an existing policy.
- Consult with persons with disabilities on the development of a television/video programming accessibility policy.

- Make persons with disabilities and organizations of persons with disabilities aware of this policy and television/video programming access services.
- Ensure licensed service providers deliver access services such as audio description, audio subtitles, closed captions and signing.
- Ensure that Electronic Programming Guides (EPGs) indicate video programs that offer access services (by using internationally recognized access service icons such as "CC" for closed captions and "AD" for audio description).
- Ensure licensed service providers encourage content creators to deliver programs with access services.
- Make sure licensed service providers ensure emergency information and public safety announcements are transmitted using access services.
- Adopt technical standards for interoperable television/video programming services to enable users to receive, decode and display access services.
- Adopt quality of service standards for access services.
- Train customer service staff on how to serve customers with disabilities.
- Provide adequate funding to public broadcasters to enable them to provide accessible television/video programming.
- Promote fair and equitable representation of persons with disabilities in video programs.

The following are examples of solutions that policymakers may promote depending on local conditions in each country:³¹

- **For persons with hearing impairments:**
 - Providing optional subtitles is the main way to make TV programs accessible. Deaf and hard of hearing persons prefer television programs, broadcast, streamed, or downloaded content that include optional subtitles. Digital television systems have made it possible for the subtitles to be easily embedded into the picture being viewed through an option on the remote control.
 - In-screen sign language is the secondary method of making programs accessible by providing a sign language version of the audio. In-screen sign language can show permanently in the picture or may become an option at the user's choice in the future, through a broadcast multimedia system. In some countries, broadcasters provide an alternative channel showing the same picture but with in-screen sign language.
 - For radio listening, the main method to make programs accessible is to provide speech data that may be displayed on a receiver screen (speech-to-text conversion data).

³¹ ITU-R Report BT.2207-4 (10/2018): [Accessibility to broadcasting services for persons with disabilities](#)

- Digital radio (audio) programs, broadcast, streamed, or downloaded, can now include data for speech-to-text display in the receiver. A text display may also be helpful for deaf or hard of hearing people to understand the radio program.
- **For persons with visual impairment:**
 - To make TV programs accessible to visually impaired persons, use of Audio Description (AD) becomes the most effective choice. AD is additional commentary that explains what is happening visually on screen, describing body language, expressions, and movements. AD is provided on a second audio channel that is mixed in the receiver with the normal audio in natural pauses in dialogue.
 - AD can also help persons with aging disabilities to bring to their attention to content they need to notice in the picture to fully follow the plot.
- **For older persons:**
 - Older persons can experience difficulties when trying to follow speech in radio or on TV broadcasts because it is too fast for them to listen comfortably. The adaptive speech rate conversion function plays speech more slowly without overrunning the program's time slot while maintaining the quality of speech. Thus, the natural silence periods in the dialogue are adjusted electronically to make the dialogue appear to be slower. Radio programs available via Internet with several speed adjustment options may help a wider age range of listeners to understand the programs.
 - Adding Audio Description to television programs in the pauses in dialogue, can also help the viewer follow the story line.
- **For receiver user-friendliness:**
 - Receiver devices must be designed and manufactured with users with disabilities in mind. Design features may include:
 - simple and self-evident controls, which operate in a similar way on all receivers.
 - visual and audio guides to program selection and choice.
 - facilities for subtitle display, signer display, and audio descriptions.
 - Device features may vary according to local broadcasting systems and formats. It is important to involve receiver manufacturers in the conversation when developing broadcasting accessibility policies so that they can provide realistic views from the market and the technology standpoints.

6.6. Electronic Kiosks

6.6.1. *Current status*

An electronic kiosk can be defined as a computer terminal that features specialized hardware and software that provides access to information and applications for communication, commerce, entertainment, or education. Electronic kiosks include (but are not limited to):

- ATMs (Automated Teller Machines)
- Information kiosks
- Ticket vending machines

- Electronic product vending machines
- Electronic voting machines
- Information displays (e.g., flight information)
- Point-of-sale customer card payment systems
- Card door entry systems

The user interface of an electronic kiosk may consist of several components, each with their own accessibility issues such as labels and instructions, smart cards, displays, keypads, and touch screens. There are two important concepts that pertain to accessibility of electronic kiosks: self-adaptive interfaces and security and access.

Accessible ATMs offer a potential source of convenient, equitable, private, independent access to banking services for customers with disabilities.

According to the Banking Industry Persons With Disability Pilot Project Case Study 2021³², persons with disabilities use services like ATMs, ATM cards, mobile money, online banking and USSD services, with over 72 percent of customers with disability reported using ATMs, including 86 percent of customers with hearing impairments, 53 percent of customers with visual impairments, and 75 percent of customers with mobility impairments. Of customers who used ATMs, 70 percent described the ATM locations as convenient. In the interviews, many customers reported positive experiences when using ATMs. These findings show that persons with disabilities – like everyone else – are open to using technology to make their banking experiences more efficient.

However, some respondents highlighted challenges that inhibited their access to financial services, and access to ATMs is a weak point for customers with visual impairments, as some banks deny ATM cards to customers with visual impairments, which angers and frustrates them. For those who use ATMs, only 45 percent of customers with visual impairment said they can find the screen easily compared to 94 percent of customers with hearing impairment and 90 percent of customers with mobility impairment. Similarly, only 45 percent of customers with visual impairment said they can touch the screen or number pad easily as compared to 94 percent of customers with hearing impairment and 95 percent of customers with mobility impairment. Notably, 55 percent of customers with visual impairment said they can enter their ATM card PIN easily, compared to 92 percent of customers with hearing impairment and 95 percent of customers with mobility impairment who said they can see or find the screen easily. Further, 60 percent of customers with visual impairment said the ATM clearly explained the services available, compared to 92 percent of customers with hearing impairment and 93 percent of customers with mobility impairment. Only 55 percent of customers with visual impairment said they can access the ATM independently without help, compared to 89 percent of customers with hearing impairment and 80 percent of customers with mobility impairment. From the interviews, lack of braille on keypads and flawed audio menus were mentioned as challenges to ATM access. Updates or changes to the menus also present challenges.

6.6.2. *Recommendations*

- The [EN 301 549](#) norm describes functional accessibility requirements applicable to ICT (Information and Communication Technology) products and services, including

³² Kenya Bankers, FSD Kenya, inABLE, February 2021. [Banking industry persons with disability pilot project case study. Promoting Financial Inclusion and Digital Accessibility](#)

electronic kiosks, and the test procedures and evaluation methodology for each accessibility requirement suitable for use in public procurement.

- [Public Access Terminal Guidelines](#), compiled by the Centre for Excellence in Universal Design at the National Disability Authority, Ireland. These guidelines cover all information and services delivered by means of electronic kiosks (or Public Access Terminals) such as ATMs (Automated Teller Machines), Information kiosks, Ticket vending machines and e-voting machines.

Case study: India.

In India, the integration of accessibility features into the functioning of financial institutions in the public sphere, through the provision of accessible banking services, has become a strong model of how engaging the private sector in accessibility measures can facilitate the ease with which persons with disabilities interact with their environment. Led by the Reserve Bank of India and with support from the Indian Banks' Association, the Government of India, and other stakeholders in the country, directives were issued to public and private banks in India to provide both physical and ICT accessibility features to support persons with disabilities in conducting their personal finances. Among other aspects, the directives required that one third of ATMs be "talking ATMs" with Braille keypads to allow persons with visual disabilities to handle standard ATM-based financial transactions independently. Banks were asked to coordinate amongst themselves to ensure that distribution of talking ATMs were placed to serve all localities, with a later scaled up directive to retrofit all and ensure that any new ATMs included these accessibility features. Union Bank of India, one of the major banks to take steps to support accessibility in banking, features a list of talking ATMs found across the country, which as of 31 March 2016 stood at 1,662.

- Provide and promote videos describing step-by-step (both through images and sound) how to do different transactions and operations would be of great help.
- Resources for consultation and guidance:
 - [EN 301 549 V3.1.1 \(2019-11\) Harmonized European Standard](#). Accessibility requirements for ICT products and services: norm describing functional accessibility requirements applicable to ICT (Information and Communication Technology) products and services and the test procedures and evaluation methodology for each accessibility requirement suitable for use in public procurement. Examples of ICT covered include those considered stationary, that is, those that stand on the floor (such as an information kiosk) or are mounted on a wall (such as a machine that dispenses cash or performs other banking services) or other immovable structure and are not intended to be moved by its user.
 - [U.S. Kiosk Manufacturer Association \(KMA\) Kiosk ADA 14 Point Checklist for Accessible Self-Service](#) (February 2021).
 - [Centre for Excellence in Universal Design at the National Disability Authority, Ireland. Public Access Terminal Guidelines](#). These guidelines cover all information and services delivered by means of electronic kiosks (or Public Access Terminals) such as ATMs (Automated Teller Machines), Information kiosks, Ticket vending machines and e-voting machines.

- [Centre for Excellence in Universal Design at the National Disability Authority, Ireland. Smart Card Accessibility Guidelines](#). A smart card is a personal device that provides an intelligent link between the user and the system being used. It can help to make a system usable by the widest possible community of users by allowing the system to provide users with the best interface for their needs. These guidelines cover all information and services delivered by means of a Smart Card and include guidelines on physical access and user interface issues.
- [Centre for Excellence in Universal Design at the National Disability Authority, Ireland. Compilation of International standards \(Australia, America, Britain, Canada, Norway, Japan, and the European Union\)](#) on the procedures that should be followed when making Smartcard services accessible.
- [U.S. National Federation for the Blind \(NFB\). Guidelines for purchasing accessible voting machines](#).

6.7. Education

6.7.1. Current status

[Article 30](#) of the CRPD “Participation in cultural life, recreation, leisure and sport” establishes that:

- “1. States Parties recognize the right of persons with disabilities to take part on an equal basis with others in cultural life and shall take all appropriate measures to ensure that persons with disabilities a) Enjoy access to cultural materials in accessible formats (...)”
- “3. States Parties shall take all appropriate steps, in accordance with international law, to ensure that laws protecting intellectual property rights do not constitute an unreasonable or discriminatory barrier to access by persons with disabilities to cultural materials.”

Children with disabilities in Kenya are less likely to participate in education or to complete it (44%), compared to children without disabilities (60%) due to reasons including cost, stigma, inadequate curricula, poorly equipped schools, and insufficiently trained teachers. Significant numbers of in school children with disabilities are in special schools and units rather than in mainstream schools or inclusive education.³³

Access and participation of Learners with disabilities is relatively low across the country. Therefore, transition from primary to secondary to tertiary levels remains a challenge as most students with disabilities cannot afford private schools and regular schools do not provide adequate adjustments.

The policy environment of education in Kenya is theoretically supportive of education for Learners with disabilities (Learners with disabilities):

- The **2013 Basic Education Act** outlines needs in relation to the provision of education for disabled children, whose right to education is guaranteed under the constitution.
- Section Four of the **Sector Policy for Learners and Trainees with Disabilities 2018** provides for Specialized Learning Resources, Assistive Devices and Technology. The

³³ The Institute of Development Studies (IDS), June 2020. [Disability Inclusive Development Kenya Situational Analysis \(SITANs\)](#).

Objective is to provide learners and trainees with disabilities in all institutions of learning and training with quality specialized learning resources, assistive devices and technologies responsive to various categories of disabilities³⁴.

- Sessional Paper No. 14 Of 2012:
 - Chapter Four, “Enhancing Access, Equity, Quality and Relevance”, Guiding principal J, provides for Equitable access to services that meet the needs of individual learners with special needs and disabilities within diverse learning environment.³⁵
 - Chapter 7 provides for Special Needs Learners, including policies that should be adopted to address their educational challenges³⁶.

However, according to a 2015 report by the Kenya National Commission on Human Rights:³⁷

- the inclusion policy in education has not been implemented yet.
- the implementation framework of the National Policy on Special Needs Education Policy of 2009 was still absent.
- Educational outcomes for children and adults with disabilities are still low.
- Illiteracy rates among persons with disabilities and for school-age children with disabilities are much higher than the general population.
- Low levels of school attendance by children with disabilities is often due to lack of adequate access and resources, among other reasons.

6.7.2. *Recommendations*

- Improve the provision of Assistive Technology and professional support in the selection, application, and procurement of Assistive Technology in education at the Huduma Centers as a means to support the education system. Promote their importance and raise awareness around them.
- Regulate the implementation and accessibility of quality home schooling and distance learning for primary and secondary education (this is urgent considering the uncertainty created around the duration and evolution of the Covid-19 pandemic).
- Accessible Textbooks:
 - Kenya ratified the Marrakesh Treaty in June 2017. To effectively implement and enforce its provisions in higher education, it is recommended that the Government of Kenya not only revise its national copyright laws to authorize the making, using, and sharing of accessible format copies, but also:
 - creates legal remedies that allow beneficiaries and authorized entities to assert their rights to create and share accessible format copies,

³⁴ https://www.udpkenya.or.ke/wp-content/uploads/2020/03/kenya_sector_policy_learners_trainees_disabilities-1.pdf Sector Policy for Learners and Trainees with Disabilities, pg. 20

³⁵ <http://repository.kippra.or.ke/bitstream/handle/123456789/490/Sessional%20paper%20no%2014%20of%202012.pdf?sequence=1&isAllowed=y> pg 29

³⁶ Ibid pg 62

³⁷ Kenya National Commission on Human Rights. [NHRI information to the 3rd Pre-sessional Working Group of the Committee on the Rights of Persons with Disabilities. For consideration when compiling the List of Issues on the First Report of the Republic of Kenya under the Convention on the Rights of Persons with Disabilities on 20 April 2015](#)

- vests authority over the Marrakesh Treaty in appropriate domestic human rights and Intellectual Property institutions, and
 - authorizes these institutions to engage in monitoring and enforcement activities.
 - Once under the national legal umbrella of the provisions of the Marrakesh Treaty that allow for the conversion and sharing of textbooks in accessible digital formats, consider allocating funding schemes (e.g., allocate resources coming from Universal Service Funding) to create a centralized unit that can manage the conversion of textbooks into accessible digital formats and their distribution to universities for students that require them.
 - Resources for consultation and guidance:
 - [IFLA/EBLIDA \(2017\). Implementing the Marrakesh Treaty in European Union Member States](#) (see page 23 “3. Transposing the Marrakesh Treaty. Summary of Recommendations”).
 - European Commission. [Implementation of the Marrakesh Treaty in EU Law](#).
 - Legal frameworks from other countries to consult:
 - France: Law No. 2016-925 of July 7, 2016 relating to the freedom of creation, architecture and heritage ([Loi pour Liberté de la Création, à l’Architecture et au Patrimoine, LCAP](#))
 - United Kingdom: [The Copyright and Rights in Performances \(Disability\) Regulations 2014](#)
 - Examples of textbook conversion centers in libraries, universities, and non-profits:
 - [Royal National Institute of Blind People \(RNIB\) National Library Service](#), United Kingdom
 - [University Library for Students with Special Needs \(Teiresias Library\)](#), part of the [Teiresias Centre](#) at the Masaryk University in Brno, Czech Republic.
 - The [Center for Inclusive Design and Innovation \(CIDI\)](#) at the Georgia Institute of Technology in Atlanta, GA, United States.
 - [Fondazione LIA](#), Italy.
 - [Nota - National Library for Persons with Print Disabilities](#), Denmark.
 - [Australian Inclusive Publishing Initiative \(AIPI\)](#), Australia
- Establish mechanisms that mandate the application of Universal Instructional Design and Universal Design for Learning principles when creating digital teaching materials in higher education.
- Fund the customization of basic assistive technologies tools in local language including text-to-speech, voice recognition and screen readers.
- Train higher education professors in creating accessible materials instructional materials, including the description of images that are part of instructional objects.
- Consider leveraging accessible ICT-enabled schools as resource hubs. This can be an especially effective approach in regions where resources are low, making it more efficient to concentrate accessible ICT and AT resources in one central location.
- Promote accessible open-access educational resources. Open-access online resources, such as massive open online courses (MOOCs), are growing in popularity and

availability as knowledge-sharing platforms. These resources provide a huge potential for the education of persons with disabilities, and as such should be provided in accessible formats. Wherever possible, open-access resources should also be made available at low or no cost. This will be particularly advantageous for areas where educational resources are scarcer.

- Make ICT accessibility a component of related study programs. The issue of accessibility should be built into the curriculum of higher education programs in the fields of technology, information processing, ICT, and computer engineering, as well as general teacher education programs. This could ideally involve the creation of dedicated modules or courses on ICT accessibility for students in the abovementioned programs but could also simply mean including ICT accessibility as a topic in other related modules.
- Include ICT accessibility as criteria in university ranking schemes. ICT accessibility should be included as a criterion in the ranking of world universities; ICT accessibility in this case could refer to accessibility in different areas such as website, online learning materials, or other ICT-based infrastructures.

6.8. Healthcare

6.8.1. *Current status*

[Article 25 “Health”](#) of the CRPD contains dispositions on the right to health. Persons with disabilities continue to face barriers in using ICTs.

The [National Disability Mainstreaming Strategy 2018-2022](#) provides information on health services to persons with disability in accessible formats including braille, Kenyan Sign language and other augmentative methods of communication³⁸.

6.8.2. *Recommendations*

Creating and implementing national ICT accessibility policy frameworks may lead to a growth in accessible ICTs and the empowerment of persons with disabilities, and open doors to health services. ICT Accessibility policy frameworks must include provisions that ensure accessible public access to healthcare systems and services.

Countries that have implemented ICT accessibility policies can use it legislative instrument that may can maximize the use of ICTs to fully access healthcare services, by making reference to it in the framework of specific healthcare legislation where ICT plays a key role in improving persons with disabilities’ access to healthcare services, to information about basic things for independent daily living such as public health information, and to impactful technologies like telemedicine and e-health, through websites, mobile devices, TV, radio and emerging technologies.

Examples of provisions to be included in health-specific ICT accessibility policies include:

³⁸ <https://www.socialprotection.go.ke/wp-content/uploads/2020/04/Finalized-Disability-Mainstreaming-Strategy-November-2018-BOOKLET-3.pdf> pg 25

- “The ICT accessibility policy applies to public services ICTs and in so doing applies to healthcare websites, electronic documents and mobile apps made available to the public.”
- “[Relevant provision of legislation] provides that the [Responsible Government Authority] is the body responsible to monitor and promote the effective use of government-provided e-Health services to citizens, including access by persons with disabilities to web content.”

Recommendations:

- Regardless of whether the ICT Accessibility policy is situated in the country’s institutional, policy and legislative framework, specify that it applies to public services ICTs and in so doing applies to public healthcare system websites and digital documents made available to the general public through public sector websites, mobile apps, or other digital means.
- Establish the mandate that all digital information, communications, and online services provided by the public healthcare system relative to public healthcare services must be in accessible formats so that they can be accessed, received, and understood by all users, including those with disabilities and older persons.
- Hold public consultations with persons with disabilities and their representative organizations concerning the development of accessibility policies and regulations in provision of public healthcare services and information.
- Encourage and promote industry or private sector efforts for the development and production of develop or produce assistive technologies and related ICT equipment for persons with disabilities.

6.9. Emergency Situation Communications

6.9.1. *Current status*

[Article 9 \(b\)](#) of the UNCRPD establishes that “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. These measures, which shall include the identification and elimination of obstacles and barriers to accessibility, shall apply to (b) Information, communications, and other services, including electronic services and **emergency services**”.

The National ICT Policy of 2019³⁹, commits the Government to ensure that emergency communications made available to the public are provided in alternative accessible formats. It will also ensure that licensed providers of telecommunications services make available services and supporting technologies for persons with disabilities including emergency services, accessible public phones, and relay services to enable persons with speech, hearing and seeing disabilities to communicate with the rest of society.

³⁹ National ICT Policy, 2019, <https://www.ict.go.ke/wp-content/uploads/2019/12/NATIONAL-ICT-POLICY-2019.pdf>

6.9.2. Recommendations

Ensure that all emergency communications services are designed in a way they meet international accessibility standards and are accessible for persons with disabilities. This would include the development of accessible interfaces and content that meet the Web Content Accessibility Guidelines (available, affordable, adaptable and accessible).

The Government of the Republic of Kenya is encouraged to revise legal frameworks on emergency communications and services to ensure these are inclusive and accessible for persons with disabilities and to include measures how to deal with emergency communications and services to ensure that the needs of persons with disabilities are considered.

Country policies promoting television and video programming accessibility should include specific language referred to public communications, announcements and information in emergency and disaster situations. The following are examples of what to include in a policy:

- “Public awareness about the availability of accessible emergency services for persons with disabilities is mandatory. It is recommended that a National Regulatory Authority that provide licenses to service providers and public bodies that are responsible for emergency services mandates them to create awareness about the availability and accessibility of emergency services by persons with disabilities.”
- “Emergency information made available to the public should also be provided in formats accessible to persons with disabilities such as sign language and subtitles for the deaf and hard of hearing and audio messages for those with visual disabilities on television/video programming.”
- “Public communications and announcements in natural disaster situations must be made accessible to persons with disabilities in appropriate forms of communication to leverage mainstream communication channels. Licensed service providers must ensure that such announcements and alerts are broadcast in relevant formats accessible to all persons with disabilities.”

Determine the most effective strategies to promote accessible ICTs, including legislation, policy, regulations, license requirements, codes of conduct, etc. The following are some examples of emergency communications aspects to be included in policies:⁴⁰

- Persons with disabilities must be able to access emergency information and to contact emergency services free of charge whatever the mobile technology or device they use.
- Mobile operators must make it possible for deaf or hearing-impaired individuals to text with acknowledgment of receipt, via real time text, to or send video emergency notifications through video relay services to the responsible authority emergency service in real time.
- Mobile operators must provide emergency and public safety alerts in accessible formats to persons with disabilities.
- Persons with disabilities must be made aware of the emergency services that are available and accessible through public awareness campaigns, which should describe

⁴⁰ [ITU-G3ict Model ICT Accessibility Policy Report](#)

how persons with disabilities can use emergency services. Information in public awareness campaigns must be provided in accessible formats.

- Make sure information materials provided target persons with disabilities and public awareness campaigns and training sessions are conducted in multiple accessible formats in different languages.
- Following a disaster, review disaster response efforts for any challenges that may have arisen for persons with disabilities and take action to fix any ICT-related issues.

The following are examples of recommended telecommunication and broadcasting requirements to include in policies and regulations pertaining Emergency Communications:⁴¹

- Persons with disabilities should be able to use their everyday communication means to reach emergency services, and to contact emergency services free of charge.
- All public awareness campaigns must specifically provide information on how persons with disabilities can contact and use such services.
- Emergency information made available to the public should also be provided in alternative accessible formats such as text messages on mobile phones.
- Persons with disabilities should be able to contact emergency services via ordinary emergency numbers. It is recommended that numbers such as "112" are used.
- Emergency call centers should be able to receive and respond to SMS or other forms of text messages as well as calls from relay services to permit emergency calling by people with hearing or speech disabilities.
- All public service announcements must include awareness messages specifically on how persons with disabilities can use emergency services.
- Emergency information made available to the public should also be provided in formats accessible to persons with disabilities such as sign language and subtitles for the deaf and hard of hearing and audio messages on television/video programming for those with visual disabilities.
- Public communications and announcements broadcast during natural disaster situations must be made accessible to persons with disabilities in appropriate forms of communication. Licensed video programming service providers must ensure broadcasted announcements and alerts are provided in relevant formats accessible.
- Make sure different systems alerting of emergency situations meet the needs of persons with disabilities:
 - Public Address systems: alerts in audio and visual formats through public loudspeakers, electronic displays, and sirens in public spaces
 - Radios: add special features to broadcasts so they can be used by people who are deaf or hard of hearing, e.g., as vibrations, flashing lights, simple texts, etc.
 - Television: use closed captioning / subtitling and sign language interpreters.

⁴¹ [ITU Guidelines for National Emergency Telecommunication Plans](#)

- SMS: send warnings and alert messages in multiple formats across different dissemination platforms.
- E-mail: send notifications in multiple languages and make sure both the software used and the content meet accessibility guidelines so they can be operated with assistive technologies. Consider if using graphics may help children and individuals with cognitive disabilities understanding the message.
- Social networks: use social media platforms that are known to conform to accessibility standards and use accessible alternative social media sites when mainstream platforms are not fully accessible (e.g., Easy Chirp²⁰ alternative to Twitter, Emergency 2.0 Wiki Accessibility Toolkit²¹, etc.). Make sure emergency information content published meet accessibility criteria and provide adequate training accordingly.
- Websites: test websites providing disaster management information for accessibility. Make digital documents (fact sheets, handbooks, manuals) available in accessible formats. Include images and graphics to depict emergency information content for children, people with cognitive disabilities, or people with linguistic differences, making sure all images have text alternatives.
- Resources:
 - In New Zealand, the Government created [Get Ready Get Through](#), a website that provides information on different types of disasters (e.g., earthquakes, storms, floods, tsunamis, volcanoes, etc.), how to prepare household emergency plans and emergency survival kit, etc. Information is provided in accessible formats (MP3 files, e-text, DAISY, etc.) and in multiple languages.
 - [ITU Guidelines for National Emergency Telecommunication Plans 2020](#)

6.10. Access to Assistive Technologies (AT)

6.10.1. *Current status*

One of the challenges faced by persons with disabilities require that access to assistive technologies that are available free or at a low cost through subsidies or grants. There is also a need for training of persons with disabilities and those who assist them on the use of assistive technologies and features made available.

Most persons that need affordable and user-friendly assistive technologies do not have access to, and many do not even know of their existence or how they could help them. Many are not aware of the accessibility functionalities provided by mainstream smartphones.

Also, funding programs by the government like the [National Development Fund for Persons with Disabilities \(NDFPWD\)](#), established in 2003 under Section 32 of the Persons with Disabilities Act, 2003 to eradicate the link between poverty and disability by providing financial support to organizations and individuals and managed by the National Council for Persons with Disabilities, do not prioritize the purchase of ICT assistive devices like screen reading software, but rather supports persons with disabilities through, among other possibilities, the provision of assistive devices and services such as wheelchairs, crutches,

hearing aids, callipers, surgical boots and prosthetic arms or legs. The purchase of assistive software such as screen readers can only be supported if the request comes from an institution.⁴²

6.10.2. Recommendations

Assistive technology (AT) is an umbrella term that includes assistive, adaptive, and rehabilitative devices for persons with disabilities and also includes the process used in selecting and using them. AT is important in that it promotes greater independence by enabling people to perform tasks that they would otherwise be unable to accomplish, or would have accomplished with great difficulty, by providing enhancements to, or changing methods of interacting with, the technology needed to accomplish such tasks.

Recommendations:

- Raise awareness about different possibilities to access assistive technologies available to the public.
- Raise awareness about the tax waivers for the acquisition of assistive technologies
- In absence of one, create a National Regulatory Authority that
 - ensures that Assistive Technologies for use with mobile handsets or services are made available on the open market by putting in place incentive schemes to improve economies of scale in purchase, production, distribution, and support of these technologies.
 - initiates, if not already in place, cooperation with other government agencies to optimize purchasing, training, and users' support on a national basis, to the extent that a large portion of assistive technologies are purchased or funded by public funds for special education, rehabilitation services, workplace accommodation or care for elderly citizens.
 - Develop, in cooperation with other government agencies, a gap analysis of the availability of assistive technologies for persons with disabilities in order to identify areas for which government action may be taken, such as public procurement of office software with embedded accessibility features, free downloadable ATs or subsidized purchases of ATs.
 - work with the Universal Service Fund, service providers, technology providers as well as academic institutions to call for proposals in order to develop, maintain and service text-to-speech technology or voice recognition in case they are not available in the official languages of the country.

6.11. Public Procurement of ICT Products and Services

6.11.1. Current status

Countries implement policies, laws, and regulations to improve the accessibility of ICTs for persons with disabilities. Policies cover ICT categories such as websites, broadcasting, mobile phones, and emergency services. Governments need to buy many of those ICT goods and services; some regions and countries have developed accessible ICT procurement policies and systems that require that public authorities procure accessible ICTs based on commonly agreed and accepted ICT accessibility standards.

⁴² CIPESA. [Assessing the Barriers to Accessing ICT by People with Disabilities in Kenya](#)

The UN Convention for the Rights of Persons with Disabilities requires Government and public sector institutions to act in conformity with its provisions; therefore, the procurement of ICTs for use by the public that are not usable and accessible by persons with disabilities may be deemed to be in contravention of the Convention.

As a signatory to the UNCRPD, Kenya has to ensure access to ICT to persons with disabilities, emergency services and Internet services on equal basis with persons without disabilities. Also, as stated by Article 32 (a) of the UNCRPD on “International Cooperation”, international cooperation programs are required to be inclusive of and accessible to persons without disabilities. Therefore, both money coming from taxpayers and funds received from international aid programs to purchase ICT products and services should be spent on ICT products and services that meet ICT accessibility standards.

In the European Union space, the [2014 European Public Procurement Directive](#) contain a strong focus on the use of public procurement to achieve social gains. Specific obligations include:

- Ensuring compliance with applicable legislation (social, environmental, labor).
- Expanding possibilities to use social considerations in public tenders.
- Making accessibility compulsory.
- Facilitating social inclusion.
- Ensuring that certain social services benefit from a simplified regime.

Article 42 of the Public Procurement Directive requires all public bodies in EU Member States to include accessibility as a mandatory requirement in the public procurement of goods and services for use by people, be they members of the public or employees of the government. The Article states:

- “For, the technical specifications, except in duly justified cases, be drawn up so as to take into account accessibility criteria for persons with disabilities or design for all users.”
- “Where mandatory accessibility requirements are adopted by a legal act of the Union, technical specifications shall, as far as accessibility criteria for persons with disabilities or design for all users are concerned, be defined by reference thereto.”

This requires that where other Acts, such as the Web Accessibility Directive or the European Accessibility Act define accessibility requirements, there requirements are relevant for use in public procurement. Accessibility is also included as a consideration in many other Articles. For examples Article 67 on Award Criteria allows for procuring authorities to award extra points for suppliers that provide a higher level of accessibility than the minimum level of accessibility specified under the Technical Specifications.

The [EN 301 549 V2.1.2 \(2018-08\) “Accessibility requirements for ICT products and services”](#) is an update of the [EN 301 549 V1.1.2 \(2015-04\) “Accessibility requirements suitable for public procurement of ICT products and services in Europe”](#), the European standard that establishes the accessibility requirements for websites, documents, software, hardware, etc. and to which the European legislation on accessibility refers. The document specifies the functional accessibility requirements applicable to ICT products and services, together with a description of the test procedures and evaluation methodology for each accessibility requirement in a form that is suitable for use in public procurement within Europe. The document is intended to be used as the basis for an accessible ICT procurement toolkit and will primarily be useful:

- for public procurers to identify the requirements for their purchases, and
- for manufacturers to employ it within their design, build and quality control procedures.

6.11.2. Recommendations

Public procurement policies must endeavor to add specific ICT Accessibility guidelines to public procurement procedures that all stakeholders, including public sector and industry can clearly understand.

Public procurement policies requiring government agencies to procure accessible ICT equipment and services serve two key goals:

1. By procuring the most accessible ICT equipment and services, government bodies can provide an accessible work environment for its employees and accessible public services for its citizens.
2. The public procurement of accessible ICTs creates a market for accessible ICTs. Manufacturers and service providers are incentivized to produce accessible ICTs and suppliers to stock accessible ICTs. This generates greater competition, drives down costs and promotes a greater availability of accessible ICT products and services in the marketplace.

While procurement of ICT equipment is the responsibility of public authorities in Kenya, commitment to and compliance with accessibility standards will not only facilitate and foster the implementation of all the other pillars of ICT accessibility policies, but will also foster competition between manufacturers, service providers, and application developers.

Although the CRPD does not specifically mention public procurement policies, the Reporting Guidelines issued by the Office of the Secretary-General of the United Nations to States Parties do include them following the general obligations regarding government policies and programs established by the Convention:

- States Parties shall “take into account the protection and promotion of the human rights of persons with disabilities in all policies and programs”; and
- “Refrain from engaging in any act or practice that is inconsistent with the present Convention and to ensure that public authorities and institutions act in conformity with the present Convention,” – Article 4 (c) and (d).
- The purchase of inaccessible ICT product and services by States Parties to the Convention would thus seem incompatible with those general obligations and more specifically with ICT accessibility dispositions for communicating with the public or, when those purchases are made for government internal use, incompatible with the obligation to foster an accessible work environment.
- Furthermore, Article 9 “Accessibility” specifies that “States Parties shall also take appropriate measures to develop, promulgate and monitor the implementation of minimum standards and guidelines for the accessibility of facilities and services open or provided to the public” Article 9.2 (a). In that regard, public procurement constitutes an excellent vehicle to foster standards.

Some recommendations on what to include in an accessible ICT public procurement policy:

- include clear statements of user accessibility needs in all calls for tender, based on internationally recognized standards.

- apply systematic and commonly used conformity assessment processes to confirm that the ICT products and services to be procured reach the stated level of accessibility conformance.
- provide general disability awareness training for all staff and vendors specific role-based training depending on the technical accessibility requirements of the role (e.g., for developers and IT professionals).

Module 6 of the [ITU's Model ICT Policy Report](#) provides guidance to government bodies in public procurement of accessible Information and Communication Technology (ICT) products and services. The module recognizes that addressing the ICT accessibility needs of persons with disabilities can be achieved more cost effectively by considering them in the earliest stage of the procurement and development process. This Model ICT Policy Report suggests that all public bodies procuring accessible ICTs adopt a set of generally accepted functional performance statements, preferably by referencing the European Standard EN 301 549. This Model Policy provides methods to assess the accessibility of the proposed ICT solution depending on the nature and complexity of the product or service purchased including off the shelf products, custom built products, integrated systems, system development, content development or services. The Model Policy recommends the use of templates for the assessment of the conformity of ICT products and services with the relevant accessibility standard used.

Case studies:

- Spain:
 - In Spain, the equivalent to the EN 301 549 V2.1.2 (2018-08) is Standard [UNE-EN 301549:2020 “Accessibility requirements for ICT products and services”](#).
 - This regulation provides presumption of conformity for the essential requirements of the Web Accessibility Directive (EU) 2016/2102, transposed in Spain, on the accessibility of websites and apps for public sector mobile devices.
 - The standard has the WCAG 2.1 of W3C as its main reference.
 - Tables A.1 and A.2 describe the accessibility requirements of websites and mobile applications. However, this standard can be applied to all ICT products and services.
 - Annex E which explains the document in a simple way and how to use it.
 - Chapter 14, on compliance, states that if a requirement cannot be met for an ICT product or service because it is not applicable, it will no longer be considered that it follows the standard to which, for these sections, is not applicable.
- United Kingdom:
 - In the United Kingdom, the [Government Digital Service](#) created the “[How to buy accessible technology](#)” guide with recommendations for making sure public bodies buy technology products that are accessible as possible. The guide provides orientations on:
 - [procuring an accessible website or app](#).
 - using the [EN 301 549](#) standard that covers procurement of web technologies and other types of technology, including hardware and non-web software to understand accessibility requirements during the procurement process.
 - searching for accessible technology using the [Digital Marketplace to access the G-cloud framework](#) and the [G-cloud buyers guide](#).

- getting help from the [government digital buying community](#).
- The [Government Digital Service](#) created the “[How to supply accessible technology to the public sector](#)” with guidance on:
 - creating a statement about how that product meets accessibility standards.
 - reviewing the [functional performance statements](#) and [functional accessibility requirements](#) to discover which are relevant to the technology to supply.
 - Using the EN 301 549 standard in procurement frameworks to find out the [accessibility conformity assessment or attestation](#) public buyers will request.
 - Providing documented evidence that the product meets the relevant standard and that it was tested with [assistive technology](#).
 - [Understanding and meeting the WCAG 2.1 standard](#) for websites and digital services
 - Using the [GOV.UK Frontend](#) to help suppliers’ services meet WCAG 2.1.

Resources on Public Procurement:

- The [EU Standard EN 301 549](#) (“Accessibility requirements suitable for public procurement of ICT products and services in Europe”) should be the one used as a guidance for developing accessibility requirements for public procurement in Kenya. This guide specifies the functional accessibility requirements applicable to ICT products and services, and a description of the test procedures and evaluating methodology for each accessibility requirement in a form that is suitable for use in public procurement within Europe.
- The [Accessible ICT Procurement Toolkit](#) developed by the European committee for standardization can be used a useful tool to identify the accessibility requirements for ICT public procurements.
- The Centre for Excellence in Universal Design, established by the National Disability Authority in Ireland, has an [IT Procurement Toolkit](#) that defines the Principles for Accessible procurement and provides a stage by stage guide to ensuring accessibility across all stages in the procurement lifecycle.

7. FINDINGS FROM FOCUS GROUPS

7.1.1. *Methodology.*

The gap analysis had both quantitative and qualitative elements including desk research, a survey, interviews and focus group discussions. The survey questionnaire mainly targeted the persons with disabilities [(specifically the blind and low vision (visually impaired); the deaf and hard of hearing (hearing impaired); and those with limited mobility and physical challenges (physically impaired)]

For purposes of capturing the perspectives of government officials, disability persons organizations (DPOs) and persons with disabilities (PWDs), the data collection exercise adopted a three-pronged approach. First, focus group discussions were held which targeted the persons with disabilities (deaf and hard of hearing, blind and low vision, and physically challenged). Secondly, Key informant interviews were held government officers. Thirdly, survey questionnaires targeting persons with disabilities.

For the qualitative sample, a total of 30 informants were targeted while for the survey – a total of 90 respondents were targeted. The interviews and focus group discussions were able to reach 28 informants while the survey reached 94 respondents.

7.1.2. *Data collection approach.*

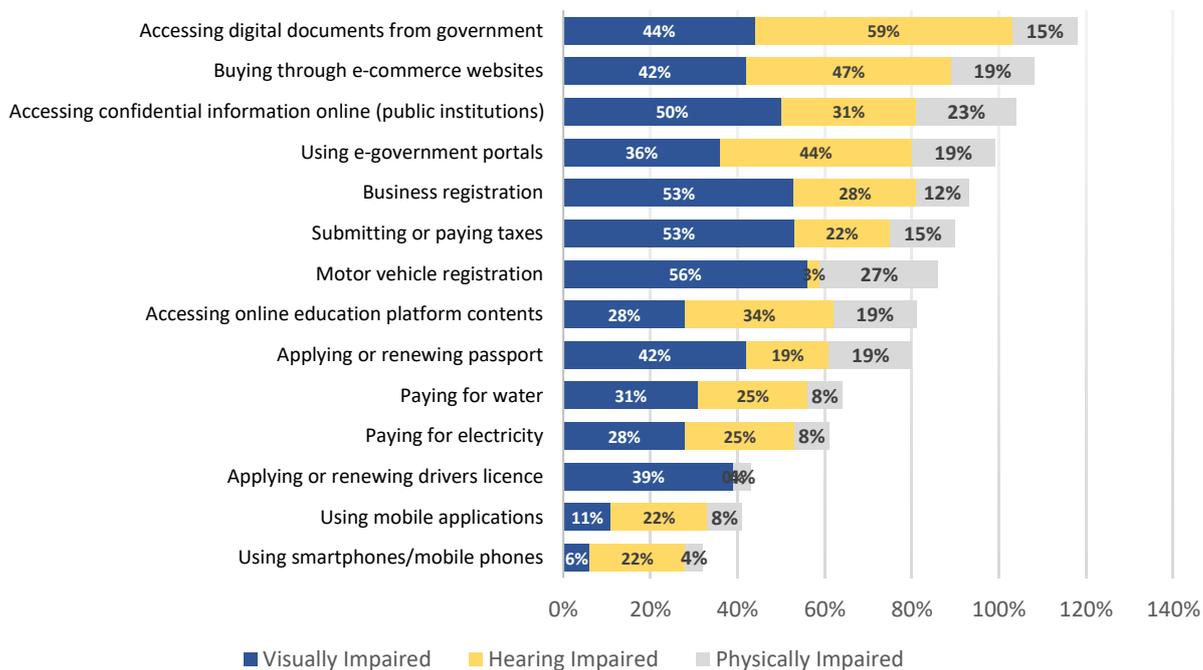
For the interviews and focus group discussions, the data collection was primarily virtual – for the government officials, persons with disabilities and the representatives of disability persons' organizations.

For the survey, three data collection approaches were used. For the persons with disabilities (the blind and the physically challenged), the computer aided telephone interviews (CATI) were prominently be utilized; for the deaf and hard of hearing – the computer aided personal interviews (CAPI) were utilized with the mobiliser (sign language interpreter) being the main data collector assisted by a note take; for the PWDs that could not be reached directly, the survey was designed in google forms and shared.

7.1.3. *The status of ICT Accessibility of Government Departments*

The rapid survey showed that generally accessing government services is a challenge across the board for persons with disabilities. Often times, the PWDs opt not to even try to access them because of the challenges but for those who use these services, they have different challenges. The figure below highlights some of the online services that PWDs struggle with, the proportions show those who indicated that they have challenges accessing the specific service. For instance, accessing digital documents from government services had the highest proportions of PWDs indicating they have challenge accessing it with an overall of 42% reporting challenges. (Q9a-9n)

PWDs having challenges accessing online services and platforms



From the figure above, it can be noted that persons who are blind or low vision are likely to have most challenges registering motor vehicles (56%), submitting tax returns (53%), registering business (53%), accessing online confidential information (44%) and accessing digital documents from government online (42%).

Persons who are deaf or hard of hearing are likely to have challenges accessing digital documents (59%), using e-government portals in general (44%), and accessing confidential online information from government (34%). While for those with physical impairments, the main challenge accessing government digital resources relates to accessing confidential online information (23%) and motor vehicle registration (27%).

An analysis of the qualitative interviews and discussions also noted found that government is doing a lot but more needs to be done. The informants from government indicated different initiatives that departments were undertaking. For instance, the Communication Authority had the Universal Service Fund that specifically targets the remote and rural areas to ensure they have connectivity; The Ministry of Education has the sector policy for trainers and learners with disabilities in addition; The judiciary, State law office, is implementing an accessibility policy that has ensured that the website is accessible and workers with disabilities are facilitated to work. However, when PWDs were asked if they have challenges accessing broadband internet services 71% (VI-61%; HI-72%; PH-85%) indicated that they had difficulties accessing (Q4). Lack of access/availability (54%) and cost of using (36%) were the main challenges cited by PWD (Q5).

Majority of government websites are inaccessible to persons who are blind or low vision. It was noted that some critical government websites are inaccessible or not fully accessible. For instance, Kenya Revenue Authority website was partially accessible and proved difficult

especially for persons with blindness or visual impairment; the websites did not follow the international standards and the PWDs indicated that they are rarely consulted during the design of the websites or online resources that affect them. Most websites for the county governments were inaccessible and could not be used to get information or services. As summarized by the informant below:

“In some cases, the developer does not put the voice so you cannot access. That is some websites not all. For example, the KRA there is a place you need to log in using captcha making it inaccessible to us the VI. The judiciary, Kenya law that is the state law office websites are accessible”
(Key Informant Interview, PWD-Blind, Male).

Inaccessibility to government online resources disadvantages persons with disabilities. The persons with hard of hearing and those who were blind or low vision noted that having online resources that are poorly designed, without involving PWDs has led to them being disadvantaged. For instance, sharing information with only audio-visual and without closed captioning disadvantages the deaf and hard of hearing, while on the other hand, having information with visual only (text only) disadvantages the blind and low vision. Majority of the resources available do not involve the PWDs at design stage therefore missing out these adjustments that would suit majority (all) PWDs. Some of these gaps have led to PWDs not accessing job opportunities depending on how they have been advertised.

“Lack of consideration of PWD ICT needs has progressively denied PWDs employment as many are not able to apply for jobs especially the visually impaired. This inconsideration can also be seen in lifts and in mobile applications and there is lack of awareness amongst those responsible in creating such features” (FGD with PWDs, Physical, Male)

Participation by the PWDs in the affairs of the country is limited because of lack of enforcement of inclusivity policies. The survey noted that few PWDs are involved in policy making processes on ICT accessibility in Kenya. For instance (Q15), only 23% respondents reported being familiar with processes that involved PWDs in policy making (VI-35%; HI-13%; PH-21%). This is contributed by either not being able to access the information about the venue, time or topic of discussion or if they get this information the public space does not meet their needs (e.g., does not have a sign language interpreter, or the materials are all in text form without accessible soft formats). It was found that sometimes this information is posted online and or put in the national newspapers like the “Nation” and the “Standard”. One of the study participants opined that it was just a few of the PWDs who have access to such papers. In order to overcome this barrier, they resort to scanning and sharing them with their friends. However, this has its own challenges since the scanned objects cannot be read by screen readers.

It was also reported that for the blind, screen readers were not available in public places and if they are available, they are connected to just a few computers which is discriminatory. Given that the screen readers voice out or produce voice, this makes it an impediment as it may irritate those who are not using it. For those who use screen readers the main challenge has been the lack of putting appropriate text tags on graphics, links, tables or forms by the developers. For government service provision centers like the Huduma centers, it was reported that their website is mixed up for access by persons with vision impairment. For instance, there were instances in some videos in which some subtitles overlapped on-screen text.

7.1.4. *The perception of Persons with Disabilities on existing ICT Accessibility barriers in Kenya, and expectations about ICT Accessibility policies in the country*

To determine the perception of PWDs on existing ICT accessibility barriers in Kenya, both quantitative (survey questions) and qualitative (interviews and focus group discussions) were administered. It was noted that low incomes and limited educational opportunities PWDs (32%), low literacy levels of PWDs and limited training on device use and rehabilitation services (27%) and lack of community awareness on PWD issues (11%) were cited as the main barriers across the different PWDs. Below are some of the key findings from the survey (Q12).

Table 1: Major Barriers for ICT accessibility policy implementation

Barriers	Visually Impaired	Hearing Impaired	Physically Impaired	Overall
Low incomes	32%	19%	46%	32%
Cultural stereotypes	27%			
Limited ICT availability	29%			
Lack of community awareness	9%	9%	14%	11%
Low literacy levels/Training on device use		69%	7%	27%
Physical accessibility to buildings			25%	

From the table, when asked to choose one main barrier to ICT accessibility policies in Kenya, it was found that, of all the PWDs who were visually impaired, 32% felt that low incomes and limited educational opportunities, limited ICT availability (29%) and cultural factors such as pity, shame and stereotypes (27%) were the main barriers. For all the PWDs who were hearing impaired, majority (69%) felt that low literacy levels were their main barrier with low incomes (19%) and lack of community awareness (9%) being the barriers cited by the rest. On the other hand, PWDs with physical impairment cited low incomes (32%), low literacy levels (27%) and lack of community awareness (11%) as the main barriers.

The following were the main barriers that were highlighted during the discussions and interviews with DPOs and PWDs

Poorly developed and inaccessible applications and websites. The informants from all categories (disability persons organizations, blind & low vision, deaf & hard of hearing, and mobility & physical challenges) emphasized that the main barrier is inaccessible applications and websites. This affected mostly persons who were blind or low vision indicated that majority of the websites are not accessible to them. The deaf and hard of hearing also noted that some websites used audio visual formats without closed captioning. The informants noted that majority of the institutions do not prioritize accessibility, nor do they involve PWDs during the design of the websites leading to inaccessibility. In the survey (Q19), only 7% of the respondents indicated that PWDs and/or DPOs were involved in the design of E-government

services. Furthermore (Q18), only 1 out of 10 (11%) opined that the e-government deployments are designed from a user-centric perspective. Of all the PWDs who had physical impairments only 18%) thought that e-government resources were user-centric, while only 9% of PWDs with visual impairment and 6% of those with hearing impairment felt the same.

A male person with mobility and physical challenges had this to say:

“A student in a wheelchair may find web-based distance education helpful but those with limited mobility may find it harder to use. Touch screen is good for the deaf but a headache to the visually impaired.”

High cost of devices and applications for accessibility. Whereas accessibility features have been entrenched in most android and IOS phones, PWDs noted that generally the devices are more expensive hence limiting the access to these applications. In some cases, these applications require subscription hence unaffordable. It was noted that the IOS phones (I-phones) have superior accessibility features, but they are the most expensive phones and owned by fewer PWDs. In relation to costs (Q5), 78% of persons with hearing impairment reported it being the main challenge they face in accessing broadband internet. When asked (Q37) if there was any financial support system for PWDs to utilize accessible computers or assistive technology, 19% indicated that there was, 37% indicated there was none while 44% did not know.

Lack of standardization of applications and online resources. It was noted that the challenge of standardization of accessibility for ICT resources is complex but not impossible to address. The survey (Q16) found that majority of the PWDs (95%) are unaware of the international accessibility standards. This makes it hard for PWDs to demand for standardization of accessibility in ICT. Furthermore (Q31), only 9% of the PWDs felt that there were sufficient accessibility standards in place to cover ICT products. From the interviews and FGDs, the persons who were deaf and hard of hearing noted that the different versions of Kenya Sign Language make it hard to decode, one informant noted *“it appears sign language variations hinders fast decoding of the signs”* making hard to quickly communicate. Another standardization related challenge was that of upgrades that may interfere with original accessibility formats where the PWD has familiarized themselves with one version and the upgrade introduces new features that may require more learning or in some cases, the upgrade erodes the accessibility features. For the persons with physical and mobility challenges, they noted that infrastructure in public places were an impediment to them accessing ICT resources, for instance, cyber cafes having seats or computer tables that are very high so that those on wheelchairs cannot use computers, or ATM machines, or lifts in buildings with buttons so high.

The survey noted that the deaf and hard of hearing had the greatest challenges accessing information on public electronic media such as television or radio because of their “audio-focused” formats. (Q11) Indeed 82% of PWDs surveyed indicated that they have challenges accessing information through these electronic media, of which 94% were PWDs with hearing impairments compared to 69% with visual impairment and 85% with physical and mobility impairments. An informant from the deaf and hard of hearing focus group had this to say on standardization:

“There are digital apps that want to be implemented for better services accessible, but new technologies come up hindering the best one plus the government agencies have not deliberated the best way for the implementation of ICT accessibility.”

From the rapid survey (Q10), it was noted that 69% of the PWDs with mobility & physical impairments indicated that they had challenges **MOST of the time** trying to access terminals such as ATM machines, ticket vending machines and digital information kiosks compared to 36% of those who were blind or low vision and 19% who had hearing impairment. A male and female informant respectively with mobility and physical challenges had these to say during the FGD:

“However, very specific things which often look small to others but are very important to us are ignored. For example, sockets are placed in positions we cannot access.” (PWD-Mobility & physical impairment, Male)

“It is very difficult for me to reach and use the mouse in a cyber because my hands are short. The navigation devices such as pointing devices discourage me from using the sites in a phone or computer”. (PWD-Mobility & physical impairment, Female)

Thus, indicating that for ICT accessibility to be truly achieved, there is need for an all-encompassing approach that also includes the physical structures that facilitate ICT accessibility such as placement of sockets, the design of desks and tables in cyber cafes, the placement of ATM or digital kiosks, among others. From the survey, it was noted that of the 75% of the PWDs who reported having difficulties accessing and using computers in their daily lives, 93% of them were those with mobility and physical challenges followed by those with visual impairments (74%) and those with hearing impairments (59%). The main challenge was lack of capacity to either access or operate computers – especially in public spaces (Q6).

Lack of well-organized and cohesive disability persons organizations. The interviews and focus group discussions noted that even though there are many associations and networks that are advocating for PWDs, there is still no proper cohesion among the different groups. This has led to fragmented approaches to advocacy initiatives and the agenda setting is not well targeted to address the accessibility issues in ICT, among other challenges. The organizations that are there are not strong enough financially to pursue the legal options of ensuring the policies and guidelines enacted to address PWD issues are litigated to conclusion. Majority of the organizations are left to pursue privileges and tokenisms as opposed to empowering the PWDs to fully and actively participate in the nation building as any other Kenyan. When the survey respondents were asked (Q30) if there was a structure in place by DPOs that can effectively be consulted or involved in addressing PWD issues, a total 27% indicated in affirmative with more who were physically impaired (46%) compared to those visually impaired (21%) and hearing impaired (16%). Perhaps an indication that there was more organization among the DPOs charged with physically impaired compared to other disabilities.

7.1.5. *Analysis of the knowledge about ICT Accessibility in Kenya by PWDs*

The knowledge on accessibility is generally low among PWDs. This is linked to the high cost of accessibility features. In addition (Q8), there is also the unavailability of the software required by PWDs, nearly 8 out of 10 (77%) of the survey participants indicated that they did not know where to get software that can aid them in their day-to-day life. While 95% were not familiar with the international ICT accessibility standards.

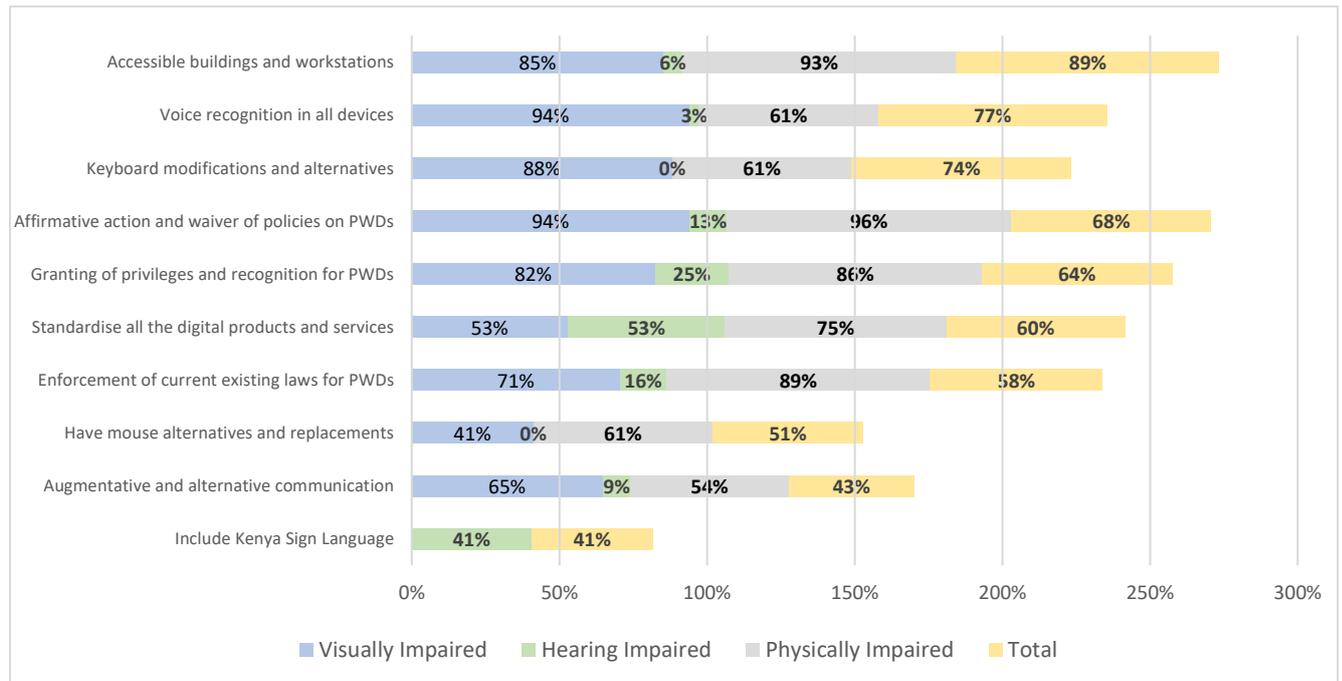
The survey (Q14) further noted that 32% of the respondents felt that their institutions had NOT initiated and implemented measures to strengthen and promote accessibility policies and programs with visually impaired (41%), hearing impaired (28%) and physically impaired (25%) indicating lack of programs and policies. In addition, the PWDs were at different levels of awareness of what government measures had been taken to protect their rights to information

and communication. A total (Q33) of 44% indicated that they were aware, but this was disproportionately when broken down with those with visual impairment (74%) indicating awareness compared to 13% for those with hearing impairment (almost 6 times more). Those with physical impairment who indicated awareness of government.

7.1.6. Recommendations

Recommendations (Q13) by PWDs are summarized in the table below:

Table 2: PWD Recommendations for ICT Accessibility and Inclusivity



Accessible buildings and workstations. The PWDs recommended the enforcement of building codes so that buildings are accessible. For the PWDs with physically impairment- the buttons for the lifts need to be at a level they can reach, the computers in public spaces need to have voice recognition software so that they can also use that where they have limited mobility. This was also the case for the blind and low vision. The survey indicated that 85% of the blind and low vision and 89% of the physically impaired considered this as an important recommendation.

More affirmative action for PWDs with focus on enforcement of policies. The PWDs recognized that government has done a great deal in putting in place laws and policies supporting PWDs, but the challenge remains in the enforcement. The recommendation was for the resources to be allocated since the challenge was not that of lack of resources but lack of prioritization of PWDs issues on accessibility.

Standardize all the digital products and services. This is a recommendation that was mentioned in almost similar proportions across all the PWD groups targeted with 60% noting the importance of standardization. The PWDs who were physically impaired (75%) felt more strongly about standardization compared to those with visual impairment (53%) and hearing impairment (53%). It should be noted (Q32), majority of the PWDs surveyed (53%) do not know if there are any initiatives being undertaken to ensure that relevant stakeholders are aware of the ICT accessibility requirements with a further 34% feeling that no action is being taken.

Therefore, the first step would be awareness raising on existing policies and guidelines before embarking on enforcement of the policies and guidelines.

Build more local capacities for ICT accessibility. There is either limited capacity or if available – the capacity to enhance ICT accessibility is not being applied. The government should build this capacity or outsource this capacity to ensure that the e-government resources are able to apply the local and international standards on accessibility. The priority should be given to online resources – business registration, Kenya Revenue Authority, Passport registration/renewal among other online resources commonly used by all persons (including PWDs).

Include Kenya Sign Language in online resources. The persons with hearing impairment emphasized that there is need to standardize KSL and include it in all the closed captioning for government online resources that have audio-visual formats. Nearly 41% of the respondents indicated that KSL was an important component of their lives and recommended its inclusion.

8. GENERAL RECOMMENDATIONS

8.1.1. Introduction

ICT Accessibility for persons with disabilities is a priority for ITU members, which recognize the need to ensure that the one billion people living with some form of disability can use information and communication technology (ICT) for their empowerment. One of the key steps to make ICT Accessibility a reality is to establish an enabling environment for ICT accessibility. Despite most countries around the world creating policy and regulatory frameworks that have triggered unprecedented growth in the use of mobile, Internet and other technologies by billions of persons worldwide, very few countries have taken steps to create policy and regulatory frameworks to ensure that persons with disabilities can use these technologies in equal terms. Examples of countries that have implemented ICT Accessibility regulatory frameworks include:

- Denmark: [Agreement on the use of open standards for software in the public sector](#) (Mandatory policy)
- Finland: [Act on Electronic Services and Communication in the Public Sector](#) (Accessibility law)
- France:
 - [Law N° 2005-102 Article 47](#) (Accessibility law)
 - [Order of 29 April 2015 on the general accessibility framework for public administrations](#) (Accessibility law)
 - [Law N° 2016-1321 Article 106](#) (Digital Governance law)
- Germany: [Federal Ordinance on Barrier-Free Information Technology](#)
- Ireland: The Disability Act, 2005 (Accessibility law)
- Italy: Law 9 January 2004, n. 4 "Provisions to support the access of disabled people to IT tools - Stanca Law" (Accessibility law)
- Netherlands:
 - Procurement Law 2012
 - Policy in the Netherlands (Mandatory policy)

- Spain: [Royal Decree 1112/2018, of September 7, on Accessibility of Websites and Applications for Mobile Devices in the Public Sector](#), transposes Directive (EU) 2016/2102 of the European Parliament and of the Council, of October 26, 2016, on the accessibility of websites and applications for mobile devices of public sector bodies, into the Spanish legal system. (Accessibility law)
- United Kingdom: [The Public Sector Bodies \(Websites and Mobile Applications\) \(No. 2\) Accessibility Regulations 2018](#) (Accessibility law) Creating and implementing specific national ICT Accessibility policy and regulation frameworks that support the principles of universal access to information and communication technology that cater to the needs of persons with disability can empower them and enable them to access and enjoy the use of mainstream ICTs in equal terms and, in turn, open doors to inclusive e-government services, mobile technologies, education, employment, health services, entertainment, emergency communications and culture, among other possibilities.

In turn, the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) establishes mandates for signatory states to define the minimum standards as per the Convention. Setting these standards is important, since promoting international standards are an essential success factor for signatory states implementing ICT accessibility and assistive technologies programs and policies. It is also imperative that states try and ensure the affordability of accessible goods and services as well as assistive technologies.

Accessibility dispositions include general ICT accessibility requirements as per Article 9⁴³ of the UNCRPD, as well as sector specific accessibility stipulations with direct implications for e-government, media and the Internet, education, employment, political rights, emergency response, culture and leisure, and special international information and programs related to the Convention.

The Convention defines obligations in relation to desired outcomes by application areas, rather than in specific technical terms. So, it is the responsibility of states, civil society, and industry to define the required solutions in their respective jurisdictions.

For the development of accessible ICTs, the articulation and strengthening of actions in an integrated and networked manner is fundamental. It is important to involve different actors in the development of digital inclusion policies and strategies, and it is also important that a collaborative environment be encouraged among all parties interested and responsible for accessibility and inclusive actions. This initiative depends on everyone working and contributing their efforts so that achievements such as those indicated in this research, should become increasingly common. There is no one party responsible, since it is a task for all, with the leadership of different national and international organizations.

Many countries have the challenge of understanding the needs of persons with disabilities. The lack of systematic information about this sector of the population and about the available activities and services is also an obstacle. In this way, proposing the creation of specific research where data and the needs can be compared can be a good step for the development of more integrated policies in the region. Despite the cultural differences, the availability of resources and the different priorities, the needs of the population with disabilities tend to be very similar in all countries. This facilitates the comparison and the search for common

⁴³ [United Nations Convention on the Rights of Persons with Disabilities \(CRPD\) Article 9 – Accessibility](#)

solutions. It is also important to intensify the action and the mapping of the actions that civil society has developed, and to seek greater alignment of strategies, allowing for a more effective analysis of the progress made in policy. It is important that this research be aligned with international frameworks, mainly with the monitoring process of the UN Convention for the Rights of Persons with Disabilities, which may bring important information for the crossing of data and as a secondary source.

It is also essential to search for alternatives in financing and resources for the implementation of policy. There are few countries that have resources from universalization funds for investment in accessible ICT initiatives. In the construction of regulatory frameworks, it is crucial that resources be allocated for the effectiveness of these policies and that there be clear sanctions in case of non-compliance. Advocacy for the inclusion of the issue in financing mechanisms and in projects with incentives, to promote initiatives in the area, contributes to the viability of the implementation of these policies.

In addition to public resources, the search for private funding sources can contribute to the increase of resources invested in the development of solutions that meet the needs of persons with disabilities. A suggested path is to consider the importance that the demands related to accessibility be incorporated in procurement processes of companies and governments. In this way, financing may also originate from the creation of demands for solutions, products and services that meet the growing demands of the population with disabilities.

8.1.2. General recommendations⁴⁴

The following general recommendations aim to help policymakers build and improve ICT accessibility policy frameworks:

- Awareness Raising:
 - Raise awareness around disability: making disability more visible is an essential step towards including the needs of persons in the priority list. On many occasions, stigma, negative stereotypes, and misinformation still surround the topic of disability which, when discussed, is sometimes addressed with silence, discomfort, or condescendence. Persons with disabilities must be given an amplified voice to openly discuss this reality and their needs in public settings through specific and mainstream actions including public media campaigns, film festivals, events marking the International Day of Persons with Disabilities (December 3rd) and including disability-specific subject matters in school curricula.
 - Raise awareness around ICT accessibility: improve public awareness and knowledge of the barriers faced by persons with disabilities when using ICTs among government officials, policymakers, educators, and companies, and the solutions needed to improve quality of life and inclusion of PWD. Increase the awareness around and adoption of international ICT accessibility standards (ISO, W3C, EN 301 549). Actions may include incorporating ICT accessibility and Universal Design into academic programs and promoting ongoing ICT

⁴⁴ Ideas extracted and adapted from Darvishy, Alireza & Erocal, Deniz & Manning, Juliet. (2019). [Delivering Together for Inclusive Development: Digital Access to Information and Knowledge for Persons with Disabilities](#). Publication available in [Open Access under the Attribution-ShareAlike 3.0 IGO \(CC-BY-SA 3.0 IGO\) license](#).

- accessibility capacity building programs among government bodies, professional associations, and the education system.
- Use an experimental approach to raise awareness of the reality faced and lived by persons with disabilities in our society in general.
 - Policy improvement:
 - Involve persons with disabilities in the design of ICT Accessibility policies: Article 33 of the UNCRPD instructs Member states to “develop and enact systematic formal processes to involve DPOs in policy making and monitoring.” Bringing persons with disabilities into every stage of development of public policies is the most effective way to properly understand and address their ICT Accessibility needs.
 - Insert the country in the emerging international support Agenda, creating fair and equitable opportunities for the development and labor inclusion of persons with disabilities.
 - Replicate successful experiences from other countries has been particularly useful.
 - Review policies in force.
 - Define inclusive public policies in the telecommunication sector and the information society.
 - Create permanent working groups to build strategies for the implementation of accessible policies.
 - Create a specific national ICT Accessibility center: a state-run national competence center could help centralize ICT accessibility initiatives and oversee and monitor the development and implementation of ICT Accessibility policies and directives.
 - Discuss with relevant stakeholders to find out how to remove barriers in the use of telecommunication/ICT services.
 - Create a database to exercise an effective control over those bounded by the national law.
 - Review policies that restrict the promotion of accessibility and support to accessible ICTs.
 - Capacity building:
 - Prioritize leveraging accessible ICTs to improve access to vocational training and higher education to persons with disabilities: persons with disabilities generally reach lower education attainment levels and experience lower employment rates. Successfully completing education and acquiring professional skills have a direct impact on financial opportunities and employment in life. Online courses and educational materials in accessible digital formats may be key to provide persons with disabilities with opportunities to develop their skills and knowledge.
 - Build capacity on ICT accessibility among public agents.
 - Implement capacity building programs on:
 - Assistive technologies tools.
 - Communication tools and information access to Persons with disabilities.
 - Mobile classrooms project to bring ICT to unserved areas and raise public awareness – the project foresees hydraulic or electric lift for Persons with disabilities, a workplace with a basic kit for people with

physical, intellectual, and sensorial learning disabilities, “big keys” keyboard and mouse flexible support.

- Implement accessible social inclusion alternatives through government projects and initiatives and contribute to events on the different social aspects to change the collective imagination in relation to the disability thematic.
- Strengthen the role of related NGOs.
- Access to internet and devices:
 - Make broadband Internet access available and affordable for persons with disabilities: today, having access to affordable broadband Internet service is probably the most important element of digital inclusion, as it is the gateway to ubiquitous communication, job opportunities, access to information, education, and services, and to actively participate in society. Design programs, policies or regulations that ensure Internet access for persons with disabilities at affordable conditions.
 - Adopt an Action Plan for the Attention of the Users with Disability of Public Telecom Services.
 - Funding startup programs for the development of assistive technologies and applications for people with disabilities.
 - Use the rights approach: promoting access to information and knowledge of their rights as users of public services of telecommunications through workshops and informative talks, as well as circulation material in accessible formats.
 - Provide information to persons with disabilities on their rights because they lack information, and this generates a lack of interest of those users to access the benefits offered by ICTs.
 - Build solutions from the basis, beginning, involving target-population.
 - Use the Universal Service Funds to identify the gaps which exist in telecommunications and utilize the fund to promote access.
 - Facilitate and promote public-public partnerships for the provision of the following accessible channels:
 - Web accessibility: free distribution of JAWS and MAGIC software to private companies to be used to make accessible their content and web sites.
 - Telephone accessibility: work with companies call-centers to ensure accessibility for deaf people.
 - Face-to-face accessibility: provision of adequate service for deaf and blind people, with availability of sign language and accessible information for the visually impaired, with understandable and easy navigation digital content.
- Guidelines:
 - Build a community of experts in the field of ICT accessibility: a group of nationally recognized ICT accessibility experts could provide guidance and expert advice to the government on an ongoing basis.
 - Prepare specific documentation, guidelines, and recommendations to improve the accessibility of web sites and digital documents.
 - Adjust automatic evaluation of web accessibility tools.

- Prepare and share guidelines and recommendations, documenting the experience of organizations that have implemented good practices so these good practices can be replicated by others.
- Elaborate and adopt ICT standards regarding accessibility.
- Adopt the Web Content Accessibility Guidelines (WCAG) 2.1 within the national public administration.
- Develop a first version of a tool to assess the accessibility of web sites.
- Launch a “web accessibility stamp” for those government entities and companies that achieve and maintain conformance to accessibility standards in their web sites.
- Increase research on issues related to ICT accessibility and consult with related organizations.

Recommended actions by national institutions to strengthen the awareness of national stakeholders to promote ICT accessibility policies and programs, motivate other national stakeholders to upgrade knowledge, expertise, and skills to promote ICT accessibility and programs:

- Sign cooperation agreements with other government entities to promote events and divulge the rights of Persons with disabilities to telecommunication/ICT services.
- Organize of workshops and information sessions targeting public and private entities on the rights of Persons with disabilities and the public telecommunication services.
- Launch ICT accessibility awareness campaigns that seek to educate the public and the Persons with disabilities population on accessibility options. Specifics of the campaigns include the publication of advertisements on the newspapers and on social media, brochures that contain information on accessibility features on ICT devices and exhibition displays of same.
- Involve telecommunication services operating companies and disability related civil associations in government projects and initiatives.
- Host international events on telecommunication/ICT accessibility.
- Promote the implementation of government projects and initiatives.
- Partner with associations of persons with disabilities to support and promote their work.
- Prepare and disseminate useful information on the use and benefits of ICTs for persons with disabilities that can be used by any stakeholder that wishes to apply it.
- Establish a National Council for Disability as a provisional Government working body that can coordinate government entities and civil society entities to develop actions to promote accessibility policies and programs.
- Develop annual national campaign to raise awareness within the public and private sectors in regards the permanent accessibility updates of the new technologies, providing free assistance and the necessary accessibility tools in benefit of Persons with disabilities and facilitate communication processes among the sectors.

8.1.3. The ITU-G3ict Model ICT Accessibility Policy Report

The ITU-G3ict Model ICT Accessibility Policy Report⁴⁵ is a practical tool for national policymakers and regulators to create ICT accessibility policy frameworks and to promote accessible ICTs and the empowerment of persons with disabilities. The Report’s approach is

⁴⁵ ITU-G3ict: [Model ICT Accessibility Policy Report \(2014\)](#)

to develop national policies in consultation with persons with disabilities and includes six modules focused on different aspects of ICT accessibility:

- Amendments to the existing ICT legal framework
- Public ICT access
- Mobile communications
- Television/video programming
- Public procurement of accessible ICTs.

The following are good practices for developing and implementing ICT Accessibility and Digital Inclusion policies suggested by the Report:

- **Mainstream ICT accessibility** through inclusive language, definitions and provisions in policies, laws, and regulations.
- **Identify key steps that can be taken quickly** to promote ICT accessibility, e.g., ensuring accessible devices are available (mobile phones, etc.).
- **Raise awareness** among key stakeholders by promoting ICT accessibility through public outreach programs, working with industry to develop universally designed products, and gathering and publishing reports on developments with respect to ICT accessibility.
- **Build consensus and inclusive policymaking** through encouraging national debate and discourse, by setting up specialized fora and committees, through inclusive regulation-making and public consultation processes and encouraging voluntary codes of conduct and charters.
- **Drive collaborative efforts** through the promotion of public-private-partnerships,
- **Set clear targets**, carry out periodic reporting to monitor implementation and define roles and responsibilities.
- **Promote training**, capacity building and disability awareness amongst information policy makers, as well as capacity building on digital literacy amongst disability policy makers.

9. RESOURCES

This section includes a curated list of resources including training courses, guides, articles, and technical references that will provide policymakers, regulators, government ministries, department and agency administrators and other stakeholders with information and guidance to assist them in building and implementing ICT Accessibility policies and initiatives and in the development of training programs and capacity building exercises.

9.1. ITU Knowledge Development Training Courses:

- [ICT Accessibility - The key to inclusive communication \(online self-paced training\)](#)
- [Web Accessibility - The cornerstone of digital society \(online self-paced training\)](#)
- [How to ensure inclusive digital communication during crises and emergency situations \(Online self-paced training\)](#)
- [Internet for @ll: National Program in Web Accessibility](#)
- [Government innovation-based on emerging technologies](#)
- [Audio-based Indoor and Outdoor Network Navigation System for Persons with Vision Impairment](#)
- [Video-Tutorials on the creation of accessible digital documents:](#)
 - [Creation of Accessible Digital Content. Criteria and Recommendations](#)
 - [Accessibility Remediation: PDF Documents](#)
 - [Accessibility Remediation: Power Point Documents](#)
 - [Accessibility Remediation: Excel Documents](#)
 - [Accessibility Remediation: Word Documents](#)

9.2. ITU Policies, Strategies and Guidelines:

- [ITU Guidelines on how to ensure that Digital Information, Services and Products are Accessible by all people, including Persons with Disabilities during COVID-19 \(2020\)](#)
- [Toolkit and Global Standards for safe listening devices and systems \(2019\)](#)
- [Artificial Intelligence and Information Communication Technology Accessibility \(2019\)](#)
- [Future of Accessible Audiovisual Media Services, TV, and Video Programming \(2019\)](#)
- [Standards in the Procurement of Accessible Products and Services \(2019\)](#)
- [Overview of remote captioning services ITU-T FSTP-ACC-RCS \(2019\)](#)
- [Audio-based indoor and outdoor network navigation system for persons with vision impairment ITU-T F.921 \(2018\)](#)
- [Digital Skills Toolkit \(2018\)](#)
- [Recommendation ITU-T F.791: Non-Telephone Telecommunication Services: Accessibility Terms and Definitions \(2018\)](#)

- [Recommendation ITU-T F.930: Non-telephone Telecommunication Services - Accessibility and human factors. Multimedia Telecommunication Relay Services \(2018\)](#)
 - [Report to World Telecommunication Development Conferences \(WTDCs\) on Question 7/1: Access to Telecommunication/ICT services by persons with disabilities and with specific needs \(2017\)](#)
 - [Use cases for assisting persons with disabilities using mobile application \(2016\)](#)
 - [Guidelines for accessible meetings \(2015\)](#)
 - [Guidelines for supporting remote participation in meetings for all \(2015\)](#)
 - [Accessibility profiles for IPTV systems \(2015\)](#)
 - [Model ICT Accessibility Policy Report \(2014\)](#)
 - [The ICT Opportunity for a Disability-Inclusive Development Framework \(2013\)](#)
 - [Universal Service Funds and Digital Inclusion for All \(2013\)](#)
- 9.3. ITU on Awareness-raising and good practices:
- [Digital Inclusion News log](#)
 - ITU-D Study Groups 1 and 2: [Question 7/1: Access to telecommunication/ICT services by persons with disabilities and with specific needs](#)
- 9.4. ITU Publications:
- [Guide for addressing accessibility in standards \(H-Series Supplement 17, ISO/IEC Guide 71\), July 2015](#)
 - [Model ICT Accessibility Policy Report November 2014](#)
 - [The ICT Opportunity for a Disability-Inclusive Development Framework. September 2013](#)
- 9.5. General ITU:
- [Connect 2030 Agenda “Access a better world” - Goal 2: Inclusiveness, “Bridge the digital divide and provide broadband access for all”](#)
 - [Accessibility to ICTs: Achieving equitable communications for everyone](#)
 - [Persons with Disabilities](#)
 - [Accessibility](#)
 - [Dynamic Coalition on Accessibility and Disability](#)
 - [IRG-AVA Group](#)
 - [ITU CWG-Internet online consultation on Accessibility](#)
 - [Making ITU an accessible organization for persons with disabilities](#)
 - [ITU Accessibility Fund](#)
 - [ITU's Mandate](#)

- [Archive of ITU activities on ICTs and persons with disabilities](#)
- 9.6. United Nations:
- [UN Convention on the Rights of Persons with Disabilities](#)
 - [United Nations Disability Inclusion Strategy \(UNDIS\)](#)
 - Division for Social Policy and Development (DSPD), Division for Social Policy and Development (DESA): [Toolkit on Disability for Africa. Information and Communication Technology \(ICT\) and Disability](#)
 - [UN Secretary-General’s report on the implementation of the UN Disability Inclusion Strategy \(2020\)](#)
 - [WSIS Session "UN collaborative efforts towards SDGs, CRPD and UNDIS implementation in Digital Accessibility" \(16 July 2020\)](#)
 - Darvishy, A., Erocal, D., Manning, J. (2019). [Delivering Together for Inclusive Development: Digital Access to Information and Knowledge for Persons with Disabilities](#)
 - [UNESCO Model Policy for Inclusive ICTs in Education for Persons with Disabilities](#)
 - [UNDESA: COVID-19 Outbreak and Persons with Disabilities](#)
- 9.7. European Union
- [European Disability Strategy 2010-2020](#)
 - [European Accessibility Act](#) (Directive [EU] 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services)
 - [Web Accessibility Directive](#) (Directive [EU] 2016/2102 on the accessibility of the websites and mobile applications of public sector bodies)
- 9.8. Other:
- ISO: [ISO/IEC 40500: 2012 Standard: Information technology -- W3C Web Content Accessibility Guidelines \(WCAG\) 2.0](#)
 - Microsoft White Paper: [Microsoft Perspectives for Policymakers: Accessibility](#)
 - [Universal Instructional Design](#). Western University, Centre for Teaching and Learning
 - [Universal Instructional Design and Universal Design for Learning](#). University of Guelph.
 - [EDF Directive on Accessibility of the Websites and Mobile Applications of public sector bodies Toolkit](#) (2017)
 - EU Public Procurement Directives:
 - [Directive 2014/24/EU \(Article 42\)](#)
 - [Directive 2014/25/EU \(Article 60\)](#)
 - [W3C “Developing a Web Accessibility Business Case”](#): social, technical, and financial factors that will benefit from implementing web accessibility.

- [W3C videos “Web Accessibility Perspectives”](#): impact and benefits of web accessibility for everyone.
- [EDF Audiovisual Media Services Directive \(AVMSD\) Toolkit for Transposition \(2019\)](#)
- [EDF European Accessibility Act Toolkit for Transposition \(2020\)](#)
- [EDF European Electronic Communications Code Toolkit for Transposition \(2020\)](#)
- [EDF. The United Nations Committee on the Rights of Persons with Disabilities: A Guide for Organizations of Persons with Disabilities \(2019\)](#)

10. GLOSSARY

- **Accessibility:** The degree to which a product, device, service, or environment (virtual or real) is available to as many people as possible.
- **Assistive Technologies:** separate hardware or software added to equipment or services to enable persons with more severe disabilities to overcome the barriers they face to access information and communication. They are used to enable or compensate users with functional, motor, sensory or intellectual impairments.
- **Assessment:** A process that includes the examination, interaction with, and observation of individuals or groups with actual or potential health conditions, impairments, activity limitations, or participation restrictions. Assessment may be required for rehabilitation interventions, or to gauge eligibility for educational support, social protection, or other services.
- **Braille:** A system of writing for individuals who are visually impaired that uses letters, numbers, and punctuation marks made up of raised dot patterns.
- **Disability:** Disability is an evolving concept and results from the interaction between persons with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others, as defined in the UN Convention on the Rights of Persons with Disabilities (CRPD). Under the International Classification of Functioning, Disability and Health (ICF) adopted by the World Health Organization (WHO) in 2001, disability is conceived as the outcome of the interaction between impairments and negative environmental impacts. The WHO emphasizes that most people will experience some degree of disability at some point during their lives. Accordingly, the ICF classification focuses on a persons’ abilities and strengths and not just impairments and limitations. It also grades functioning on a scale from not impairment to complete impairment. By shifting the focus from cause to impact, ICF places all the health conditions on an equal footing.
- **Disabled Peoples’ Organization (DPO):** A DPO is an organization representing persons with disabilities focused on the promotion of their rights. These organizations must be mainly composed of and led by persons with disabilities. In the case of people with significant intellectual or multiple disabilities, they can also be family-based organizations advocating for the human rights of persons with disabilities.

- **Electronic document:** downloadable files which may be consulted, printed, or filled offline or on-line by users.
- **Empowerment:** The empowerment of a group or community increases its strengths and improves its capacity to accomplish its goals. Empowerment is the expansion to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives.
- **EN 301 549 V2.1.2 (2018-08):** European standard describing functional accessibility requirements applicable to ICT products and services and test procedures and evaluation methodology for each accessibility requirement in a form that is suitable for use in public procurement within Europe.⁴⁶
- **[European Accessibility Act](#)** (Directive [EU] 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services): directive that aims to improve the functioning of the internal market for accessible products and services, by removing barriers created by divergent rules in Member States. Products and services covered include computers and operating systems, ATMs, ticketing and check-in machines, smartphones, TV equipment related to digital television services, telephony services and related equipment, access to audio-visual media services (e.g., television broadcast and related consumer equipment), services related to air, bus, rail and waterborne passenger transport, banking services, e-books, and e-commerce.⁴⁷
- **Impairment:** term used to refer to the loss or limitation of physical, mental, intellectual, or sensory function on a long – term or permanent basis.
- **Inclusive Development:** Inclusive development is a rights-based process that promotes equality and the participation of the largest possible section of society, especially groups that face discrimination and exclusion. Inclusive development ensures that persons with disabilities are recognized as rights-holding equal members of society, who are engaged and contributing to a development process for all. Inclusive development can be implemented at the national and local level.
- **Independent living:** a philosophy and a movement of people with disabilities, based on the right to live in the community but including self-determination, equal opportunities, and self-respect.
- **Information and Communication Technologies (ICT):** encompass a wide range of hardware and software, devices and computers, formats and systems that enable communication through electronic means. This includes devices and systems used for the storage, processing, and retrieval of electronic information to the array of devices and software used to retrieve this information, as well as those used to communicate, in real-time, with other people.
- **International Classification of Functioning, Disability and Health (ICF):** The classification that provides a unified and standard language and framework for the

⁴⁶ CEN, CENELEC, ETSI. [ETSI EN 301 549 - V2.1.2 - Accessibility requirements for ICT products and services](#)

⁴⁷ European Commission. [European Accessibility Act](#).

description of health and health-related states. ICF is part of the “family” of international classifications developed by the World Health Organization.

- **ISO/IEC 40500:2012:** Information Technology — W3C Web Content Accessibility Guidelines (WCAG) 2.0 standard which covers a wide range of recommendations for making Web content more accessible. Following these guidelines will make content accessible to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity, and combinations of these. Following these guidelines will also often make your Web content more usable to users in general. This standard contributes to the following Sustainable Development Goals (SDG) 8, 9 and 11.⁴⁸
- The [World Intellectual Property Organization \(WIPO\) Marrakesh Treaty \(MT\)](#), is a United Nations Treaty that came into force on 30th September 2016 and sets norms for ratifying countries to create mandatory domestic copyright exceptions for creating accessible versions of books and other copyrighted materials aimed to facilitate access to them for persons who are blind, visually impaired or otherwise print disabled. It also limits duplication and increases availability of accessible works by enabling cross border sharing so that they can be shared freely all over the world, or at least in all the countries that have ratified the Marrakesh Treaty. As of December 2020, it has been signed by over 76 countries and ratified by 39 countries.
- **Persons with disabilities:** individuals who have long-term physical, mental, intellectual, or sensory impairments, which, in interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others. Older persons with functional disabilities are also regarded as persons with disabilities (Article 1 of the UN Convention on the Rights of Persons with Disabilities).
- **Prevalence:** The proportion of a population, per 1000 people, with a condition at a given time. For example, the prevalence of child disability is the proportion of children in a population that are found to have a disability. The 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.
- **Print disability:** a difficulty or inability to read printed material due to a perceptual, physical, or visual disability. Print disability will affect individuals in different ways, depending on a wide range of issues, including degree of impairment, degree of motivation, support, education, available resources and more. A person experiencing a print disability could be denied a broad range of information that other persons may take for granted and, in many cases, the absence of such information will result in ignorance and lack of action or sole reliance on the advice of a third party. Reasons for print disability may include vision impairment or blindness; physical dexterity problems such as multiple sclerosis, Parkinson’s disease, arthritis, or paralysis; learning disability, such as dyslexia, brain injury or cognitive impairment; literacy difficulties; early dementia.

⁴⁸ ISO (2012). [ISO/IEC 40500:2012](#)

- **Public sector:** ministries, national government departments, local government and other government or public agencies that provide e-government services and communication to the public as well as public education resources via websites, email, SMS, and other means of electronic communications.
- **Reasonable Accommodation:** The 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.
- **Relay services:** phone services operated by interpreters that enable people who are deaf or hard of hearing or who have a speech impairment, to communicate by phone through an interpreter with a person who can hear in a manner that is "functionally equivalent" to the ability of an individual without a disability.
- **Social Services:** Social services cover a large and diversified range of services, which are intended to improve standards of living, especially of marginalized individuals and groups, those discriminated against or in vulnerable situations. Social services are linked to national welfare schemes and are important tools for the implementation of public policies in the field of social protection, non-discrimination, the fight against poverty and exclusion. They are not conditioned by the contribution of the users and should enhance capacities of individuals for full inclusion and participation in society.
- **Universal Design:** Universal Design is a strategy which aims to make the design and composition of different environments, products, communication, information technology and services accessible and understandable to, as well as usable by, everyone, as far as possible in the most independent and natural manner possible, preferably without the need for adaptation or specialized solutions. It promotes a shift towards user-centered design by following a holistic approach and aiming to accommodate the needs of persons with disabilities, regardless of any changes they might experience during their lives. Consequently, Universal Design is a concept that extends beyond the issues of mere accessibility of buildings for persons with disabilities and should become an integrated part of policies and planning in all aspects of society.
- **User:** a person who interacts with the product, service, or environment.
- **Vocational rehabilitation and training:** Programs designed to restore or develop the capabilities of people with disabilities to secure, retain and advance in suitable employment – for example, job training, job counselling, and job placement services.
- **Web Accessibility Directive (Directive [EU] 2016/2102 on the accessibility of the websites and mobile applications of public sector bodies):** directive of the European Parliament and of the Council Europe in force since 22 December 2016, which obliges websites and apps of public sector bodies from EU Member States, with a limited number of exceptions (e.g., broadcasters, live streaming), to meet specific technical accessibility standards. It requires an accessibility statement for each website and mobile app; a feedback mechanism so users can flag accessibility problems or request information published in a non-accessible content; and regular monitoring of public sector websites and apps by Member States and reporting on the results. The Directive refers to the EN 301 549 V2.1.2 (2018-08) as the harmonized standard for websites and mobile applications that provides for the presumption of conformity with the Directive.

- **Website:** the entire collection of electronic files that are accessible through a domain name. It includes all website home pages and pages (including web applications and services, and dynamically generated content) referenced from website home pages, and web applications accessible from such webpages.
- **Web Content Accessibility Guidelines (WCAG) 2.1:** the web standard developed by the World Wide Web Consortium (W3C) Web Accessibility Initiative (WAI).

11. ABBREVIATION LIST⁴⁹

- AD: Audio Description
- AP: Autonomous Province
- AT: Assistive Technology
- ATM: Automated Teller Machines
- CAPTCHA: Complete Automated Public Turing test to tell Computers and Humans Apart
- DAISY: Digital Accessible Information System
- DPO: Disabled Persons' Organization
- EU: European Union
- G3ICT: Global Initiative for Inclusive Information and Communications Technologies
- ICT: Information and Communications Technologies
- W3C WCAG 2.1, ISO/IEC 40500:2012, EN 301 549
- IEC: International Electrotechnical Commission
- IFLA: International Federation of Library Associations and Institutions
- ISO: International Organization for Standardization
- IT: Information Technology
- ITU: International Telecommunication Union
- LMS (Learning Management System)
- LTA: Local Tax Administration
- PMI: Public Media Institution
- OGP: Open Government Partnership
- PWD: Persons with disabilities
- R&D: Research and Development
- SDG: Sustainable Development Goals
- STB: Set-top-box
- UDL: Universal Design for Learning
- UID: Universal Instructional Design
- UN: United Nations
- UNCRPD: United Nations Convention on the Rights of Persons with Disabilities
- UNDESA: United Nations Department of Economic and Social Affairs

⁴⁹ Add relevant source from Kenya or other accredited organization that makes this information publicly available.

- UNICEF: United Nations International Children's Emergency Fund
- W3C: World Wide Web Consortium
- WAI: Web Accessibility Initiative
- WCAG: Web Content Accessibility Guidelines
- WIPO: World Intellectual Property Organization
- WHO: World Health Organization