Access Denied:

How Telecom Operators in Africa Are **Failing Persons With Disabilities**

August 2020

CIPESA

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Introduction

Information and Communication Technologies (ICT) have the potential to make significant improvements in the lives of persons with disabilities through enabling their access to information, and enhancing their social and economic integration in communities by enlarging the scope of activities available to them.[1] Yet, while a great number of people now use ICT for a growing range of tasks, many persons with disabilities in Africa still find it hard to access and use digital technologies. As a result, they continue to miss out on the potential digital dividends.[2] Indeed, a 2018 United Nations study found that, in many countries, persons with disabilities faced inequality in accessing ICT and assistive technologies.[3] Assistive technologies are tools that persons with disabilities use to accomplish tasks, and they include screen readers, screen magnification software, text readers, and speech input software.[4]

In many instances, persons with disabilities are unable to use digital technologies because these technologies lack "digital accessibility", namely the ability of a website, mobile application or electronic document to be easily navigated and understood by a wide range of users, including those with visual, auditory, motor or cognitive disabilities.[5] Digital accessibility is thus key to enabling persons with disabilities access information and services. It is also an enabler of the enjoyment of other rights, such as the right to education, employment, social services, and political participation. However, for persons with disabilities to realise technology's transformative potential, their rights must be provided for in national laws and policies, and countries must take deliberate steps to ensure that they have unfettered access to quality information and ICT, and are protected from all forms of discrimination.[6]

One of the pillars of the 2030 Agenda for Sustainable Development Goals (SDGs) is the pledge to leave no one behind.[7] Indeed, up to five SDGs outline inclusion of persons with disabilities. These include inclusive learning environments and facilities (SDG 4); promotion of full and productive employment that allows persons with disabilities to fully access the job market (SDG 8.5); social, economic and political inclusion (SDG 10); creating safe, accessible, resilient and sustainable communities and cities for all (SDG 11); and availability of disability disaggregated data (SDG 17).[8] Specific to digital technologies, SDG 9c calls for increasing access to ICT and providing universal and affordable internet access.

1 *Empowering Persons with Disability Through ICT, https://unesdoc.unesco.org/ark:/48223/pf0000184704; Consultative Meeting on Mainstreaming ICTs for Persons with Disability to Access Information and Knowledge, https://unesdoc.unesco.org/ark:/48223/pf0000189237*

2 *Paul Kimumwe, Kenya, Tanzania and Uganda Must Do More to Improve Access to ICT for Persons with Disabilities, https://cipesa.org/2019/12/kenya-tanzania-and-uganda-must-do-more-to-improve-access-to-ict-for-persons-with-disabilities/*

3 *UN Flagship Report on Disability and Sustainable Development Goals, https://www.un.org/development/desa/disabilities/publication-disability-sdgs.html*

4 *Types of Assistive Technology, https://webaccess.berkeley.edu/resources/assistive-technology*

5 *Digital Accessibility, https://whatis.techtarget.com/definition/digital-accessibility*

6 *Sida, Disability Rights in Tanzania, https://www.sida.se/globalassets/sida/eng/partners/human-rights-based-approach/disability/rights-of-persons-with-disabilities-tanzania.pdf*

7 *UN, Leave No One Behind, https://tinyurl.com/y3ttaxvj*

8 *Sustainable Development, https://www.un.org/sustainabledevelopment/*

The United Nations Convention on the Rights of Persons with Disabilities (CRPD) places significant obligations on countries to promote digital accessibility and inclusion of persons with disabilities.[9] Article 9(2)(g) of the Convention calls on member states to ensure that persons with disabilities have access to ICT, including the internet. The Convention also calls on governments to ensure that private sector service providers also provide information and services in accessible formats for all. Most African countries have ratified the CRPD.[10]

Another instrument relevant to the region is the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Persons with Disabilities in Africa, which was adopted by the African Union Assembly in January 2018 but is yet to come into force.[11] The Protocol recognises the right of persons with disabilities to barrier-free access to the physical environment, transportation, and information including communication technologies and systems.[12] Moreover, some states in their national constitutions guarantee the rights of persons with disabilities, and have enacted specific laws to promote the realisation of these rights, including prescribing standards on digital accessibility for all.[13]

While there are various efforts to increase ICT usage in Africa, there is limited information about what telecom companies are doing to promote digital accessibility. This research contributes to addressing this knowledge and development gap

The telecommunication industry plays a critical role in the provision of information and communication services to the public. It has been observed that the benefits of creating products that are accessible to all extend not only to persons with disabilities but also to companies, by opening a new market opportunity for vendors among persons with disabilities. Nevertheless, enhanced accessibility of telecom services and products remains a relatively underdeveloped segment of the ICT market.[14] It is of utmost importance therefore that the telecommunications industry in Africa takes deliberate measures to promote accessibility of mobile communication products and services. Additionally, the industry needs to be proactive in creating and promoting awareness of accessible mobile communications among persons with disabilities, their caregivers, and organisations of persons with disabilities (DPOs).

While there are various efforts to increase ICT usage in Africa, there is limited information about what telecom companies are doing to promote digital accessibility. This research contributes to addressing this knowledge and development gap by assessing the performance of 10 telecom companies in five countries in promoting digital accessibility for persons with disabilities, in particular visual and auditory disabilities. The research presents some notable initiatives and common challenges, and offers recommendations to telecom operators, disability rights organisations, and government agencies charged with protecting and promoting the rights of persons with disabilities.

9 *Convention on the Rights of Persons with Disabilities, https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html*

10 *CRPD and Optional Protocol Signatures and Ratifications, https://www.un.org/disabilities/documents/2016/Map/DESA-Enable_4496R6_May16.jpg*

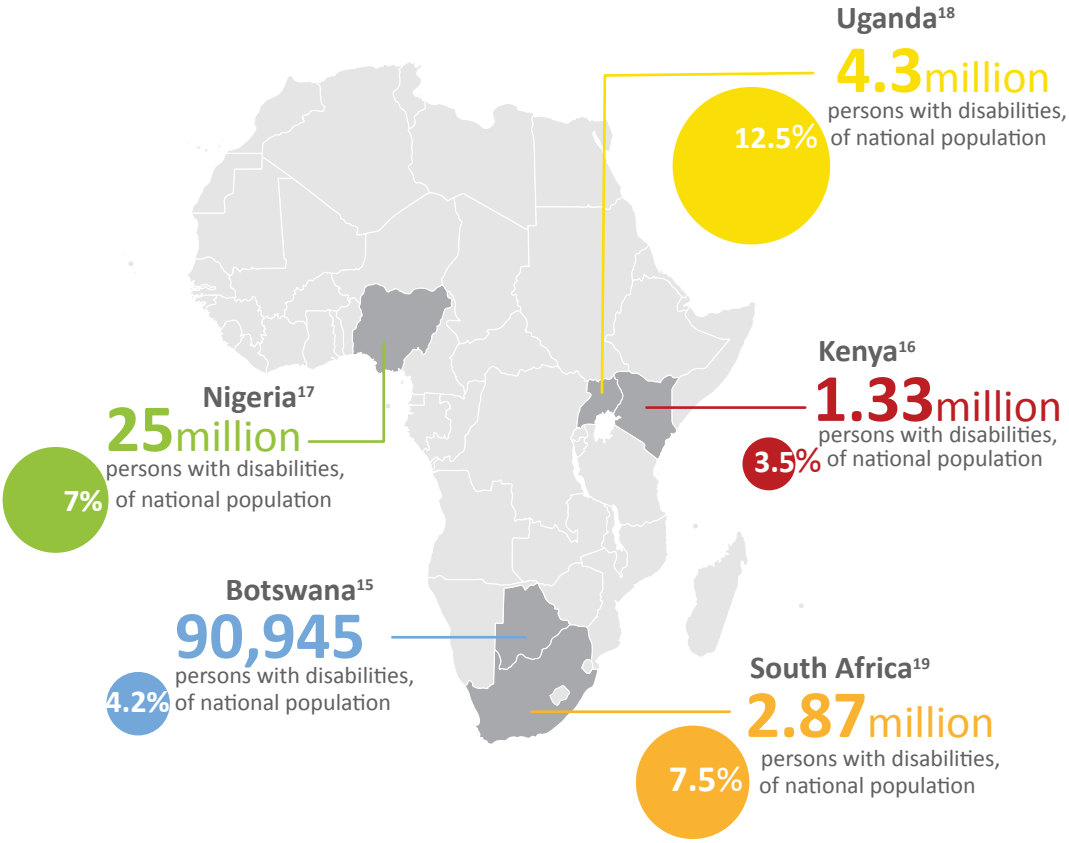
11 *Protocol to the African Charter on the Rights of Persons with Disabilities, https://au.int/sites/default/files/treaties/36440-treaty-protocol_to_the_achpr_on_the_rights_of_persons_with_disabilities_in_africa_e.pdf*

12 *Article 11 of the Africa Protocol on Rights of People With Disabilities, https://tinyurl.com/tnnqjd9*

13 *Policies and Laws on Disability in Different African Countries, https://afri-can.org/policies-and-laws-on-disability-in-different-african-countries/*

14 *UN, Technology, digitalization and information and communications technology for the empowerment and inclusion of persons with disabilities, 2019, https://undocs.org/CRPD/CSP/2019/2*

Disability statistics
for countries under study



15 *Statistics Botswana, Botswana Demographic Survey Report 2017, http://www.statsbots.org.bw/sites/default/files/publications/Botswana%20Demographic%20Survey%20Report%202017.pdf*

16 *Kenya National Bureau of Statistics, Number of persons with disability, https://www.knbs.or.ke/?p=164*

17 *World Health Organization, World Disability Report 2011, https://www.who.int/disabilities/world_report/2011/report.pdf*

18 *Uganda Bureau of Statistics, Persons With Disability, https://www.ubos.org/wp-content/uploads/publications/09_2019DISABILITY_MONOGRAPH_-_FINAL.pdf*

19 *Statistics South Africa, Profile of persons with disabilities in South Africa, http://www.statssa.gov.za/publications/Report-03-01-59/Report-03-01-592011.pdf*

Research
Design and Scope

This pilot study was conducted between August and December 2019. Assessments were conducted on 10 telecom companies in five countries: Botswana (Mascom and Orange), Kenya (Safaricom and Wananchi Telecom), Nigeria (Airtel and MTN), South Africa (MTN and Vodacom), and Uganda (Airtel and MTN). The companies were chosen because they are long-established operators and have the majority market share of telecom subscribers in the respective countries.

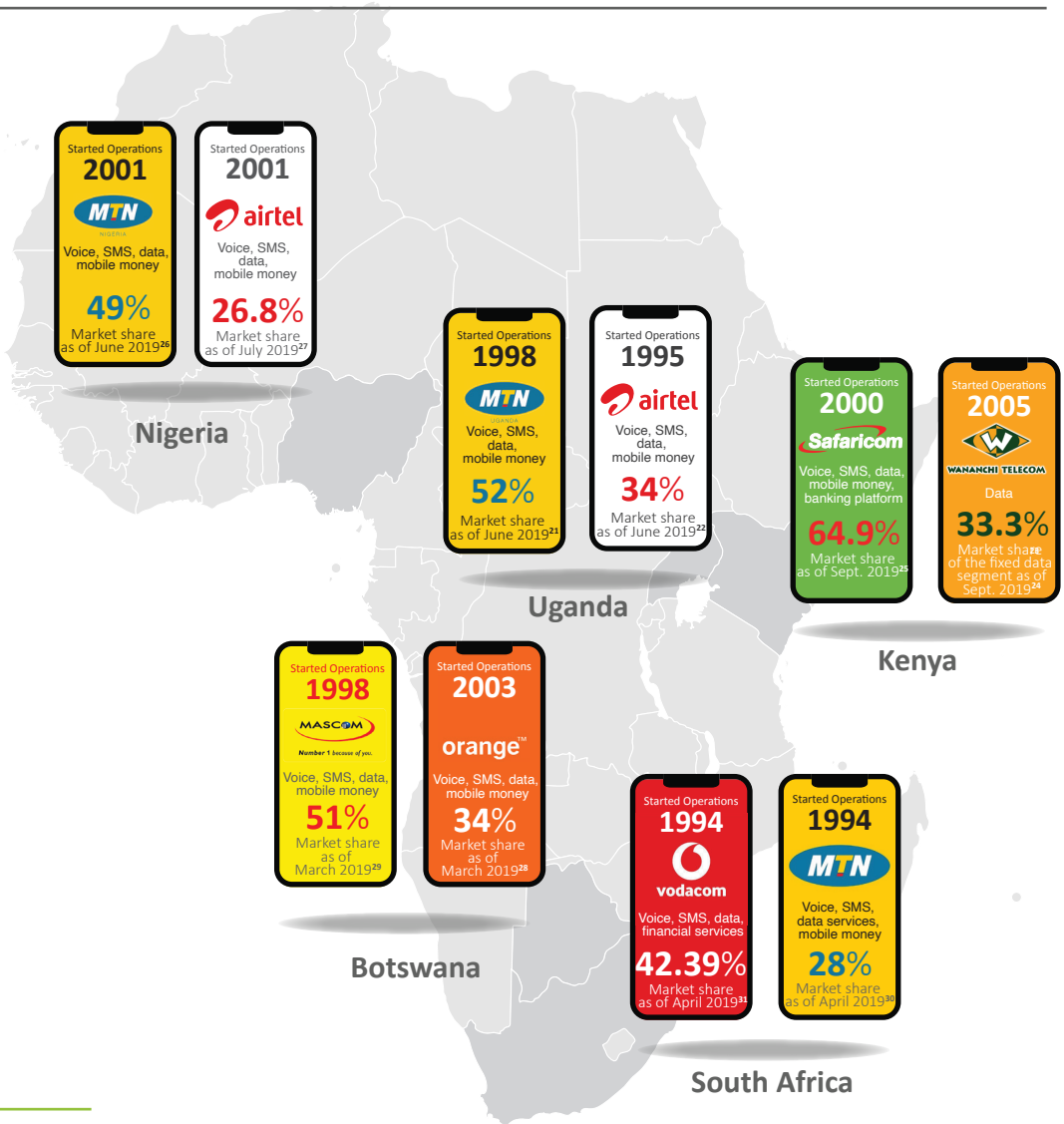
10 *Telecom companies* | Five Countries

The study was guided by a research tool that drew assessment criteria from the International Telecommunications Union (ITU) Model Accessibility Policy 2014, the Web and Mobile Content Accessibility Guidelines developed by the World Wide Web Consortium, and the CRPD.[20] The telecom companies were assessed on various facets of promoting digital accessibility, such as availability of accessible handsets and other mobile devices embedded with accessibility features; physical accessibility of sales and customer service outlets of the telecom operators; and whether the operators trained their staff to serve customers with disabilities. The companies were also assessed on their efforts to develop and avail accessible applications; whether they had special or discounted rates on their products and services for persons with disabilities; and whether they proactively promoted awareness about their accessible services and products.

The assessment process involved country-based researchers scoring telecom operators on the above criteria, and providing evidence-based explanations on how they determined the scores. The assessment tool also had a set of closed-ended questions with "Yes" or "No" responses, which also required detailed explanations, with supporting evidence and references. The researchers were required to determine their scoring based on evidence gathered through a combination of data collection methods that included documentary and literature review of relevant documents such as terms of services and internal policies, as well as other reports on the operators' quality of service; field-based observations that involved visits to an average of 10 telecom sales outlets in each country; key informant interviews with persons with disabilities, staff of DPOs, and employees of telecom companies.

20 *The Africa ICT Accessibility and Disability Indicators assessment tool was developed by CIPESA as a framework for measuring ICT accessibility for persons with disabilities in Africa, and assessing public and private sector compliance with digital accessibility obligations enshrined in the CRPD, national constitutions and other relevant policies.*

Companies **assessed**



21 *Connecting Africa, New Telecoms Licensing Regime in Uganda, https://tinyurl.com/yy7ofjex*

22 *Ibid.*

23 *Whereas Wananchi Telecom was included in the study, it turned out that since it offered only data services, mostly to internet service providers, it was not possible to assess it against the same criteria as the rest of the companies that offered a broad range of telecom services. As such, the reporting on results has no information on Wananchi Telecom.*

24 *Communications Authority of Kenya, First Quarter Sector Statistics Report for The Financial Year 2019/2020 (July -September 2019), https://ca.go.ke/wp-content/uploads/2019/12/Sector-Statistics-Report-Q1-2019-2020.pdf*

25 *Ibid*

26 *MTN dominates market share in over half its operations, http://www.connectingafrica.com/author.asp?section_id=761&doc_id=758785*

27 *Airtel overtakes Globacom, mobile subscription peaks at 174.67m, https://punchng.com/airtel-overtakes-globacom-mobile-subscription-peaks-at-174-67m/*

28 *BOCRA Annual Report 2019, https://www.bocra.org.bw/sites/default/files/documents/Bocra-AR19-web.pdf*

29 *Ibid.*

30 *Mobile market share 2019: Vodacom vs MTN vs Cell C vs Telkom, https://businesstech.co.za/news/mobile/319378/mobile-market-share-2019-vodacom-vs-mtn-vs-cell-c-vs-telkom/*

31 *Ibid.*

Results

Availability of Accessible Handsets in Sales Outlets

The study sought to establish the availability of disability accessible handsets and other mobile devices at telecom operators' sales outlets. Mobile handsets can be made accessible to persons with different disabilities by integrating a variety of features in the hardware design and operating system, and providing specific services as well as by installing third party applications such as screen readers and magnifiers which can help users navigate menus and content.[32] Assistive features, such as screen readers from a third party, can often provide a better user-experience than the original handset-embedded application or voice synthesiser, although more manufacturers are now embedding high quality applications such as in Apple's iPhone.[33]

The study found that MTN South Africa had an affordable accessible handset that was retailing at ZAR 250 (USD 16), which amongst other features had a 'talk back' option.[34] However, this handset was not available in MTN outlets visited in Campus Square and Rosebank Mall in Johannesburg. Staff in these outlets admitted to having no knowledge of any special offerings for persons with disabilities (call, SMS, data or discounted rates).

For its part, Vodacom South Africa's website stated that it offered Apple and Android smart devices that came with built-in text-to-speech applications (Apple - VoiceOver and Android - TalkBack) that convert text to audio, allowing visually impaired customers to listen to information such as SMS. The website offered options for in-store activation, assisted step-by-step guide and training.[35] Additionally, Vodacom South Africa said it also had easy-to-use devices with a big keypad and inclusive design smartphones.[36] Similar to the case with MTN South Africa, visits to some Vodacom outlets established that the handsets were not readily available on display and some sales agents were unaware of any such handsets.

In Nigeria, there were few accessible handsets and other mobile devices in telecom operators' outlets for both MTN and Airtel. Persons with disabilities from the Joint National Association of Persons Living with Disabilities (JONAPWD) stated in interviews that they were not aware of accessible handsets or devices offered or on sale by telecom companies. Specifically, visually impaired interviewees reported difficulty in using handsets sold in telecom companies' outlets, saying the majority lacked accessibility features, such as screen readers and magnifiers and voice commands.

32 *Making Mobile Phones and services accessible for Persons with disabilities, https://www.itu.int/en/ITU-D/Digital-Inclusion/Persons-with-Disabilities/Documents/Making%20Mobile-English.pdf*

33 *ibid*

34 *See https://www.icasa.org.za/uploads/files/MTN-presentation-on-%E2%80%8Bdraft-code-for-persons-with-disabilities.pdf*

35 *See https://www.vodacom.co.za/vodacom/services/specific-needs-persons-with-visual-impairments*

36 *Vodacom, ICT Accessibility / Specific Needs, https://tinyurl.com/vec8328*

Under section 15(1) of the Consumer Code of Practice Regulations 2007 issued by the Nigerian Communications Commission (NCC), licensees are required from time to time to consult the Consumer Forum[37] to ensure that the requirements and interests of consumers with disabilities are fully taken into account in developing and providing their services. The operators did not seem to be adhering to this requirement, although they mostly retailed as opposed to manufacturing the devices.

In Uganda, both MTN and Airtel had not taken any deliberate efforts to stock accessible devices. The two operators also made no reference either on their websites or in their terms and conditions to accessibility of mobile communications or to accessible devices for persons with disabilities. In Kenya, key informants from DPOs reported that Safaricom sales outlets retailed standard smartphones embedded with accessibility features. This was confirmed during field visits to Safaricom outlets in Nairobi. In interviews, MTN Uganda and Safaricom officials stated that since they did not manufacture mobile devices, the best they were doing was to sell smartphones embedded with accessibility features.

In Botswana, visits to seven Mascom stores in the capital Gaborone observed minimal availability of devices with accessibility features, aside from the provision of Apple and Android phones that were equipped with voice prompting for persons with visual impairement. The Southern Africa Federation for Disabilities (SAFOD) reported a lack of handsets for persons with severe mobility limitations or cognitive disabilities. Additionally, the Botswana Council for Disabled Persons noted lack of government incentives for investment and innovation in assistive technologies.

Promotion of Awareness of Accessible Mobile Telecommunications Products and Services

Assessment of companies' efforts to promote awareness of accessible mobile telecommunications products and service among persons with disabilities and DPOs revealed that the majority did not undertake any awareness promotion. This was firstly because availability of such services and products was still limited among the companies studied. Secondly, because many telecoms staff, including in sales outlets, were untrained and unaware of any such services. The best efforts seemed to be at Safaricom in Kenya and Vodacom in South Africa, with the operators assessed in Botswana, Nigeria, and Uganda lagging. None of the companies assessed availed information about its services in Braille.

37 *Schedule of the Consumer Code of Practice Regulation 2007, https://www.ncc.gov.ng/licensing-regulation/legal/regulations*

Vodacom had awareness alliances with DPOs such as the South African Audiology Association and South African Speech, Language and Hearing Association.[38] It also supported the development of HearZA app, a smartphone-based national hearing test app, developed in partnership with the University of Pretoria to help with early detection of hearing problems. In addition, in April 2018 Vodacom launched the free (082 112) SMS Emergency Service for hearing and speech impaired customers, which enabled registered customers to request emergency services such as police, ambulance, fire and sea rescue by sending an SMS to the Emergency Service Contact Centre.[39]

Meanwhile, Safaricom's website had a switch view feature that enabled a user to increase or reduce the font-size, and a live chat option available 24/7 to assist customers navigate the website.[40] Furthermore, in partnership with the Kenya Union of the Blind, Safaricom was creating a database of its customers with visual impairment in order to support better service provision,[41] such as flagging their phone numbers and connecting them to customer care agents trained to cater to them.

For the rest of the companies, no distinct efforts were found. According to officials of the Botswana Council of the Disabled, persons with disabilities were generally not aware of the existence of accessible devices. Staff of SAFOD and the Office for People with Disabilities, which sits in the Office of the President, said there were limited efforts by telecom operators to promote awareness of accessible mobile telecommunications. A staff member at SAFOD said while some members of the community were aware of some mobile phones that were equipped with accessibility features, such as Huawei's 'talk-back' feature, it was as a result of Huawei's advertising and not through an awareness campaign by telecom companies.

In Nigeria, MTN Nigeria has offered digital accessibility devices and scholarships to persons with disabilities.[42] Beyond this, key informants reported sketchy attempts at raising awareness of accessible mobile communications, by both MTN and Airtel Nigeria. There was no evidence that MTN Uganda and Airtel Uganda had undertaken any initiatives on promoting awareness about accessible mobile communication products and services.

38 *https://now.vodacom.co.za/article/check-your-hearing-on-the-hearza-app*

39 *See https://www.vodacom.com/news-article.php?articleID=4474*

40 *https://www.safaricom.co.ke/find-our-shops*

41 *Safaricom enhances support for the blind and visually impaired in the country, https://tinyurl.com/s6sd4al*

42 *MTN extends scholarship to students with vision disabilities, https://globalaccessibilitynews.com/2012/12/17/mtn-extends-scholarship-to-students-with-vision-disabilities/*

Procurement Policies on Accessible Handsets

The study assessed whether telecom companies had procurement policies that required them to procure and stock a range of handsets and other mobile devices embedded with accessibility features for sale to customers with disabilities. On this aspect, Vodacom South Africa performed better than the rest of the companies. It had a guiding procurement policy as part of the group's inclusion strategy to ensure accessibility of its services including mobile voice, messaging, and data services to persons with disabilities.[43] On the other hand, MTN South Africa had a very wide business-focused procurement policy with no specific information on devices for persons with disabilities.[44]

Based on the information obtained from reviewed documents and key informants, the policies of Airtel Uganda, MTN Uganda, MTN Nigeria, Airtel Nigeria, Orange Botswana, and Safaricom were silent on procuring accessible handsets and other mobile devices. Key informants at Safaricom said the Kenyan operator was in early stages of streamlining its operations to improve how it addressed the needs of persons with disabilities. The Orange (global) Sustainable Procurement Policy 2014 which was applicable to Orange Botswana did not address the procurement of devices with accessibility features for sales outlets.

Physical Accessibility of Sales Outlets

Accessibility of sales outlets and service centres of telecom companies to persons with physical disabilities was another element assessed by the research. In South Africa, the MTN outlets in Melville (Campus Square Mall) and Rosebank Mall, in Johannesburg, had accessible pathways, doors, and lifts/elevators. There were no stairs or obstructions to entry in or near the outlets. This made the stores physically accessible to persons with mobility limitations.

In Nigeria, persons with mobility limitations who were interviewed in Lagos said they were able to access the buildings housing telecom companies' offices and outlets. For at least a decade, MTN in Nigeria has worked to have ramps at the entrance of its walk-in centres to make them accessible,[45] which could explain the high level of physical accessibility observed.

In Kenya, the main entrance and exit of Safaricom's headquarters had a ramp while its outlets tended to be located on the ground floor, but some lacked ramps. For the Wananchi group, staff noted that most of their outlets were strategically located on the ground floor and staff properly trained on assisting and serving persons with disabilities. However, some of the outlets visited lacked proper signage and some did not have ramps.

In Uganda, the sales outlets that were visited in Kampala were all on the ground floor and some buildings rented by the telecom companies had ramps and elevators. Similarly, in Botswana, all the outlets visited were situated in public malls, and had ramps and elevator availability for persons with mobility limitations.

43 *https://www.vodacom.co.za/cs/groups/public/documents/document/terms_and_conditions_vodacom.pdf*

44 *MTN, Procurement, https://www.mtn.co.za/Pages/Procurement.aspx*

45 *Restoring Abilities of Persons with Disability: The MTN Experience, http://consumer.ncc.gov.ng/archive/files/Accessibility_MTN_Presentation.pdf*

Capacity of Telecoms Staff to Serve Customers with Disabilities

The study assessed whether the staff had undergone sensitivity training covering information about the culture, language, and societal norms of persons with disabilities as well as accessibility principles and awareness of accessible features and product support information.

On its website, Vodacom had a dedicated section on providing easy access to a range of offerings and services for persons with disabilities.[46] Vodacom had a range of services, dedicated direct lines, and email services as well as an instant messaging function (as part of the My Vodacom App) exclusively for persons with disabilities.[47] It would be assumed that its staff were thus trained and conversant with the company's strategic thinking on serving persons with disabilities. However, not all staff in the outlets visited had been trained and possessed the requisite skills.

In 2016, Vodacom partnered with South African National Council for the Blind (SANCB) to provide an easier and more accessible avenue to bring mobile communication closer to the visually impaired by installing a mobile service kiosk at SANCB's premises in Pretoria.[48] The aim of this partnership was to provide training and to empower the SANCB staff on how to use accessible smartphones and to be able to share and train their members. In its efforts towards more diversity and inclusion, as of 2015 Vodacom had 41 known employees with disabilities in South Africa.[49]

Airtel Uganda and MTN Uganda trained their staff in general customer care with a component of attending to all categories of customers without discrimination. The companies expected their staff to use this knowledge when dealing with persons with disabilities. Similarly, in Botswana, a store manager of an Orange outlet said staff were not specifically trained to serve customers with disabilities but received "diversity training" that covered staff interactions with customers of different ages, races, religions, and abilities. Interviews with Orange sales outlet staff indicated that some staff were unaware of the accessibility features on devices and how to assist customers with disabilities who required information on product support. One staff member recalled that about three years ago the store's staff were required to undergo sign language training but this was a one-off with no follow-up. Mascom staff also recalled undergoing sign language training but without follow-up. During field visits and discussion with some store staff, it was observed that there was a less than satisfactory level of knowledge of accessibility features, product support information for persons with disabilities, and of sign language.

46 *Vodacom, ICT Accessibility / Specific Needs, https://www.vodacom.co.za/vodacom/services/specific-needs*

47 *Ibid*

48 *Vodacom kiosk brings mobile communication closer to the visually impaired, https://www.vodacom.com/news-article.php?articleID=4102*

49 *Vodacom, Human capital report, https://www.vodacom.com/pdf/additional-documents/social/human_capital_report.pdf*

In addition to efforts to register customers with visual impairment in order to tailor customer service, Safaricom had a disability sensitivity training programme for its staff. Safaricom had also committed to employing more persons with disabilities. As of April 2019, Safaricom reported that 2.1% of its employees were persons with disabilities (up from 1.7% in 2018), and the company aimed to reach 5% in the next two or three years.[50] However, DPOs and persons with disabilities interviewed said sales staff generally lacked the skills to serve customers with disabilities. One key informant stated that lack of trained staff at telecommunications service outlets remained a barrier to accessibility of communication services for persons with disabilities in Kenya. During a visit to one of the Safaricom outlets, a sales staff said most customers with disabilities who visited the shop were accompanied by someone who assisted where there were communication barriers, while those with hearing impairments wrote their requests.

But at some other Safaricom outlets, the staff had knowledge of how to enable accessibility features on smartphones for persons with disabilities. A sales staff at Climbing Star Telecoms, a Safaricom authorised outlet, admitted that they were not trained to serve persons with disabilities but they had learnt on the job. However, at Ropen Telecoms, another Safaricom outlet, staff said they advised persons who were visually impaired to buy feature phones as they considered them to be easier to navigate compared to smartphones.

In Nigeria, key respondents said the telecom company staff were not properly trained. In some cases, company staff were reported to often show surprise when faced with a customer with a hearing impairment - some making an effort to write explanations while others used improvised gestures to communicate. A visually impaired key informant stated that telecom staff were not able to offer proper explanations when asked for assistance.

50 *Safaricom rallies organisations to accelerate empowerment of persons with disabilities, https://www.safaricom.co.ke/about/media-center/publications/press-releases/release/545*

Development and Availability of Accessible Applications

On the aspect of development and availability of accessible applications for persons with disabilities, the majority of telecom companies assessed performed dismally, as only Vodacom South Africa and Safaricom were supporting the development of accessible apps and systems.

In December 2017, Safaricom introduced the Interactive Voice Response (IVR)[51] that enabled visually impaired customers to manage their M-Pesa transactions and query their M-Pesa balances.[52] In November 2018, Safaricom launched[53] the DOT Braille Watch service that was an improvement to the earlier launched IVR. Safaricom partnered with a South Korea technology firm - Dot Incorporation - to develop the DOT Braille Watch, which displayed SMS notifications in braille, enabling the visually impaired to use M-Pesa services without having to seek assistance from third parties. Prior to this innovation, visually impaired persons had to share their M-Pesa PIN, which exposed them to fraud. The DOT Braille Watch came with additional functionality to manage calls, set time and alarm in braille.

In South Africa, Vodacom has HearZA app, the smartphone-based national hearing test app developed in partnership with the University of Pretoria to help with early detection of hearing problems. In addition, in April 2018 Vodacom launched the SMS Emergency Service for the hearing impaired.[54]

MTN South Africa had no specific tailor-made applications for persons with disabilities. In Botswana, Nigeria, and Uganda, key informants from DPOs said the only apps they were aware of, and which were being used by some persons with disabilities, were not associated with the telecom operators operating in these countries.

51 *Safaricom enhances M-Pesa for visually impaired customers, https://www.safaricom.co.ke/about/media-center/publications/press-releases/release/405*

52 *Safaricom Enhances MPESA for Visually Impaired Customers with New Voice Platform, https://www.cio.co.ke/safaricom-enhances-mpesa-visually-impaired-customers-new-voice-platform/*

53 *Safaricom launches braille for visually impaired M-Pesa users, https://tinyurl.com/y6mwzqjl*

54 *Vodacom launches SMS Emergency Service for the Deaf, https://tinyurl.com/qr2hs9y*

Availability of Discounted Rates for Telecom Services

Telecom companies can have discounted services for persons with disabilities, such as text-only plans for the hearing impaired. Of the 10 telecom companies assessed, only Vodacom South Africa had such discounted rates. Its SMS bundle of 20 messages that would cost ZAR 10.00 (USD $0.60) was available to persons with hearing impairment on a "buy 1 get 1 additional free offer". To access this discounted rate, one had to fill out an application form that was available on the company's website.

Vodacom South Africa also offered its hearing impaired customers with special contract phone deals that consisted of data and SMS only, without voice minutes. Moreover, it said its targeted products and specialised services included easy-to-use devices with a big keypad, inclusive design smartphones, and a device repair priority process that enabled customers with disabilities to have their devices repaired in a shorter period of time.[55]

Accessibility and Awareness of Emergency Mobile Communications

The study sought to establish whether emergency mobile communications, including provision of real-time text and video-relay, were accessible to persons with disabilities. Only Vodacom was compliant with the requirement, specifically targeting persons with disabilities.[56] The rest of the telecom companies had emergency communications designed for the general population and not specific to persons with disabilities.

The research found that, because of the lack of accessible emergency services among most operators, the telecom companies were not doing enough to promote awareness of their general emergency services – even if these were for the most part not accessible to some persons with disabilities. Outside South Africa, interviewees from DPOs and persons with disabilities stated that they were not aware of accessible emergency services. Some key informants from telecom companies said they did not have disaggregated data about their customers with disabilities, which hampered efforts to develop services to cater to them.

In South Africa, organisations like the South African National Council for the Blind (SANCB) often made their members aware of available accessible emergency services. However, knowledge about availability of accessible emergency services was not universal among the DPOs and persons with disabilities who were interviewed.

In Botswana, key informants at the Southern African Federation of the Disabled and the Botswana Council for the Disabled stated that they had not been made aware of Orange and Mascom's emergency services for persons with disabilities.

55 *Vodacom, ICT Accessibility / Specific Needs, https://myvodacom.secure.vodacom.co.za/vodacom/services/specific-needs*

56 *Vodacom launches SMS Emergency Service for the Deaf, https://tinyurl.com/vec8328*

Existence of Code of Conduct on Mobile Telecommunications Accessibility

The study considered whether there was a code of conduct on mobile telecommunications accessibility for persons with disabilities.

In Nigeria, the Nigerian Communications Commission (NCC) Consumer Code of Practice regulations 2007 required licensed telecom companies to publish their individual consumer code of practice and to periodically assess the needs of persons with disabilities, and attend to them.[57] The two Nigerian companies under review had not published their consumer codes of practice. However, the NCC also issued the draft consumer code of practice regulations 2018 which required telecom operators to offer additional services, on request, to elderly and differently abled consumers, including large button telephones; priority fault repair and assistance; copies of bills in large print, on computer disc or Braille; and larger print correspondence.[58] The draft regulations further required that licensees should, on request, make available to consumers with special needs copies of the licensee's code of practice in larger print and other reasonable formats as may be required.

In South Africa, the Code of Conduct for Persons with Disabilities Regulations was issued by the Independent Communications Authority of South Africa (ICASA) in 2007.[59] The code guides and governs interactions of persons with disabilities (as consumers of communication services) with telecom providers, pursuant to section 70 of the Electronic Communications Act, 2005. Under the Act, ICASA has a mandate to promote the empowerment of historically disadvantaged persons, including persons with disabilities. However, having the code was not sufficient, as the code needed to be made available in simple easy-to-digest, and accessible language, popularised among DPOs, persons with disabilities, and telecoms staff. Working with DPOs and telecom companies, ICASA initiated a review of the code in 2019, with inputs and commitments of support to the review effort from operators Cell-C,[60] MTN,[61] and Vodacom.

According to ICASA, during consultations on the regulations, it received proposals to revise the code of conduct to include subtitling for all TV programmes; large print and braille billing statements to be issued by operators; a need for universal design of handsets at affordable prices; cheaper hearing aids to be made available; airtime vouchers to be printed in braille; and Jaws software to be installed in smartphones.[62]

57 *This code is general to telecom services provision, not limited to provision of services to persons with disabilities.*

58 *Text of the code: https://www.ncc.gov.ng/docman-main/legal-regulatory/regulations/drafts-regulations/780-consumer-code-of-practice-regulations-2018/file*

59 *See https://www.icasa.org.za/consumer-publications/code-for-people-with-disabilities*

60 *Cell C Presentation On draft Code For Persons With Disabilities, https://www.icasa.org.za/legislation-and-regulations/cell-c-presentation-on-the-draft-code-for-persons-with-disabilities*

61 *See https://www.icasa.org.za/uploads/files/MTN-presentation-on-draft-code-for-persons-with-disabilities.pdf*

62 *JAWS is a computer screen reader program for Microsoft Windows that allows blind and visually impaired users to read the screen either with a text-to-speech output or by a refreshable Braille display.*

In Uganda, the national communications regulator had specified various consumer rights, which mentioned access to basic communications services as a fundamental human right, and the right to fair treatment without undue discrimination.[63] However, the two companies, Airtel Uganda and MTN Uganda, did not have codes of conduct to show how they were complying with the stated consumer rights. Indeed, the Ugandan regulator did not mention persons with disabilities in its description of consumer rights. In Botswana, the regulator and two telecom operators were yet to develop codes of conduct on mobile communications accessibility.

63 *UCC, Consumer Rights, https://www.ucc.co.ug/consumer-rights/*

Discussion of Key Findings

Overall, the level of accessibility of mobile telecommunication services in the countries studied was very low. This discussion section highlights key aspects that were failing greater accessibility and points to the actions that telecom companies and regulators need to take.

Weak Enforcement of Regulations. Regulations on accessibility requirements are largely non-existent, and where they exist, they are largely unenforced. In Uganda, Kenya, Nigeria and Botswana, there was little evidence of compliance with accessibility obligations by the companies studied, or of regulators including accessibility of mobile communications for persons with disabilities among their metrics or key performance indicators.

In Nigeria, the NCC vice chairman in 2013 noted gaps that service providers needed to plug, naming them as deactivation of audio/voice prompt facility used to check credit balance; difficulty with surfing websites of service providers; lack of a disability desk at Customer Care Centres; and non-supportive access platform for Consumer Care Centers.[64] These challenges have persisted and the NCC has not taken any decisive steps to ensure operators complied. Notably, Nigeria's Code of Practice regulations 2007 required operators to comply with "any specific obligations" that the regulator may impose on them "in respect of special services or service arrangements for subscribers with disabilities." The Nigerian operators lacked requisite consumer codes of practice and were non-compliant on most accessibility indicators.

In South Africa, there is a Code of Conduct for Persons with Disabilities Regulations that guides interactions of persons with disabilities with telecom providers. However, MTN was non-compliant on several accessibility indicators. In Uganda, the Uganda Communications Commission (UCC) has generic consumer rights regulations that do not articulate operators' obligations on digital accessibility for persons with disabilities.

Failure to Prioritise the Needs of Telecom Customers with Disabilities: Whereas the outlets of most telecom companies assessed were physically accessible to persons with disabilities, there was a stark lack of training for sales and customer services staff in serving persons with disabilities. Most companies offered no training to their staff, which impacted on the quality of services rendered.

64 *NCC, Conference on Accessibility of Telecom Services To Persons Living With Disabilities (PWDs), https://tinyurl.com/qrecf6a*

Safaricom and Vodacom Lead in Providing Accessible Services to Persons with Disabilities. In many respects, Safaricom and Vodacom were leading in improving accessibility of communication products and services, which probably derived from the fact that the two are sister companies partly owned by British multinational Vodafone, which holds a 60.5% stake in Vodacom[65] and 35% stake in Safaricom.[66] The good performance by Safaricom and Vodacom in comparison to the other companies reviewed thus appeared to be driven by the Vodafone group's policies and culture and not by regulations or regulators in Kenya and South Africa.

Low Consideration for Accessibility by MTN and Airtel Groups. MTN's operations in Nigeria, South Africa, and Uganda, as well as Airtel's operations in Nigeria and Uganda seemed to give low consideration to accessibility of their services by persons with disabilities. This was evidenced by the consistent non-compliance with the accessibility indicators covered in the study across the countries where MTN and Airtel operated.

Conclusion

This research has established that digital accessibility is still a big challenge for persons with disabilities in the African countries studied. This initial effort is a small step towards establishing a keen appreciation of these challenges and will hopefully encourage the relevant stakeholders to play their part in order to realise the dream of inclusive access to technology in the region. The limitations of this study need to be noted. Notably, the research covered only a few operators and a few countries. Its results are therefore not representative of the situation of all operators and all countries in Africa. Moreover, because of methodological impediments, the research did not exhaustively cover all the accessibility issues - few stores were visited, in one city per country, and the number of interviews held was insufficient to generate a wholesome picture. Nonetheless, the study sets a groundbreaking understanding of the state of digital accessibility of telecom companies' services, and its results can inform further research in this hugely under-studied area. Moreover, the research findings provide telecom companies, regulators, DPOs, and governments with information necessary to take decisive steps to improve the digital accessibility of telecom products and services to persons with disabilities.

65 *Vodacom Integrated report for the year ended 31 March 2019, http://vodacom-reports.co.za/integrated-reports/ir-2019/*

66 *See Safaricom annual report and financial statements 2019, https://www.safaricom.co.ke/images/Downloads/Safaricom_Annual_Report_2019.pdf*

Recommendations

Based on the study findings, the following is recommended:

Telecom Companies Should Address Concerns of Persons with Disabilities: Telecom operators need to address concerns of persons with disabilities regarding their services and products, including through the following:

- Provision of public information or communication in accessible formats such as Braille, large print, visual and audio formats.
- Understand the numbers and needs of their customers with disabilities so that they build focused products and services to suit these customers.
- Ramp up sensitivity training for staff, including in basic sign language.
- Improve the availability for sale of affordable mobile telecommunication devices with accessible features.
- Offer priority service/counters for persons with disabilities in outlets, with at least one agent that is trained to attend to a person with a disability.

Enhance Enforcement of Relevant Regulations: Relevant government agencies such as communication regulators and consumer protection units should enforce legislation on accessible communication products and services. In this regard, more vigilance is needed in enforcing implementation of national disability laws, Codes of Practice, consumer rights regulations, and ICT and disability policies. More vigilance is also needed in monitoring compliance to avoid empty claims when in reality products and services are still inaccessible.

Where national codes are lacking, they should be promptly developed. The codes should be made available in simple easy-to-digest and accessible languages, popularised among DPOs, persons with disabilities, and telecoms staff. In addition, operators should report periodically on how they implemented the codes.

Enhance Advocacy and Awareness Creation: There is a need to enhance the advocacy efforts of DPOs, civil society organisations, and international development partners, among others, for accessible communication products and services.

Benchmarking With Other Operators: Safaricom and Vodacom can provide learning examples for other telecoms on how to proactively and consistently work to improve digital accessibility and build partnerships that improve service provision to persons with disabilities. Regulators also need to learn from these examples to offer guidance to operators in their jurisdictions on measures needed to attain meaningful accessibility.

Form Multi-Stakeholder Partnerships: Telecom companies should form partnerships with academia, civil society, DPOs, tech developers and innovators as well as device manufacturers to develop accessible mobile communication solutions, in similar fashion to HearZA app, a smartphone-based national hearing test app that was developed through a partnership between Vodacom and the University of Pretoria. Persons with disabilities must be the core stakeholder in the apps development process in line with the principle of "nothing for us without us".

Government Incentives for Innovation and Investment in Accessible Products and Services: Incentives for investment and innovation in accessible handsets/ mobile devices and software solutions will encourage the development and availability of such technologies and solutions. Examples of such incentives are tax exemption on handsets/mobile devices tailored to the needs of persons with disabilities, and supporting innovations for accessible telecom products and services.

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