THE Regulator

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JANUARY - MARCH 2018

Quarterly Magazine of the Tanzania Communications Regulatory Authority

Renewed drive to empower consumers

SPECIAL REPORT

KISWAHILI SUPPLEMENT

MWONGOZO WA WATUMIAJI

Girls for ICT

Safety issues in e-commerce

TZ-CERT

TANZANIA COMPUTER EMERGENCY RESPONSE TEAM

Tanzania Computer Emergency Response Team (TZ-CERT) is a team within the structure of the Tanzania Communications Regulatory Authority (TCRA), with national responsibility for coordinating responses to cyber security incidents at the national level. It cooperates with regional and international entities involved in the management of cyber security incidents. TZ-CERT was established under section 124 of the Electronic and Postal Communications Act (EPOCA) of 2010.

TZ-CERT provides the following services to its constituencies and the general public.

1. Alerts and Warning
With the growth in cyber threats and vulnerabilities, TZ-CERT constantly monitors cyber security threats and vulnerabilities and advises both its constituencies and the general public.

2. Incidents Response
With expertise in cyber security, TZ-CERT can now work with constituency organizations to respond to all cyber security incidents in their respective networks. TZ-CERT provides step by step assistance to organizations facing cyber security attacks.

3. Cyber Security Awareness
With the mandate of improving cyber security posture in the country, TZ-CERT disseminates cyber security information to the public. This includes promoting cyber security best practices to users of information and communications technologies.

TZ-CERT will improve its services and focus on providing other cyber security services to the community including:

Security audits and assessments. Malware analysis. Intrusion detection. Risk analysis. Security Consulting.

For more information and to report cyber security incidents please contact TZ-CERT:

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The Regulator is published quarterly by the Tanzania Communications Regulatory Authority (TCRA), an independent Government agency established under the Tanzania Communications Regulatory Authority Act No. 12 of 2003 to regulate the electronic and postal sectors in Tanzania.

FROM OUR ARCHIVES

Past copies of the Regulator can be accessed on the TCRA website - www.tcra.go.tz. Navigate to 'Publications and Statistics", scroll down to The Regulator.

Letter from the Editor

TWO international events in March 2018 have influenced our coverage in this edition of the Regulator. While the world commemorates 8th March as the International Day of the Woman, women in Africa have not fully embraced the benefits of ICTs. The gap in ICTs use among men and women is widening in the continent. We have extensive coverage of the digital divide - how it keeps African women offline, and possible solutions for attracting girls and young women to subjects that form the foundation of studies and careers in ICTs.

Fifteenth March is World Consumer Rights Day (WCRD); which TCRA has been commemorating through focused seminars to remind consumers of communications services and products of their rights and responsibilities. This year it has coincided with the publication, by TCRA, of a guidebook for Tanzanian consumers. We have reproduced parts of the handbook, which was launched in Dar Es Salaam in an event which we have equally covered.

We also carry communications statistics for the October – December quarter; which show the trebling of the number of internet users in the last six years. Tariffs have also fallen; validating the conclusions in a report published in 2017 by Research ICT Africa that competition had lowered data prices in Tanzania; which tops the Southern African Development Community (SADC) in terms of 'lower' prices of a 1GB prepaid mobile package.

The April – June edition will cover emerging trends in ICT; including Artificial Intelligence and Big Data Analytics. We invite articles and photographs on these and other areas of electronic and postal communications.

Contributions, in font size 12, single-spacing, up to four A4 pages, should be submitted to: **regulator.magazine@tcra.go.tz.**

COVER PHOTOGRAPHS

Minister for Information, Culture, Sports and Arts Dr. Harrison Mwakyembe (centre); Deputy Minister for Works, Transport and Communications, Eng. Atashata Nditiye (second right); Deputy Permanent Secretary, Ministry of Works, Transport and Communications,Eng. Angelina Madete (second left), TCRA Board Charman Dr. Jones Killimbe (right) and the Authority's Director General, Eng. James Kilaba (left) displaying copies of the communications consumers guidebook at the launching of the document in Dar Es Salaam in January,2018. (Story on page 10).

Deputy Minister for Industry, Trade and Investment; Eng. Stella Manyanya (centre) with some of the girls being mentored by a local NGO - She Codes for Change - to embrace science, technology, engineering and mathematic (STEM) as a spingboard to careers in ICT. Women and girls need role models to inspire them to pursue STEM and related subjects. (This edition carries a special report on the gender digital divide and Girls in ICT from page 23).

CONTENTS

From The Director General's Desk

Building consumer confidence

ON 19th January, 2018, TCRA launched a handbook to guide consumers around issues ranging from the choice of services to their rights and responsibilities. The book has tips on the safe use of the internet, the avoidance of mobile phone and online scams and fraud. The illustrated handbook is expected to build the confidence of consumers on the services they subscribe to. Studies have shown that confident consumers are most inclined to use the services more; thus promoting businesses.

The protection of consumers is a key function of the Tanzania Communications Regulatory Authority; and is performed through the enforcement of regulations made under the Electronic and Postal Communications Act (EPOCA), educating consumers on their rights and responsibilities; and by promoting competition among service providers.

Opening the market in terms of the number of providers and the variety of quality services promotes competition. Besides widening consumer choice in terms of quality, accessibility, affordability and reliability; it rewards efficient service providers with more loyal customers.

There are 22 network facilities licensees, 14 network services providers, 83 application services providers, 150 radio stations and 26 free to air television stations. Besides widening consumers' choice, the increase in the number of licensees fuels competition; leading to improvements in terms of quality, variety and efficiency – which trickle down to the consumer. There were 40 million SIM cards in the market in December 2017.

Regulations with a direct bearing on the consumer are those on consumer protection, broadcasting content, quality of service, value added services, licensing, mobile number portability, tariffs, interconnection, central equipment identification register and electronic communications equipment standards. They address the availability of reliable, good quality, safe and secure communications services and products; and the consumers' rights to be educated, to receive clear and complete information, to be heard and to privacy.

TCRA regularly monitors service providers' quality of service based on the performance criteria and parameters in the regulations; and publishes the statistics. The Authority also conducts periodic surveys to get the perceptions consumers and their levels of satisfaction to a service. It requires the respective licensees to rectify shortcomings highlighted in both surveys.

UNITED REPUBLIC OF TANZANIA
Tanzania Communications Regulatory Authority
ISO 9001: 2015 CERTIFIED

OUR VISION

To be a world-class Communications Regulator creating a level playing field among Communications Service Providers, and promoting environmentally friendly, accessible and affordable services to consumers.

OUR MISSION

To develop an effective and efficient communications regulatory framework, promote efficiency among the communications services providers, and protect consumer interests with an objective of contributing to socio-economic and technological development in the United Republic of Tanzania.

STRATEGIC GOAL

To enhance the welfare of Tanzanians through an effective and efficient regulatory framework that ensures universal access to communications.

STRATEGIC OBJECTIVES

- To enhance TCRA capacity, staff competences in regulation, research and related fields;
- To promote efficient, reliable and affordable communications infrastructure and applications;
- To promote efficient communication services and increase access to ICTs in underserved and unserved areas;
- To protect the interests of consumers and enhance awareness of their rights, responsibiliyi and obligations;
- To monitor performance of regulated services and enforce compliance to legislations, regulations and standards;
- To coordinate implementation of regional and international sector commitments.

OUR QUALITY POLICY

TCRA is committed to enhancing the welfare of Tanzanians through provision of effective and efficient regulatory services that ensures universal access to communication services, through quality management system in all processes needed in our areas of jurisdiction. TCRA continuously improves and reviews her quality objectives regularly and communicates the policy within the organization.

QUALITY MANAGEMENT SYSTEM

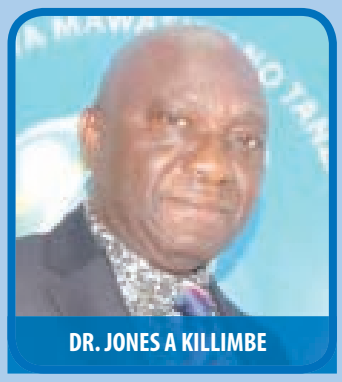
TCRA is ISO 9001:2015 certified.

QUALITY OBJECTIVE

- To maintain an effective Quality Management System complying with International Standard ISO 9001:2015;
- To achieve and maintain a level of quality which enhances TCRA's reputation among stakeholders;
- To ensure compliance with relevant statutory and regulatory requirements;
- To endeavour, at all times to maximize stakeholder satisfaction with our services.

WAJUMBE WA BODI YA WAKURUGENZI, MAMLAKA YA MAWASILIANO TANZANIA

Bodi ya Wakurugenzi ya TCRA ni chombo cha juu cha uongozi wa Mamlaka na ina wajumbe saba ambao ni Mwenyekiti na Makamu Mwenyekiti (wasio watendaji na ambao wanateuliwa na Rais wa Jamhuri ya Muungano wa Tanzania); wajumbe wanne wasio watendaji na Mkurugenzi Mkuu (ambao wanateuliwa na Waziri mwenye dhamana ya mawasiliano). Wajumbe wa Bodi ya sasa ni Dr. Jones Killimbe (Mwenyekiti), Balozi Sylvester Massele Mabumba (Makamu Mwenyekiti), Bibi Butamo Kasuka Phillip, Bibi Valerie Ndeneingo-Sia Msoka, Dr. Mzee Suleiman Mndewa, Dr. Jabiri Kuwe Bakari na Mhandisi James M. Kilaba.

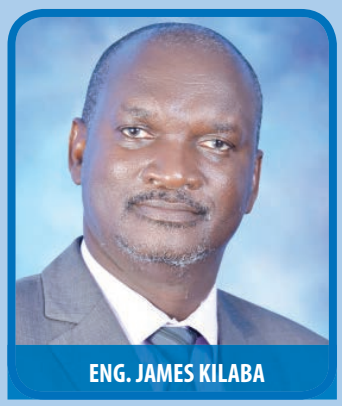


DR. JONES A KILLIMBE

Dr. Killimbe ana shahada ya Uzamili ya Sayansi (Master of Science) na shahada ya uzamifu (Ph.D) ya mawasiliano ya simu kutoka Chuo Kikuu cha Mawasiliano na Usafiri; Dresden, Ujerumani. Ameshika nyadhifa za uandamizi kadhaa za uendeshaji katika Kampuni ya Simu Tanzania (TTCL) kati ya 1994 na 2003. Hizi ni pamoja na kuwa Mkurugenzi wa Uhusiano wa Kimataifa, Mkurugenzi wa Ujenzi wa Miundombinu na Naibu Mkurugenzi Mwendeshaji anayeshughulikia huduma za kibiashara. Amefanya kazi kama Gavanawa Bodi ya Wakurugenzi ya Shirika la Kimataifa la INTELSAT akiwakilisha kanda namba 1 (moja) Afrika na pia kama Mkurugenzi na Mwenyekiti wa Bodi ya Wakurugenzi ya Shirika la Satelaiti la kikanda la Afrika (RASCOM). Dr. Killimbe alikuwa Mkurugenzi Mkuu na Afisa Mtendaji Mkuu wa RASCOM kwa miaka 10 kuanzia 2004.

BALOZI SYLVESTER MASSELE MABUMBA

Balozi Mabumba ni Balozi wa Tanzania Comoro. Ana shahada ya Uzamili katika sayansi katika masuala ya maendeleo ya kiuchumi ya jamii (Msc CED) kutoka Chuo Kikuu cha Southern New Hampshire Marekani (kikishirikiana na Chuo Kikuu Huria cha Tanzania); Stashahada ya Uzamili ya Mipango ya Maendeleo Vijijini kutoka Kituo cha Weitz Centre for Development Studies, Rehovot, Israel na Stahashada ya Juu (Advanced Diploma) ya Mipango ya Uchumi kutoka Chuo cha Uongozi wa Maendeleo (IDM) Mzumbe, Tanzania. Alikuwa Mbunge wa jimbo la Dole, Zanzibar kati ya 2010 na 2015. Katika kipindi hicho alichaguliwa kuwa Naibu Mwenyekiti wa Kamati ya Bunge ya Sheria Ndogo (Machi 2011 hadi Novemba 2013) na baadae kuwa Mwenyekiti wa Kamati hiyo. Vilevile alishika wadhfa wa Mwenyekiti wa Bunge anbapo alisimamia shughuli za Bunge kutoka kwenye kiti cha Spika. Nyadhifa nyingine ambazo Balozi Mabumba amezishika ni pamoja na Mkuu wa Mpango wa Ustawi, Ulinzi na Maendeleo ya mtoto (YCSPD) lkatika Wizara ya Fedha na Mipango (Tume ya Mipango) na Mchumi Mkuu, Tume ya Mipango ya Zanzibar.



ENG. JAMES KILABA

Mhandisi Kilaba ni Mkurugenzi Mkuu wa TCRA. Ana shahada ya Uzamili katika Mawasiliano ya Simu na Mifumo ya Kompyuta kutoka Chuo Kikuu cha Essex, Uingereza na Shahada ya Electronics and Communications Engineering kutoka Chuo kikuu cha Mysore; India. Vilevile Eng. Kilaba ana Stashahada ya Uzamili ya Usimamizi wa Biashara. Kabla ya kuteuliwa Mkurugenzi Mkuu, Eng. Kilaba alikuwa ameshikilia nyadhifa mbalimbali ambazo ni pamoja na Mhandisi Mtendaji na Mkurugenzi wa Teknolojia ya habari na Mawasiliano, TCRA.

Mhandisi Kilaba amesajiliwa na Bodi ya Usajili wa Wahandisi Tanzania na ni mwanachama mwandamizi wa Institute of Engineers Tanzania. Aidha, ni mjumbe wa Institution of Electrical and Electronics Engineers (IEEE) ya Marekani kwa zaidi ya miaka 15.

MS. VALERIE NDENEINGO - SIA MSOKA

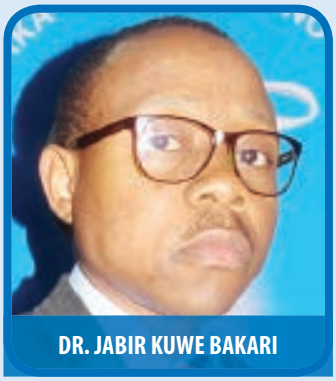
Bibi Msoka ana shahada ya Uzamili ya Uandishi wa habari wa Kimataifa (Master of Arts degree in International Journalism) kutoka Chuo Kikuuu cha City, London, Uingereza na amehitimu mafunzo ya kitaaluma ya Uendeshaji na Masuala ya Fedha. Ana uzoefu wa zaidi ya miaka 30 katika uandishi wa habari. Uzoefu huu ni pamoja na kuwa Afisa Habari mwandamizi wa Umoja wa mataifa Iraq na Sudan Kusini na kuwa muandaa vipindi na mtangazaji wa Shirika la Utangazaji la Uingereza (BBC). Bibi Msoka amewahi kuwa Mkurugenzi Mtendaji wa Chama cha Waandishi wa Habari Wanawake Tanzania (TAMWA) ambacho yeye ni mmoja wa wanachama waanzilishi. Mwaka 2015 alianzisha shirika lisilo la kiserikali la kimataifa lijulikanalo kama Internews ambamo alikuwa Mkurugenzi Miradi. Alikuwa mjumbe wa Bunge la Katiba na mjumbe wa kamati ya uandishi ya Katiba ya Tanzania iliyopendekezwa.
Hivi sasa anajihusisha na masuala ya vyombo vya habari, kutoa mafunzo na kuelimisha na kuhamasisha.

MS. BUTAMO KASUKA PHILLIP

Bibi Phillip ni Naibu Katibu Mkuu, Ofisi ya Makamu wa Rais (Muungano na Mazingira). Ana Shahada ya Uzamili ya Sheria (LLM) ya Chuo Kikuu cha Dar Es Salaam (UDSM), Shahada ya Sheria (International and Comparative Law) ya Chuo Kikuu cha Chicago – Kent College of Law, Marekani na Shahada ya Sheria kutoka UDSM. Ni Wakili wa Mahakama Kuu ya Tanzania. Amekuwa Mkurugenzi wa kampuni ya wanasheria ya Top Attorneys ya Dar es Salaam; Mwanasheria wa Serikali katika Wizara ya Masuala ya katiba na Sheria na Afisa Sheria wa Benki la Taifa ya Biashara (NBC).
Bibi Philip pia ni mjumbe wa Chama cha Wanasheria Tanganyika (TLS), Chama cha Wanasheria Afrika Mashariki (EALS), Chama cha Wanasheria Wanawake Tanzania (TAWLA), Chama cha Wanasheria Ulimwenguni (International Bar Association (IBA), Chama Cha Wafanyabiashara wenye Viwanda na Kilimo Tanzania (TCCIA), Dar es Salaam Chapter na Tanzania IFP Alumni Association. Vilevile ni mjumbe wa jopo la usuluhishi la Baraza la Ujenzi la Taifa na mjumbe wa Chama cha Wasuluhishi Tanzania ((TIArb).

ENG. DR. MZEE SULEIMAN MNDEWA

Dr. Mndewa ana shahada ya Uzamivu (Ph.D.) ya Optoelectronic information engineering kutoka Chuo Kikuu cha Sayansi na Tekinolojia cha Huazhong, Wuhan – China; Shahada ya Uzamili ya Teknolojia ya Habari (Information Technology) kutoka Chuo Kikuu cha Griffiths, Queensland, Australia, Shahada ya Sayansi (Electronics) kutoka Chuo Kikuu cha Osmania Hyderabad, India) na Astashahada (Full Technicians Certificate) ya Uhandisi wa Umeme kutoka Chuo cha Ufundi cha Karume, Zanzibar. Hivi sasa ni Mkurugenzi wa Mawasiliano, Wizara ya Miundombinu, Mawasiliano na Usafirishaji, Zanzibar. Amekuwa mjumbe wa timu ya wataalamu wa Mkongo wa Taifa wa Mawasiliano (NICTBB kuanzia 2004. Nyadhifa nyingine alizoshikilia ni pamoja na Mkurugenzi wa Tekinolojia ya Habari na Mawasiliano, Chuo Kikuu cha Dodoma; Mshauri wa masuala ya TEHAMA kwenye Serikali ya Tanzania na mjumbe na msimamizi wa timu ya kitaalamu kuhusu mtandao na miundombinu kwa ajili ya mradi wa serikali mtandao, Zanzibar.



DR. JABIR KUWE BAKARI

Dr. Jabiri Kuwe Bakari ana Shahada ya Uzamivu (Ph.D) ya mifumo ya kompyuta na sayansi ya mifumo (Computer and Systems Sciences) kutoka Chuo Kikuu cha Stockholm,Sweden (2007); Shahada ya Uzamili ya sayansi (Uhandisi) MSc. (Eng.) Data Communication kutoka Idara ya Elecronics and Electrical Engineering ya Chuo Kikuu cha Sheffield, Uingereza; (1999) na Shahada ya Sayansi ya Kompyuta kutoka Chuo Kikuu cha Dar Es Salaam (1996). Alijiunga na Chuo Kikuu Huria Tanzania baada ya miaka 10 ya kufanya kazi Chuo Kikuu cha Dar Es Salaam ambapo alishika nyadhifa mbalimbali za uendeshaji na uongozi ikiwa ni pamoja na kuwa Naibu Mkurugenzi wa Kituo cha Kompyuta cha UDSM. Amewahi kuwa mhadhiri na mkurugenzi wa Taasisi ya Teknolojia ya Elimu, Chuo Kikuu Huria Tanzania. Hivi sasa ni mtendaji mkuu wa wakala wa Serikali Mtandao. Dr. Bakari ni mjumbe mwandamizi wa chama cha ukaguzi na uthibiti wa mifuno ya kompyuta na mawasiliano - Information Systems Audit and Control Association (ISACA).

Safe online shopping

■ **Christopher John Assenga,Tanzania Communications Regulatory Authority**
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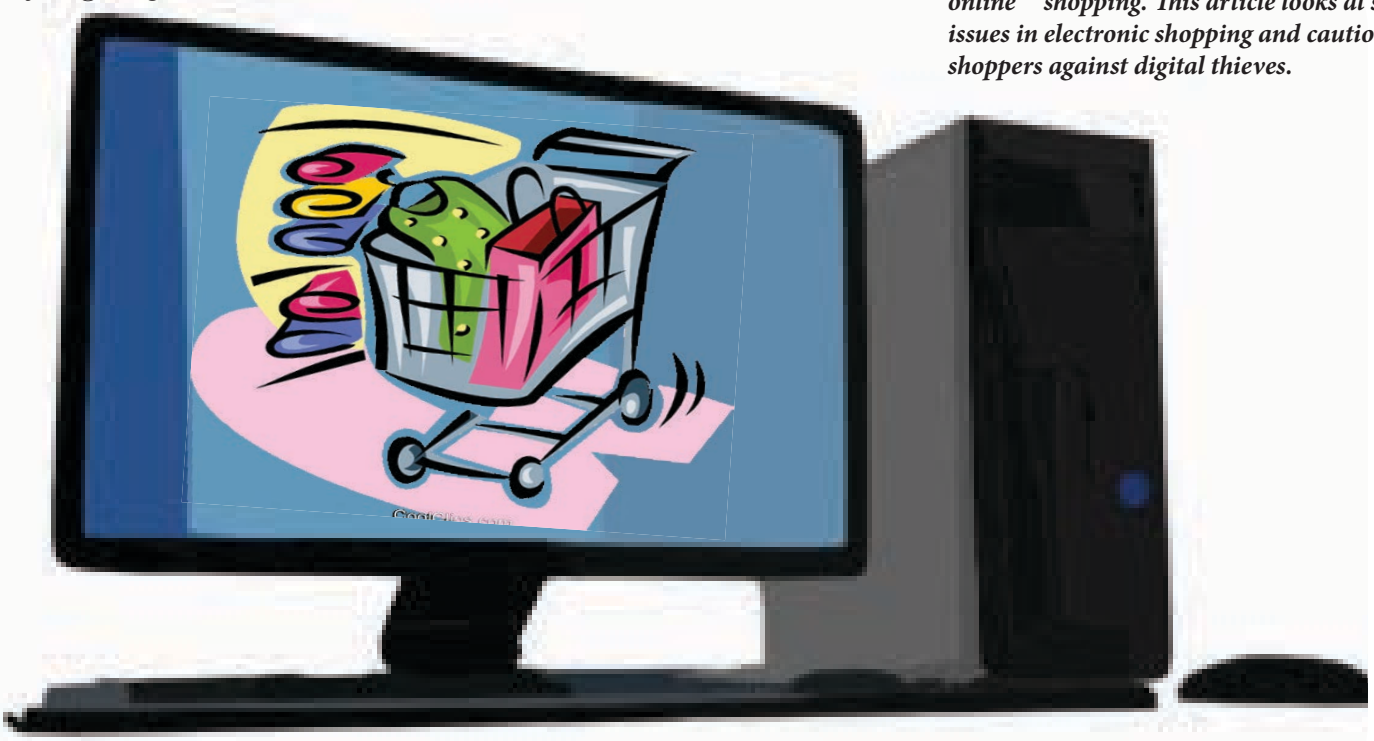
The message of this year's World Consumer Rights Day on 15 March - Making digital market places fairer ***–addresses the safety concerns of consumers who have embraced online shopping. This article looks at safety issues in electronic shopping and cautions shoppers against digital thieves.***



1. Introduction

The traditional way of doing business or shopping involves a businessman opening up a physical shop or store like Game or Nakumat where customers walk in to purchase goods or services. Most of the time, this involves a physical interaction between shops/stores attendants and a customer.

The use, and spread, of the internet has changed the business ecosystem; raising the potential for businesses through global connectivity. Stores and shops have changed from being physical to virtual; people do not need to drive to a shopping mall for their purchases. They can just sit in front of their computers and purchase from anywhere in the world. This is called online shopping. Some popular online stores include Amazon, Alibaba, eBay, Rakuten and Zappos.

Online shopping is the act of purchasing products or services over the internet. It is sometimes called e-commerce; and is becoming increasingly popular among consumers because of the speed and ease of use.

With the advent of mobile broadband services, most people have access to the internet, which is the prerequisite for online shopping. According to a report published by Internet World Stats (2017), 51.7% of the world population use the internet. Hsieh et al. (as cited in Kumar, 2015) stated that the internet is influencing people's daily lives more than in the past. People's daily activities have gradually shifted from the physical to virtual environment.

Online shopping is getting more popular to users as compared to in store shopping because consumers can accomplish their desires with just a click of the mouse anywhere, anytime.

For example, South Africa which is home to 55.91 million people has 18.43 million online shoppers, with an additional 6.36 million users expected to be shopping online by 2021. Four years from now, these 24.79 million online shoppers will spend an average of 189.47 USD online (Eshopworld, 2018). This is a huge amount of money.

Despite its advantages, online shopping faces a number of challenges. Online shopping, as opposed to traditional shopping, involves huge transactions of funds over the internet.

It is estimated that global online sales will reach 8.8% of total retail spending in 2018 as compared to 7.4% in 2016 (Saleh, 2016). This attracts online criminals - scammers; online fraudsters or 'digital thieves'.

According to Button et al. (2014), online fraud is the use of the internet to deceive the other party to give money with a promise of goods or services that do not exist nor intended to be provided, or were misrepresented; which leads to financial and non-financial loss. In simple language this involves a victim paying money via the internet to the online fraudster and not receiving what they paid for or receiving an item of low quality or different from what was presented online.

Many people have fallen prey to online fraudsters and lost a lot of money. The Australia Competition and Consumer Commission (2017) found that 6,735 online shopping scams were reported in 2017 and 49% of the same had a total financial loss of $1,374,551. "The amount of cases and losses are expected to be higher; as many online fraud cases go unreported due to many reasons, such as embarrassment, self-blame and victims not knowing what to do" Button et al. (as cited in Yakimin et al. 2015).

2. Why people fall victims of digital thieves

People fall in the hands of digital thieves for many reasons. These can be categorized into ignorance (deliberately ignoring or disregarding important information, facts or warnings about fraudsters); negligence (failure to take proper care or cautions when doing online shopping); being desperate for very low priced items; and unawareness (of the existence of digital thieves). Digital thieves understand, and they effectively use these weaknesses.

3. How to safely shop online

When doing online shopping, one must be very careful not to fall victim of scammers. Most of the time ignoring precautions on online shopping has led many people to fall victims of online shopping fraudsters.

The following are some of the issues that online shoppers are advised to take into consideration before they pay their money

3.1. Beware of imposters (fake websites)

A fake website is the one which either impersonates a genuine reputable online business (by using a very similar website address) or that pretends to be a legitimate business but is not (Fraud Advisory Panel, 2010). A scammer can easily set up a website that appears to be a legitimate store by simply copying the look of other, well-known stores. Once these fake websites are online, scammers prey on people who are looking for the lowest price possible.

Shoppers often start by searching on Google or Bing for products they'd like to buy, and then add words such as "cheapest" or "lowest price." In return, the search engine will present many, even hundreds of websites selling the item. Some of these websites may be fake (Sans Securing The Human, 2013).

3.2. Beware of coupons and discounts

Companies make use of different techniques to sell their products quickly. Techniques such as discounts, cash backs, coupons e.t.c are used often. Although most of these discounts and cash backs are genuine, some website or online shopping stores promise to sell a product at unbelievably low prices to lure unsuspecting consumers shopping around for a good deal. Prices that are too good to be true are probably untrue. People need to be aware of slogans like '80% discount', 'buy one and get three'. These are scammers.

3.3. Browse Safe

Shop on secured websites. A secure website address begins

Picture 1: A fake Amazon website

Picture 2: A genuine Amazon website

with "https://' instead of "http://". An address beginning with "https://' is a secured HTTP connection. Examples of secured sites are https://www.amazon.com/, https://www.ebay.com/, https://www.zappos.com/, https://www.etsy.com/, https://www.rakuten.com/, https://www.groupon.com/ and many others.

3.4. Choose a payment method with caution

Online payments require, most of the time, the use of a card to pay for online items. You are advised not to use cash or cash-like methods such as money transfers, debit card money order or bitcoin. Use a credit card instead as it offers some additional protection from fraud, including zero-liability policies (you are not held responsible for purchases made with your stolen card) and credit protector services that alert you to any fishy activity (Craiglist, 2017).

According to Kevin (2015), "The real difference between a debit card and a credit card when it comes to fraud is in how you get your money back. When a fraudulent transaction occurs on your credit card, you have lost no money. You can report the fraud, get a credit on your statement, and the issue will never affect your bank account. With a debit card, your bank account balance is affected from the moment the fraudulent transaction takes place. If the transactions are significant, you could experience a domino effect of financial headaches. Fraudulent charges can tie up funds so that legitimate charges are declined or cause overdrafts."

If you don't have a credit card and you are forced to use a debit card for online shopping, make sure you have a low balance in the account linked to the card you use for online shopping.

3.5. Protect your personal information

Legitimate websites will never ask for credit card number or any other personal information through email. So never give your financial information even if the email appears to be coming from a trusted online store or shop.

3.6. Take time to review a seller

Online shoppers are advised to take time and go around the website they want to do business with. Reviews and feedback from customers who have previously used the site will give a clue on the genuineness of the business. A legitimate website will provide a link for its customer feed back and all information will be public to all users.

4. Conclusion

Online shopping has proven to be a most efficiency way of doing business but is also a dangerous environment where one can lose a lot of money. Because it not possible to stop people from purchasing goods and service online, they should be aware of online thieves and take the required precautions before deciding to commit their money over the internet.

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Building consumer confidence in e-commerce

Consumers participating in electronic commerce in Tanzania are protected by the Electronic Transactions Act of 2015. The law requires suppliers to provide complete information to buyers and sets the time for refunds for non supply of goods and services. Part VI of the Act, on consumer protection, is reproduced below.

PART VI CONSUMER PROTECTION

28. (1) A supplier offering goods or services for sale, hire or for exchange electronically, shall provide the following information to consumers-
(a) full name, legal status and place of business;
(b) contact details including physical address, telephone and e-mail addresses;
(c) a full description of the goods or services offered;
(d) the price of the goods or services;
(e) information on the payment mechanism that complies with other written laws; and
(f) any other relevant information.
(2) Before a consumer places an order, the supplier shall provide the consumer with an opportunity to- (a) review the entire electronic transaction; (b) correct any mistake; and (c) withdraw from the transaction.
(3) Where a supplier contravenes this section, the consumer may, within fourteen days of receiving the goods or services, cancel the transaction.

29. (1) Unless the parties have agreed otherwise, the supplier shall execute the order within thirty days from the day on which the supplier received the order.
(2) Where a supplier fails to execute the order within time specified under subsection (1), the consumer may cancel the agreement by giving a seven days notice.
(3) Where a supplier is unable to perform the contract on the grounds that goods or services ordered are unavailable, the supplier shall within thirty days notify the consumer and the supplier shall refund any payment that has been made.

30. (1) Without prejudice to any other law, a consumer may, within seven days or longer period specified in the agreement, after receiving the goods or conclusion of the agreement and the consumer has not received any material benefit from the transaction, cancel the agreement for supply of goods or provision of service.
(2) Where a consumer has cancelled the agreement under subsection (1), he shall pay direct cost of returning the goods.
(3) Where a consumer has paid for the goods or services prior to exercising a right under subsection (1) the consumer is entitled to a refund.
(4) The refund under subsection (3) shall be made within thirty days after the date of cancellation of transaction.
(5) This section shall not apply to electronic transactions-
(a) for financial services;
(b) by way of an auction;
(c) for the supply of foodstuffs, beverages or other goods intended for daily consumption;
(d) for services which began with the consent by the consumer before expiration of the seven-day period;
(e) where the price for the supply of goods or services is dependent on fluctuations in the financial markets and which cannot be controlled by the supplier;
(f) where the goods-
(i) are made to the consumer's specifications;
(ii) are clearly personalized;
(iii) by their nature, cannot be returned; or
(iv) are likely to deteriorate or expire rapidly;
(g) where audio or video recordings or computer software were downloaded or unsealed by the consumer;
(h) for the sale of newspapers, periodicals, magazines and books;
(i) for the provision of gaming and lottery services;
(j) for online gambling;
(k) for the provision of accommodation, transport, catering; and
(l) any other transactions as the Minister may, by notice published in the Gazette prescribe.
(6) For the purpose of this section "direct costs" means, costs incurred and include transport costs or postage when returning goods or services but exclude any handling fees.

31. A person who offers goods or services electronically shall provide the addressee with- (a) an identity of the originator and contact details; (b) a valid and operational opt-out facility from receiving similar communications in future; and (c) the particulars of the source from which the originator obtained the personal information of the addressee.

TCRA in new drive to

TCRA's consumer protection drive has gone into high gear with the publication and launching of a handbook guiding consumers in all stages of using ICTs and other communications services.

The pocket-sized, 60-page illustrated handbook was launched in Dar Es Salaam in January 2018 in a ceremony attended by stakeholders including licenced service providers and representatives of consumer groups.The Authority's mandate in consumer protection includes enforcing the relevant regulations made under the Electronic and Postal Communications Act (EPOCA), monitoring the satisfaction levels of consumers and the standards and quality of services provided by licensees.

TCRA is also required to educate consumers on their rights and responsibilities, the complaints lodging procedures and-safe use of ICTs.
(*The handbook - Mwongozo wa Watumiaji wa Huduma na Bidhaa za Mawasiliano is reproduced on page 13).*

ABOVE: Minister for Information, Culture, Sports and Arts Dr. Harrison Mwakyembe (left; Deputy Minister for Works, Transport and Communications, Eng. Atashata Nditiye (centre) and TCRA Board Charman Dr. Jones Killimbe (right) at the launching ceremony.

FRONT ROW: TCRA Board members Eng. Dr. Mzee Suleiman Mndewa and Ms Valerie Msoka. SECOND ROW: Members of the TCRA Content Committee - Mr. Joseph Mapunda (5th left), Mr. Abdul Ngarawa (4th) and Mr Derek Murusuri (3rd left); Executive Secretary of the TCRA Consumer Consultative Council, Ms. Mary Shao Msuya (2nd left) and Mr. Isaac Mruma, consultant.

empower consumers

ABOVE,RIGHT, BELOW: Stakeholders who participated in the launching.

LEFT: ACP Barnabas Mwakalukwa of the Police Force (first right) with other stakeholders

TCRA's Mr. Benito Kalinga (second left), Mr. Alfred Maro (third left), Ms. Connie Francis and Eng. Andrew Kisaka (right)

Fig. 1. Consumer protection in EPOCA Regulations

Regulation	Obligations of service providers
Consumer protection	Provision of accurate and complete information to consumers on services and products; including tariffs, terms and conditions; and complaints procedure. Privacy and confidentiality.
Quality of service	Provision of information to customers on Quality of service parameters so they can make informed decisions. Measure quality of service and submit quarterly reports to TCRA Timely resolution of customer complaints.
Licensing	SIM card registration to prevent misuse. Ensuring safety of services and products; privacy. Use of type approved equipment. No suspension of services without prior notice. Warranty for products, devices sold.
Mobile Number Portability	(Has provisions for using a subscriber's mobile number on another mobile network). Subscribers to freely port their numbers.
Tariffs	Submitting, to TCRA, quarterly schedules of tariffs. Should not charge tariffs not filed with TCRA. To file tariffs of promotions and special offers in advance. To provide clear and complete information on tariffs and rates. No discriminatory tariffs. To provide clear terms and conditions of services.
Value Added Services (VAS)	(These are the extra communication services, other than basic telecommunications services, provided by numbering resource assignees). Provision of complete and accurate information to consumers on VAS, including terms and conditions - in printed and electronic formats. No unsolicited messages to consumers. Deactivation of unsolicited messages.
Postal	Standards of performance- speed of delivery
Interconnection	Obligation to connect with other networks; to give consumers seamless connections
Elecronic Communications Equipment Standards	To use only type approved equipment. All equipment to have minimum 12 months warranty. Warranty to be signed and to describe terms, including replacement or free maintanance during period.
Central Equipment Identification Register (CEIR)	Enabling consumers to buy quality commnications devices. Blacklisting reported stolen of lost mobile phones and devices.
Content	Privacy, ethical issues. Periodic provision of viewers guide, warning and information on the rating of content. Broadcast of suitable programmes in terms of content, language and presentation. To have provisions for people with disabilities.

Mwongozo wa Watumiaji wa Huduma na Bidhaa za Mawasiliano

Mamlaka ya Mawasiliano Tanzania imeandaa na kuchapisha vidokezo vya kumuongoza mtumiaji wa huduma na bidhaa za mawasiliano katika masuala mbalimbali. Nakala za Mwongozo huo zimesambazwa sehemu mbalimbali na zinapatikana kwenye tovuti ya TCRA - www.tcra.go.tz. Tunachapisha sehemu ya kwanza ya Mwongozo huo. Sehemu ya pili na ya mwisho itachapishwa kwenye toleo la Aprili - Juni, 2018.

Utangulizi

Miaka ya hivi karibuni tumeshuhudia kukua kwa kasi kwa sekta ya mawasiliano hapa nchini na duniani kwa ujumla. Kumekuwa na ongezeko la huduma zinazowezeshwa na tekinolojia ya habari na mawasiliano (TEHAMA). Fursa zinazotokana na kuongezeka huku na pia idadi ya watumiaji na watoa huduma vimeongezeka.

Mabadiliko katika sekta ya mawasiliano yameleta maendeleo makubwa na kurahisisha na kubadili kwa kiasi kikubwa namna ambavyo tunafanya shughuli zetu mbalimbali. Pamoja na mchango huu mkubwa na wenye kuongeza tija katika shughuli zetu, maendeleo haya pia yamekuja na changamoto mbalimbali zikiwemo za kitamaduni, maudhui na staha, kiusalama, masuala mapya na wakati mwingine hali ya sintofahamu kwa upande wa watumiaji wa huduma hizi.

Mwongozo huu wa watumiaji wa huduma za mawasiliano utakuwa unachapishwa mara kwa mara kwa kuzingatia mabadiliko katika tekinolojia na maendeleo ya sekta kwa lengo la kuwaonyesha watumiaji utaratibu bora wa kufuata ili kufaidi huduma za mawasiliano ambazo wamezilipia au wamewezeshwa kuzitumia, kupunguza na pale inapowezekana kuondoa kabisa changamoto ambazo zinaweza kuwaletea athari hasi katika matumizi ya huduma na bidhaa za mawasiliano. Kitabu hiki pia kinakusudiwa kumwezesha mtumiaji wa huduma za mawasiliano kujilinda dhidi ya matukio yanayoweza kutokea na kumsababishia athari za kiafya, kiusalama au upotevu wa mali zake.

Mwongozo umefafanua dhana mbalimbali, umewachambua wadau wa sekta ya mawasiliano nchini Tanzania pamoja na kazi zao, umeainisha majukumu na kazi za mdhibiti wa sekta hii kwenye kumlinda mtumiaji na umeelezea haki na wajibu wa watumiaji.

Vilevile chapisho hili lina lengo la kutoa dondoo muhimu kwa wanaotumia huduma za simu na intaneti, huduma za utangazaji na huduma za posta.

Katika chapisho hili mtumiaji atapata pia ufahamu kuhusu utaratibu wa kuwasilisha malalamiko pale ambapo haki yake imekiukwa au pale ambapo hakupokea huduma kwa kiwango ambacho mtoa huduma aliahidi kufanya hivyo. Mtumiaji pia atafahamishwa kanuni zinazomlinda, masuala mtambuka na tahadhari na mambo ya kuzingatia anapotumia huduma na bidhaa za mawasiliano.

Ni matarajio yetu kuwa chapisho hili litakuwa msaada mkubwa kwa walengwa ili kuwawezesha kupata thamani halisi ya fedha zao, na pia kufurahia na kufaidi fursa zilizopo katika matumizi ya TEHAMA.

2.0.Maana ya Mtumiaji

Mara nyingi, maneno ‘mtumiaji’ au ‘mteja’ yanatumika kwa kubadilishana; yaani kama vile moja ni mbadala wa lingine. Kwa kuzingatia matakwa ya kisheria, maneno haya yanatofautishwa kama yanavyo fafanuliwa hapa. Neno “Mteja” litatumika kumtambulisha yule ambaye ana uhusiano wa kimkataba na mtoa huduma au bidhaa na anaweza kuwa mtu binafsi, kikundi cha watu au taasisi. Sambamba na tafsiri hii, neno “Mtumiaji” litatumika kumtambulisha yule ambaye anatumia/ anafaidika na huduma au bidhaa yenyewe.

Aghalabu, inategemewa mteja atakuwa pia ndiye mtumiaji, lakini kufuatana na tafsiri zilizotangulia, inawezekana kabisa kwamba mteja asiwe mtumiaji na mtumiaji asiwe mteja. Kwa mfano, mtu akinunua simu kwa ajili ya matumizi ya ofisi na kuiunganisha na mtandao wa simu kwa kuisajili laini kwa mujibu wa utaratibu uliowekwa, aliyenunua na kusajili laini ndiye mteja wa kampuni husika. Mtumiaji anaweza kuwa mtu mwingine kabisa. Hivyo hivyo kwa kutumia mfano wa televisheni/runinga, mmilki au mwendeshaji wa hoteli anaponunua televisheni/ luninga na kujiunga na huduma ya shitariki anakuwa mteja wa kampuni husika ya utangazaji; lakini watumiaji wa televisheni/runinga hizo ikiwa ni pamoja na maudhui ni watu wengine.

Pamoja na maelezo hayo, hii haizuii ama kwa mteja au kwa mtumiaji kutopata haki zake kisheria na kwa mujibu wa kanuni zinazosimamia sekta ya mawasiliano.

3.0 Sekta ya Mawasiliano Tanzania

Sekta ya mawasiliano nchini inahusisha miundombinu, utoaji na matumizi ya huduma na bidhaa katika sekta ndogo za simu na intaneti, utangazaji, posta na usafirishaji wa vipeto.

Huduma za Mawasiliano ni za msingi katika maisha ya wananchi kijamii, kiuchumi na kisiasa. Mawasiliano yanawezesha na kuhimili sekta nyingine.

Watoa huduma za mawasiliano wanapewa leseni na kusimamiwa na Mamlaka ya Mawasiliano Tanzania.

4.0. Mamlaka ya Mawasiliano Tanzania

Mamlaka ya Mawasiliano Tanzania au TCRA ambacho ni kifupisho cha Tanzania Communications Regulatory Authority kwa lugha ya kiingereza ni taasisi ya serikali inayosimamia sekta ya mawasiliano katika Jamhuri ya Muungano wa Tanzania. TCRA inasimamia sekta ndogo za mawasiliano ya simu, intaneti, maudhui ya utangazaji (redio na televisheni) na huduma za posta na usafirishaji wa vipeto. Mamlaka inasimamia maudhui kwa Tanzania Bara tu. Zanzibar ina tume inayosimamia maudhui ya utangazaji kwa eneo la Zanzibar. TCRA ilianzishwa chini ya Sheria ya Mamlaka ya Mawasiliano Tanzania Na. 12 ya 2003.

TCRA imeweka mfumo wa leseni wenye lengo la kuendeleza maeneo ya sekta ndogo zilizotajwa hapo awali. Leseni zinazotolewa ni pamoja na Leseni ya kumiliki na kuweka miundombinu; Leseni ya Mawasiliano; Leseni ya kutoa huduma za Mawasiliano, Leseni ya kutumia masafa na namba na Leseni za Maudhui kwa ajili ya redio na televisheni.

Mamlaka pia inatoa leseni za kusambaza na kusafirisha barua na vifurushi, kufunga na kutengeneza vifaa; Leseni ya kuingiza nchini na kusambaza vifaa vya mawasiliano; Leseni ya kuuza vifaa vya mawasiliano vya jumla, Leseni ya kuuza vifaa vya mawasiliano kwa rejareja na Leseni ya kufunga au kuweka mitambo ya mawasiliano.

5.0. Wadau wa Sekta ya Mawasiliano Tanzania

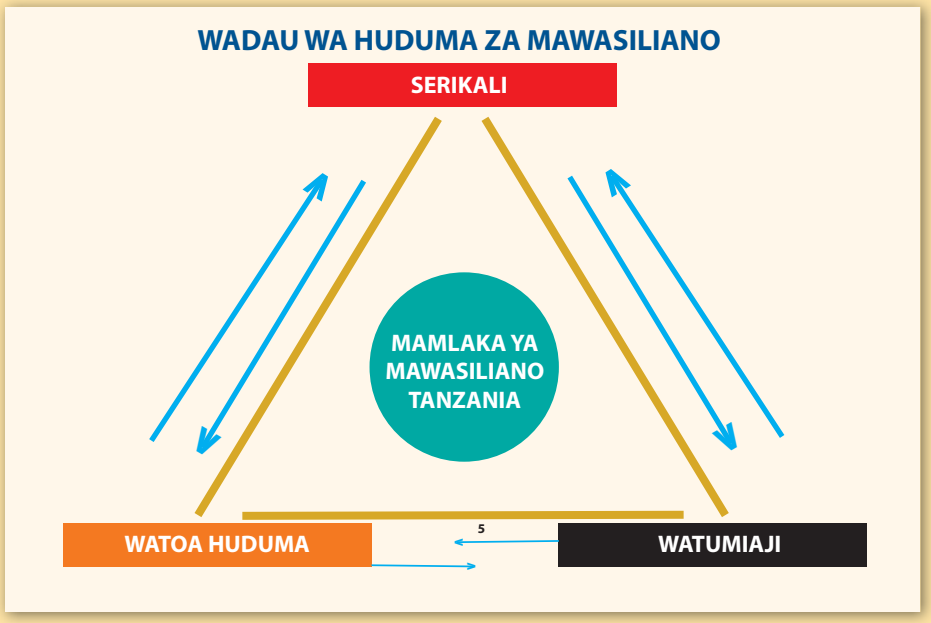
Sekta ya mawasiliano Tanzania ina wadau wakuu wanne ambao ni Serikali, Watoa huduma, Watumiaji wa huduma na TCRA ambaye ni msimamizi wa sekta. Wadau hawa wana majukumu, matarajio na malengo tofauti kama inavyoainishwa hapa chini: -

Serikali-inatunga sera, sheria na kanuni zinazoongoza sekta pamoja na kukusanya kodi zinazotokana na shughuli za sekta kwa maendeleo ya nchi na watu wake.

Watoa huduma-wanafanya biashara, wamejipanga vizuri, wanahamasishwa n a kupata faida, wana uwezo (nguvu ya fedha).

Watumiaji-hawajajipanga, wanatazamia kupata huduma bora kwa gharama kidogo au ikiwezekana hata bure, hawana umoja na wengi wana ufahamu mdogo kuhusu teknolojia ya mawasiliano pamoja na huduma wanazozitumia.

Mdhibiti/Msimamizi (TCRA) - yuko katikati ya wadau hawa wengine ili kuhakikisha mahitaji na matazamio yao yanafikiwa kwa kuzingatia uwiano sawia wa manufaa katika sekta ya mawasiliano. Mamlaka inatekeleza sera za Serikali, inahakikisha sekta haiyumbi kwa kuhakikisha watoa huduma wanatoa huduma kwa ufanisi na kuona maslahi ya watumiaji yanalindwa.



6.0 Kazi na Majukumu ya Mamlaka ya Mawasiliano Tanzania

Sheria iliyoianzisha Mamlaka hii imetamka kazi za TCRA kama zinavyoainishwa hapa chini: -

1. Kutoa leseni, kuongeza muda wa leseni na kufuta leseni pale ambapo masharti ya leseni husika hayakufuatwa;
2. Kuweka viwango kwa bidhaa na huduma zinazosimamiwa;
3. Kuweka viwango, kanuni na masharti ya kusambaza bidhaa na huduma zinazosimamiwa;
4. Kudhibiti viwango na bei ya jumla ya mawasiliano kati ya mitandao;
5. Kufuatilia utendaji wa sekta zinazosimamiwa kuhusiana na: -
   a. Viwango vya uwekezaji, upatikanaji wa huduma, ubora na viwango vya huduma, gharama za huduma, ufanisi wa bidhaa na usambazaji wa huduma;
   b. Kuwezesha kutatuliwa kwa malalamiko na migogoro baina ya watoa huduma na kati ya mtoa huduma na mtumiaji wa huduma;
   c. Kusambaza taarifa kuhusu mambo ambayo ni muhimu kwa ajili ya shughuli za Mamlaka.

Katika kufanya kazi zake, Mamlaka inajitahidi kuendeleza ustawi wa jamii ya Tanzania kwa kukuza ushindani unaofaa na ufanisi wa uchumi; kulinda maslahi ya watumiaji; kuendeleza upatikanaji wa huduma zilizodhibitiwa kwa watumiaji wote ikiwa ni pamoja na wenye kipato kidogo, walioko vijijini na watumiaji walio katika mazingira magumu;

kuelimisha wananchi kuhusu utambuzi na uelewa wa sekta zilizodhibitiwa ikiwa ni pamoja na haki na wajibu wa watumiaji na namna ambavyo malalamiko yanaweza kuwasilishwa na kutatuliwa.

7.0. TCRA na dhana ya kumlinda Mtumiaji

Sekta ya mawasiliano inakua na kubadilika wa kasi. Kuna huduma na bidhaa nyingi ambazo zinavutia watumiaji tofauti-tofauti kutokana na hadhi yao, kiwango cha uchumi, uelewa na mahali walipo. Wateja na watumiaji wa huduma na bidhaa za mawasiliano wakiwa wadau muhimu katika sekta ya mawasiliano wanahitaji kulindwa dhidi ya watoa huduma ambao wanaweza kutumia udhaifu w a watumiaji au uelewa wao mdogo kuwakandamiza, kuwanyonya, kuwadhihaki na kuwanyanyasa kiuchumi.

TCRA inapotoa leseni huweka masharti ambayo hulenga kumlinda mtumiaji. Uwekaji wa viwango kwa bidhaa na huduma zinazosimamiwa una lengo la kuhakikisha kwamba watumiaji wanapata thamani ya malipo waliyotoa kwa huduma na bidhaa. Viwango na kanuni na masharti ya kusambaza bidhaa na huduma zinazodhibitiwa vinawekwa kwa madhumuni ya kuendeleza biashara inayozingatia ubora wenye viwango vya kimataifa na vitakavyo hakikisha watumiaji wanapata huduma kwa viwango stahiki. Udhibiti wa gharama na bei za huduma una lengo la kuzuia mtoa huduma mwenye ukiritimba kuwanyonya watumiaji kwa kujipangia bei anayotaka kwa kutumia fursa ya kutokuwepo ushindani.

Majukumu ya kushughulikia malalamiko ya watumiaji yana lengo la kuhakikisha kwamba watumiaji wanatendewa haki na kwa muda mfupi iwezekanavyo ikilinganishwa na muda ambao ungehitajika kwenye vyombo vingine vya kutoa haki.

Aidha, Mamlaka inapohimiza kuenea kwa huduma vijijini na kwenye maeneo ambayo watoa huduma wasingependelea kwenda kwa sababu za kibiashara, hufanya hivyo kwa lengo la kuhakikisha kwamba Watanzania wengi zaidi wanapata huduma, bila kutengwa kwa sababu ya eneo wanaloishi.

8.0. Haki za Watumiaji

Watumiaji wa huduma na bidhaa za mawasiliano wana haki mbalimbali ambazo zinawapa ulinzi wanapotumia huduma na bidhaa hizo. Haki hizi, ambazo zimeainishwa kwenye Kanuni za Kulinda Watumiaji, zinatokana ama na matumizi ya huduma au bidhaa husika, masharti ya leseni za watoa huduma au kwa mujibu wa matakwa ya sheria za nchi.

8.1. Haki zitokanazo na matumizi na masharti ya leseni

Upatikanaji wa huduma: Watumiaji wanapaswa kupata huduma za msingi za mawasiliano kwa bei nafuu.

Kupata huduma bora: Watumiaji wanatakiwa kupata huduma zenye ubora ambazo zinaendana na gharama za huduma. Wanapaswa kupata huduma ambazo zinaendana na dhana ya thamani ya fedha inayolingana na huduma zinazotolewa.

Kupewa taarifa kuhusuhuduma na bidhaa: Watumiaji wana haki ya kupata taarifa kamili za makubaliano ya awali ambazo ziko wazi (zinaeleweka),zitakazosaidia,zinazojitosheleza na sahihi kuhusu huduma zinazotolewa na mtoa huduma ili kurahisisha kufanya uchaguzi sahihi.

Kutokubaguliwa: Watumiaji wana haki ya kuhudumiwa kwa usawa na bila kubaguliwa. Ubaguzi unaozungumziwa hapa unaweza ukawa kwa namna ya ama kunyimwa huduma au huduma kutolewa kwa ubora

usiofanana kwa wateja tofauti hata kama wote wanalipa kiasi cha fedha sawa na wengine na kwa huduma zinazofanana.

Malalamiko: Watumiaji wanapokutana na kasoro katika ubora wa huduma au ucheleweshaji katika kupata huduma wanatakiwa kulalamika. Watumiaji wanatarajiwa kutumia huduma wakijua masharti na viwango vya huduma inayotolewa. Kama masharti hayo hayakutimizwa mtumiaji anatakiwa kulalamika.
Kutatuliwa matatizo: Mtumiaji anapolalamika anatakiwa apate suluhisho la matatizo yake. Kila mtoa huduma anatakiwa kuweka utaratibu wa kutatua malalamiko ya wateja kuhusiana na huduma anazozitoa au matatizo yanayotokana na huduma hizo.
Iwapo mtoa huduma ama hakutatua tatizo au hakulishughulikia kabisa au utatuzi uliotolewa haukumridhisha mlalamikaji basi m l a l a m i k a j i anatakiwa kuwasilisha malalamiko yake TCRA.

Kupewa taarifa kabla ya kusimamisha au kukatisha huduma: Iwapo kwa namna moja au nyingine mtoa huduma anataka kusimamisha kwa muda utoaji wa huduma anatakiwa kutoa taarifa ya awali kwa watumiaji akieleza wazi sababu za kufanya hivyo. Kusitishiwa huduma bila kupewa taarifa ni ukiukwaji wa haki za watumiaji.

Uwakilishi: Watumiaji wana haki ya kuwakilishwa katika kufuatilia masuala ya huduma wanazopata.

Kupata taarifa kamili za malipo na ankara: Watumiaji wanaolipia huduma baada ya kutumia, wana haki ya kupata taarifa kuhusu ankara zao kwa ajili ya malipo wanayotakiwa kufanya.

8.2. Haki zinazotokana na Sheria za nchi

Zipo haki ambazo zimewekwa kwenye sheria; nazo ni usalama wa huduma zinazotolewa, usiri na faragha wakati wa matumizi na elimu kuhusu huduma zinazotolewa. Haki hizo ni:

Usalama na Ulinzi: Watumiaji wanatarajia kutumia huduma na bidhaa ambazo ni salama na imara. Mtoa huduma, muagizaji au msambazaji wa vifaa vya mawasiliano hapa nchini, anapaswa kuhakikisha kwamba vifaa vyake vyote vinakidhi mahitaji ya usalama wa afya kabla ya kutumiwa na wateja. Vifaa vya mawasiliano vinavyoingizwa Tanzania vinatakiwa kuthibitishwa ubora wake na TCRA, kuwa salama kwa watumiaji kwa kuzingatia viwango vya ubora wa kimataifa.

Kuwa na usiri au faragha katika matumizi: Sheria inamlinda mtumiaji dhidi ya kutolewa kwa taarifa zake na mtoa huduma kwa watu wasiohusika. Watumiaji wana haki ya usiri au faragha katika matumizi ya huduma. Sheria imeweka masharti ya uaminifu kwa watoa huduma ili kuhakikisha na kudumisha usiri wa maudhui ya mawasiliano yote, ziwe data au taarifa zozote ambazo mtoa huduma anaweza kuvipata kutokana na kumhudumia mteja. Taarifa za mteja hazitatolewa kwa mtu yeyote bila ya ridhaa ya maandishi ya mteja mwenyewe.

Taarifa zinaweza kutolewa kwa wahusika walioidhinishwa pale tu ambapo zinahitajika katika uchunguzi wa matukio ya kijinai na kwa utaratibu uliowekwa kisheria na kikanuni au itakapoombwa na mahakama.

Elimu kwa Watumiaji: Watumiaji wana haki ya kuelimishwa kuhusu huduma wanazotarajia kujiunga nazo na zile zinazotolewa kwao na masuala yanayohusiana na matumizi yao.

9.0. Wajibu wa watumiaji

Pamoja na haki walizonazo, watumiaji pia wana wajibu ambao wakati mwingine unafanana na haki. Wajibu unatokana na matumizi pia na sheria za nchi.

9.1 Wajibu kutokana na matumizi

Kuwa makini: Ni jukumu la mtumiaji kuwa makini na kuhoji masuala kama vile kanuni na masharti ya huduma. Wateja wanapaswa kujua haki na wajibu wao pamoja na kutafiti taarifa nyingine wanazoweza kupata ambazo zinahusiana na huduma ambazo wanazitumia au wanatarajia kuitumia. A i d h a watumiaji wanatakiwa kujilinda dhidi ya makosa yote ya mtandaoni, ikiwemo ulaghai na uhalifu unaofanywa kwenye mtandao ya mawasiliano.

Kuunga mkono udhibiti: Watumiaji wanatakiwa kutoa taarifa TCRA pale ambapo wanaona kasoro katika utoaji wa huduma yoyote katika matumizi ya huduma za mawasiliano.

Kutokubughudhi watumiaji wengine: Kila Mtumiaji anapaswa kutumia huduma na bidhaa za mawasiliano kwa staha, bila ya kuwaletea kero watumiaji wengine. Hii ni pamoja na kuzingatia faragha ya watu wengine kwa mfano kwenye sehemu za ibada; sehemu zinazohitaji umakini kwa mfano maktaba, benki na kwenye mikusanyiko ya watu wengi. Katika wajibu huu, inasisitizwa kwa mtumiaji kutotuma ujumbe, au kupiga simu zenye maudhui isivyo stahiki kwa mtumiaji mwingine bila ridhaa yake.

9.2. Wajibu unaotokana na Sheria za nchi

Kutii sheria za nchi: Mtumiaji ana wajibu wa kutumia huduma kwa kuzingatia sheria za nchi na bila kuingilia uhuru na haki za watumiaji wengine. Huduma za mawasiliano zisitumike kama nyenzo ya kufanya uhalifu wa aina yoyote; mfano kutukana watumiaji wengine, kutunza au kusambaza picha zisizofaa, kufanya mawasiliano yenye maudhui ya kulenga ponografia ikiwemo ponografia inayohusu watoto. Sheria mojawapo ni sheria ya Mawasiliano ya Elektroniki na Posta (EPOCA) ya 2010, Sheria ya makosa ya Mtandao ya 2015 na Sheria ya Miamala ya Kielektroniki ya 2015.

Baadhi ya matakwa ya kisheria kuhusu matumizi ya huduma za mawasiliano ni pamoja na kusajili laini ya simu kwa majina halisi kabla ya kuanza kuitumia, kutoa taarifa unapopoteza simu au laini ya simu au unapobadilisha umiliki wa simu. Kuchakachua laini ya simu au kifaa chochote cha mawasiliano ni kutenda kosa la jinai.

Matumizi halali ya huduma: Watumiaji wanatakiwa kutumia huduma kwa kuzingatia masharti ya huduma husika. Matumizi ya huduma kinyume na malengo yaliyowekwa ni kukiuka sheria za nchi.

Matumizi salama ya huduma: Watumiaji wa huduma na vifaa vya mawasiliano wanatakiwa kutumia huduma na vifaa vya mawasiliano kwa usalama wao binafsi na watumiaji wengine na pia kuhakikisha utunzaji wa mazingira. Watumiaji wanatakiwa kuzingatia maelekezo kuhusu matumizi ya simu zao za kiganjani wanapokuwa kwenye maeneo hatarishi au maeneo maalum kama vituo vya mafuta, hospitali (karibu na vifaa tiba ambavyo vinaweza kuathiriwa ubora wa utendaji wake kwa kuingiliwa na matumizi ya simu) au wanapoendesha magari. Watumiaji wachukue tahadhari na wazingatie maelekezo yanayotolewa kwenye maeneo husika.

Kulipia huduma wanazotumia: Watumiaji wanawajibika kulipa gharama za huduma ambazo wamejiunga nazo, hasa kwa wale wanaolipia huduma baada ya matumizi. Kwa wale wanaolipia kabla, ni vyema kufahamu huduma wanazotumia na gharama
zake. Mamlaka inawashauri watumiaji kujiunga na vifurushi ikiwa vipo kwani gharama zake ni ndogo kuliko bei ya kawaida. Kujiunga na vifurushi ni hiari ya mtumiaji mwenyewe.

Kuhifadhi Mazingira na Utunzaji wa nyenzo za mawasiliano: Kila mtumiaji ana jukumu la kuhakikisha kuwa matumizi yake ya huduma za mawasiliano hayaathiri mazingira. Aidha mtumiaji ana jukumu la kutunza vifaa, miundombinu na nyenzo zote za mawasiliano karibu yake.

10.0. Masuala ya kuzingatia unaponunua na kutumia huduma za mawasiliano

Unaponunua kifaa cha mawasiliano au huduma za mawasiliano unakuwa na matarajio mengi. Kwanza ungependa kifaa au huduma ikidhi mahitaji yako na uridhishwe na ubora wake, ufanisi na upatikanaji wa huduma muhimu zitakazofanya uweze kuendelea kufaidi na kuifurahia bidhaa au huduma husika. Ungependa pia kupata msaada au kuungwa mkono na aliyekuuzia au anayekupa huduma ili uweze kuendelea kutumia huduma na bidhaa hiyo kama ulivyotarajia mwanzoni. Hivyo, kuna mambo ambayo ni muhimu kuzingatia, ambayo yameainishwa hapa kutegemea na aina ya huduma au kifaa.

10.1. Unaponunua simu

Simu imekuwa kifaa ambacho kina matumizi mengi ya mawasiliano. Simu ya mezani inafanikisha mazungumzo na baadhi huweza kutoa huduma za ujumbe mfupi (sms) na huduma za intaneti. Simu ya kiganjani inatumika kwa mazungumzo, kutuma ujumbe mfupi, kupata huduma za intaneti, kufanya miamala ya kifedha, kujumuika kupitia mitandao ya kijamii na hata kuhifadhi kumbukumbu, kutegemea uwezo wa simu husika. Simu ni nyenzo ya kutuunganisha kibiashara na kijamii; hivyo mnunuzi wa simu angependa kuwa na kifaa ambacho kinakidhi mahitaji na matarajio yake kutegemea na kile anachotaka kufanya.

Iwapo mahitaji yako ni mazungumzo na kutuma ujumbe mfupi au kupata huduma za kifedha tu, simu ya kawaida inakufaa. Iwapo una matumizi na matarajio zaidi ya kuzungumza na kutuma ujumbe mfupi, unahitaji kuwa na simu yenye uwezo wa kufanya mambo unayotarajia.

Pamoja na mahitaji haya ya mawasiliano, unahitaji kuwa na simu ambayo itakuwezesha kuitumia wakati wote. Hivyo, pamoja na mazingatio ya mahitaji yako ya matumizi, unahitaji simu yenye sifa zifuatazo:

1. Ubora: Kabla ya kununua simu, uhakikishe uhalisia na ubora wake kwa kuangalia namba tambulishi ya simu husika. Kila simu halali ya kiganjani ina namba yake ya pekee ya utambulisho ambayo inajulikana kama IMEI, ambacho ni kifupisho cha maneno ya kiingereza ambayo ni International Mobile Equipment Identity, na namba hii haifanani na nyingine yoyote duniani kote.

2. **Uwezo wa kuunganisha mitandao**: Hakikisha kuwa simu unayonunua inaweza kuunganishwa na mitandao iliyoko nchini na nje ya nchi pia.

3. **Urahisi wa kuchaji**: Simu iwe na uwezo wa kutumia kifaa cha kuchajia ambacho kinapatikana kirahisi.

4. **Utunzaji wa umeme**: Hakikisha simu ina uwezo wa kutunza umeme kwenye betri yake na kukupa muda wa kutosha kutumia huduma za mawasiliano, yaani ambayo ikichajiwa inakaa muda mrefu bila betri kuisha nguvu.

5. Urahisi wa kutumia: Hakikisha unanunua simu itakayo kuwezesha kupokea simu na meseji bila kupitia mlolongo wa hatua ndefu.

6. **Simu ya kiganjani isiwe kero**: Nunua simu inayoweza kushikwa mkononi na kutumiwa bila kuleta bugudha kwa mtumiaji au kwa watu wengine.

7. Mahali pa kununua simu: Ni jambo la muhimu kuhakikisha unanunua simu yako mpya kutoka kwenye duka lililosajiliwa au kuidhinishwa na watoa huduma au watengenezaji wa simu husika. Hii itakuhakikishia kuwa iwapo kuna tatizo la simu uliyonunua, basi utaweza kutengenezewa simu yako iliyo kwenye waranti au wakati mwingine kubadilishiwa kabisa.

8. Dai risiti na waranti: Kila ununuapo simu mpya, hakikisha unadai risiti na waranti ambavyo vitakuhakikishia umiliki wako na pia uhakika wa yule anayekuuzia. Pale inapotokea unataka kununua simu iliyotumika, hakikisha unapata risiti ya awali au uthibitisho wa umilki wa simu husika. Simu bora inatakiwa iwe na garantii ya angalau mwaka mmoja.

9. Pata taarifa kabla ya kufanya uamuzi: Pamoja na vidokezo vilivyotajwa hapo juu, unaweza pia kupata simu inayokufaa kwa kusoma taarifa za kifaa chenyewe au kupata uzoefu/maoni ya watumiaji wengine ambao wameridhika na ubora, utendaji kazi wa simu husika; ila taarifa hizo zitoke kwa watu unaowaamini.

10.2. Unaponunua laini ya simu

Ili simu ya kiganjani iweze kufanya kazi, inahitaji iwe na laini ambayo imeunganishwa na mtandao husika. Laini hii inajulikana kama SIM card, ambacho ni kifupisho cha Subscriber Identity Module kwa lugha ya kiingereza.

Sheria inataka mtumiaji anayenunua au kupata laini ya simu kuisajili kwa majina yake halisi. Kwa mujibu wa Sheria ya Mawasiliano ya Kielektoniki na Posta (EPOCA) ya 2010, adhabu ya kutokufanya hivyo ni shilingi 300,000 au kifungo miezi mitatu. Hakikisha taarifa unazotoa wakati wa usajili ni za kweli. Ni kosa la jinai kutoa taarifa za uongo, na inapothibitishwa mahakamani, adhabu kali hutolewa ikiwa ni pamoja na faini, kifungo au vyote viwili. Kuthibitisha usajili wako, piga *106#.

Ni muhimu kuhakikisha kwamba kitambulisho chako ndicho kinachotumika katika usajili wa laini. Vitambulisho ambavyo vinakubalika ni:
1. Kitambulisho cha Taifa.
2. Kitambulisho cha Mzanzibari Mkaazi.
3. Pasi ya Kusafiria.
4. Kitambulisho cha Mpiga Kura.
5. Leseni ya Udereva iliyotolewa Tanzania.

Ni vyema kuchagua mtoa huduma ambaye atakidhi matarajio yako na ambaye una imani kuwa atakupa huduma bora kwa gharama unayoimudu. Ujiunge na mtoa huduma ambaye atakuwa tayari kukuhakikishia haki zako, ikiwa ni pamoja na haki ya kuwasilisha malalamiko na kupata suluhisho.

10.3. Unapojiunga na huduma za simu

Watoa huduma za simu za kiganjani wana bidhaa nyingi ambazo huweza kuunganishwa kama huduma moja (kifurushi). Kuna aina nyingi za vifurushi vyenye gharama tofauti. Unapojiunga na huduma au vifurushi, ni vyema kuzingatia aina ya huduma unayotarajia; kama ni ya mazungumzo zaidi, meseji zaidi au data zaidi.

Pata taarifa za kutosha kabla na wakati wa kutumia huduma hizo na wakati wote, pata ufafanuzi wa huduma unayojiunga nayo iwapo utakuwa huna uhakika na lile linaloendelea, hasa pale unapoona kipengele cha 'masharti na vigezo kuzingatiwa' kinasisitizwa.

10.4. Unapotumia simu kwa maongezi au kutuma ujumbe mfupi

Matumizi ya simu kwa maongezi ni ya aina mbili – kupigia mtumiaji mwingine na kupokea simu kutoka kwa mtumiaji mwingine. Maongezi ya simu yanatakiwa yawasilishe ujumbe unaotakiwa kwa muda mfupi. Hii inaokoa muda na pia gharama za matumizi. Mawasiliano kwa njia ya ujumbe mfupi yanaokoa gharama za maongezi na pia ni nzuri kutumika kwenye hadhara, kwani ina faragha na huondoa kuwabugudhi watu wengine. Unapotumia simu kuwasiliana zingatia vidokezo hivi muhimu:
1. Fikisha kwanza ujumbe uliokufanya upige simu, ndipo uongee mambo mengine.

2. Simu nyingi zina milio ndani ya kifaa chenyewe, lakini pia mtumiaji anaweza kupata milio mingine kwa namna mbalimbali na kuihifadhi kwenye simu yake. Ni vyema kuweka mlio wenye staha na heshima kwenye simu yako, kwa kuzingatia maadili ya hadhara/jamii inayokuzunguka.

3. Zingatia faragha yako na ya watu wengine; kwa mfano kwa kutokupayuka unapokuwa kwenye mkusanyiko wa watu, (mfano benki, maeneo ya ibada na tafakuri, hospitali, kwenye mikutano, darasani n.k). Kwa kawaida, sauti ya mtu anapozungumza na simu inakuwa ni ya juu tofauti na mazungumzo ya ana kwa ana. Ukitaka kutumia simu kwenye hadhara, kaa mbali na watu wengine, angalau hatua nne kutoka mtu wa mwisho kwenye mkusanyiko huo au kama ni kwenye chumba, ni vyema zaidi ukitoka nje ya chumba husika.

4. Usitumie simu kwenye maeneo hatarishi ambayo yanaweza kukufanya usahau unachofanya; kwa mfano unapoendesha gari au mitambo, unapokuwa jikoni, unapotembea barabarani, n.k. Usitumie simu katika mazingira ambayo yanaweza kuwapa nafasi watu wenye nia mbaya kukufanyia uhalifu.

5. Zingatia masharti ya matumizi ya simu (kwa mfano ukiwa ndani ya ndege, maeneo nyeti, n.k).

6. Usipigie watu simu au kuwatumia meseji muda ambao kijamii unakubalika kuwa ni usiku sana au asubuhi sana; isipokuwa tu kama kuna dharura.

7. Chukua tahadhari ya wale walio karibu nawe wasisikie mazungumzo yako kwani waweza kupata taarifa zako za siri usizokusudia wao kuzifahamu.

8.Tuma ujumbe wenye staha na maudhui mazuri.

9.Usitunge au kusambaza ujumbe wenye maudhi au usiofaa.
10. Ukipokea ujumbe usiofaa, ufute na usiusambaze.

10.5. Unapotumia simu kupata huduma za kifedha

Simu ya kiganjani imekuwa mwezeshaji mkuu wa miamala ya kifedha. Katika miaka ya hivi karibuni, kumekuwa na ongezeko kubwa la matumizi ya huduma za kifedha mtandaoni. Simu ya mkononi inakuwezesha kutuma, kuhamisha au kupokea pesa mahali popote penye huduma hiyo. Hali hii imeongeza kwa kiasi kikubwa uwezo wa jamii kuweza kuzifikia na kushiriki katika huduma za kifedha kwa wingi na kwa urahisi zaidi.

Pamoja na faida nyingi zinazotokana na ukuaji huu, pia kumekuwepo ongezeko la changamoto ambazo zinaendana na matumizi ya huduma hizi. Ili kupunguza au kuondoa kabisa changamoto hizi, mtumiaji wa huduma za kifedha mtandaoni unashauriwa kuzingatia yafuatayo:

1. Usiweke kiwango kikubwa cha pesa kwenye akaunti ya fedha kwa mtandao kwa muda mrefu. Tumia huduma za Benki kutunza kiasi kikubwa cha fedha, na unapozihitaji kwa kufanya miamala, basi unaweza kuzitoa huko na kuziingiza kwenye simu kwa ajili ya matumizi yako mtandaoni.

2. Tumia namba ya siri ambayo sio rahisi mtu mwingine kukisia. Usitumie mwaka wako wa kuzaliwa au wa mtu wa karibu kama mwenza au watoto. Ni vyema kuibadili namba hiyo mara kwa mara.

3. Thibitisha na hakiki namba ya mtu unayemtumia pesa au salio kabla ya kutuma. Hapa tunasisitiza, hakikisha, hakikisha na hakikisha tena kabla ya kukamilisha muamala.

4. Usimpe mtu yeyote usiyemfahamu vizuri simu yako au kadi yako ya simu ili atumie.

5. Usitoe namba zako za siri au taarifa zako binafsi unazotumia kwa huduma za kimtandao kwa mtu yeyote, (hapa tunasisitiza usitoe kwa mtu yeyote) kwani anaweza kutozitunza vyema au yeye mwenyewe akazitumia kwa utaratibu ambao hujauridhia.

6. Ukipigiwa simu au kutumiwa ujumbe mfupi unaokuelekeza kutuma fedha, hata kama mtu anayekuagiza unamfahamu hakikisha kuwa ndiye kabla ya kutekeleza maagizo hayo. Usishinikizwe na maelekezo ya ujumbe mfupi (sms), kwa kuwa wahalifu wana njia nyingi za kulaghai. Ukiwa hujajiridhisha, mpigie simu aliyekutumia ujumbe kwa namba nyingine, au wapigie simu watu wake wa karibu kupata uhakika; vinginevyo usitekeleze maagizo hayo. Usiwe na nidhamu ya woga.Thibitisha taarifa hata kama ni kutoka kwa mwanafamilia, kwa wakubwa wako wa kazi au kwenye jamii.

7. Unapoombwa msaada au mkopo katika mazingira ya dharura, tumia njia iliyoelekezwa hapo juu ili kujiridhisha kabla ya kutoa msaada.

8. Unapopewa “dili” linalohusisha biashara yenye faida kubwa, mikopo isiyo na usumbufu, SACCOS zenye majina maarufu, unapopata taarifa y a ushindi wa donge nono katika bahati nasibu ambayo hujashiriki, kumbuka usitangulize malipo ya aina yoyote. Kumbuka utafanikiwa kwa kufanya kazi halali kwa bidii na kwa ueledi na sio kwa njia za mkato.

9. Mtumiaji mwingine akikosea kukutumia fedha na akakuomba umrudishie, usizitoe wala kumrudishia,

ila mwelekeze awasiliane na mtoa huduma wake ambaye atazitoa kwako na kumrudishia.
10. Iwapo umekosea kutuma fedha na kuituma kwenye akaunti/namba usiyotarajia, toa taarifa haraka kwa mtoa huduma wako na fuatilia maelekezo unayopatiwa, kisha ripoti suala hili Polisi mapema iwezekanavyo iwapo fedha hazijarudishwa.
11. Hakikisha huduma zako zote zimezuiliwa ikiwa ni pamoja na huduma za kifedha endapo utapoteza au kuibiwa simu. Kuibiwa fedha za mtandaoni baada ya kuibiwa simu au laini ya simu hutokea tu iwapo hutatoa taarifa mapema kwa mtoa huduma wako na kwa jeshi la Polisi.
12.Unapopokea maelekezo kutoka mtu anayedai ni mwakilishi wa mtoa huduma ambaye anataka uingize tarakimu kwenye simu yako au uizime simu yako kwa sababu yoyote ile atakayokueleza usifanye hivyo; badala yake nenda kwenye ofisi za mtoa huduma wako ili utekeleze maelekezo hao ukiwa ofisini kwao. Ni bora kuchelewa kuliko kupoteza. Toa taarifa kwa Mtoa huduma wako na kwa Jeshi la Polisi.

10.6. Unapotumia simu kwa biashara

Simu zimefungua fursa za ujasiriamali wa aina nyingi. Zinawezesha watu kuwa wakala wa kuuza vocha za muda wa maongezi, kufanya miamala ya kifedha, kuuza na kutengeneza simu na kuchaji simu za watumiaji wengine, kuuza na kununua bidhaa na huduma mitandaoni, n.k.

Pamoja na mambo ya kuzingatia kwa wanaotumia huduma za fedha kwa simu, wanaofanya biashara kwenye mitandao au biashara na shughuli zinazohusiana na simu wanashauriwa kuzingatia yafuatayo:

1. Kujisajili kwa mtoa huduma husika kwa kutumia taarifa zako binafsi na kuepuka kutumia taarifa au vibali vya watu wengine.

2. Kuwa makini dhidi ya wahalifu. Kwa vile biashara hizi zinahusisha mzunguko mkubwa wa fedha, zinalengwa na wezi mtandaoni na wale wa kawaida.

3. Kuhakikisha kwamba simu inayotumika kwa miamala ya kifedha ni tofauti na inayotumika kwa shughuli nyingine na kuhakikisha simu hiyo haitumiwi na mtu mwingine. Vilevile waagize wahudumu wako wasipokee maagizo ya mtu mwingine kuhusiana na biashara yako. Maelekezo yote lazima yafanyike uso-kwa-uso, au kwa njia ya simu ya maongezi tu.

4. Tumia namba ya siri ambayo sio rahisi mtu mwingine kukisia. Ni hatari na uzembe kutumia mwaka wa kuzaliwa kama namba ya siri, kwani ni rahisi kukisiwa.

5. Iwapo unauza laini za simu, hakikisha unasajili wanaonunua kwa kutumia vitambulisho vyao halisi vilivyoidhinishwa na TCRA.

6. Kutokuchakachua simu au laini ya simu. Hii inahusu hasa mafundi wa simu na wamiliki wa simu husika. Sheria ya Mawasiliano ya Elektroniki na Posta (EPOCA) ya mwaka 2010, kifungu cha 129 kimeweka adhabu dhidi ya kuchakachua simu au laini na kifungu 135 kimeweka adhabu dhidi ya kufungulia simu ambayo imefungiwa kama sehemu ya kutekeleza mpango wa rajisi kuu ya namba tambulishi.

7. Ukipokea simu kwa ajili ya matengenezo au kwa huduma ya kuchaji, hakikisha aliyekupa ana uthibitisho wa umilki wa simu hiyo au kifaa hicho na pale inapowezekana aonyeshe risiti ya manunuzi ya kifaa husika. Weka, tumia na tunza kitabu cha kumbukumbu (rejesta) ya vifaa vyote vinavyopokelewa na kutoka. Vilevile hakikisha kuwa wahusika wanaweka sahihi zao.

10.7. Mengineyo kuhusu simu

1. Ukipoteza simu au kadi ya simu toa taarifa kwa mtoa huduma na Polisi. Kutokutoa taarifa ni kosa la jinai na adhabu ya kutokufanya hivyo ni faini, kifungo au vyote viwili.
2. Ukiokota simu au kadi ya simu toa taarifa polisi au kwa mtoa huduma. Kutumia laini ya simu au kifaa cha mawasiliano ambacho huna uhalali wa umiliki wake au ridhaa ya mmiliki ni kosa la jinai na adhabu kwa mujibu wa kifungu 126 ni faini au kifungo.

Sehemu ya pili na ya mwisho itachapishwa toleo la Aprili - Juni, 2018.

Mobile wireless boosts internet uptake

TANZANIA has 23 million internet users; mostly using mobile wireless connections in a sub sector where subscriptions to the service have tripled in six years.

The December 2017 communications statistics released by TCRA show that internet users increased from 7,520,878 in 2012 to 22,995,109 in December 2017.

The national uptake, measured against the country's population, is now 45 per cent compared to 17 per cent in 2012. There were major leaps between 2013 and 2014 (from 9,312,272 users to 14,217,311) and between 2014 and 2015 (rising to 17,263,523).

The volume of domestic postal items declined during the period; from 22,992,828 in 2012 to 8,228,501. The fall in the number of International items was briefly arrested, and reversed, in 2015 but fell by half in 2016.

Mobile phone subscriptions increased from 27,627,156 to 40,080,954 in the period.

Fig 1: Subscriptions and Teledensity

Year	2012	2013	2014	2015	2016	2017
Fixed	176,367	164,999	142,950	142,819	129,597	127,094
Mobile	27,450,789	27,442,823	34,108,851	39,665,600	40,044,186	39,953,860
Total	27,627,156	27,607,822	34,251,801	39,808,419	40,173,783	40,080,954
Penetration	61%	61%	71%	79%	80%	80%

Fig. 2: Traffic (in minutes)

Year	2012	2013	2014	2015	2016	2017
National Traffic (On & Off Net)	24,354,279,292	34,934,613,363	41,689,212,148	43,461,094,130	51,023,633,898	56,053,981,867
Traffic to International	201,827,164	198,116,642	234,080,182	219,401,125	145,972,186	99,413,092
Traffic from International	253,811,569	229,961,296	258,420,938	221,145,509	171,320,372	104,148,723
Traffic to East Africa	67,648,652	42,535,489	53,329,431	44,821,161	35,811,296	21,952,159
Traffic from East Africa	68,978,489	56,624,940	54,174,595	54,078,219	79,875,098	43,845,601
Traffic to Other International	134,178,512	155,581,153	180,750,751	174,579,964	110,160,890	77,460,933
Traffic from Other International	184,833,080	173,336,356	204,246,343	167,067,290	91,445,274	60,303,122

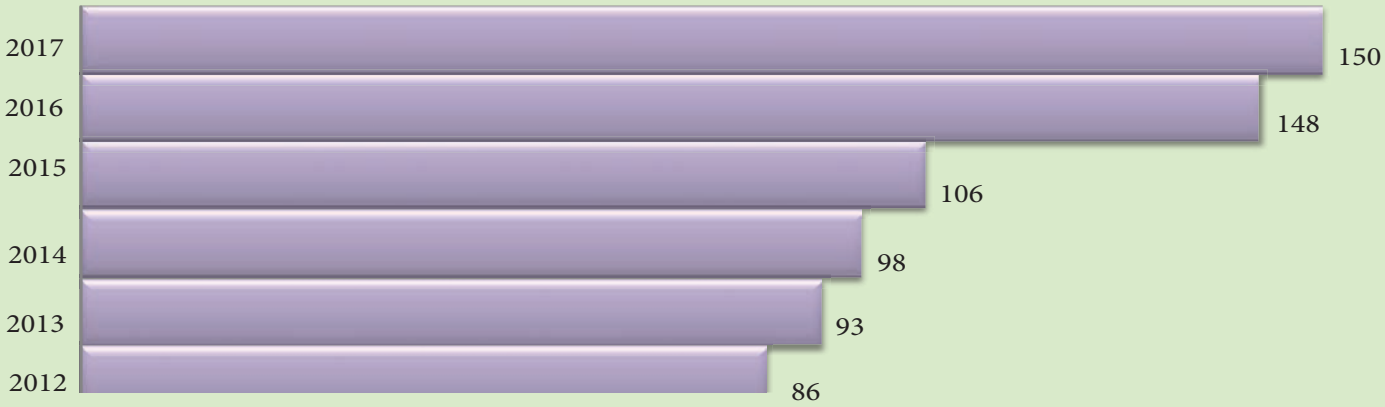
Fig. 3: Estimated number of internet users by technology type

Year	2012	2013	2014	2015	2016	2017
Fixed Wireless	777,461	1,056,940	1,913,082	662,882	1,218,693	3,468,188
Mobile Wireless	6,031,323	7,493,823	11,320,031	16,280,943	18,014,358	19,006,223
Fixed Wired	712,095	761,508	984,198	319,698	629,474	520,698
Total	7,520,878	9,312,272	14,217,311	17,263,523	19,862,525	22,995,109
Penetration	17%	21%	29%	34%	40%	45%

Fig. 4: Domestic and International Posted Items

Year	2012	2013	2014	2015	2016	2017
Domestic items	22,992,828	25,635,016	17,158,175	22,870,106	9,058,968	8,228,501
International items	8,137,969	7,225,647	5,477,634	8,389,065	3,039,816	1,892,887
Total	31,130,797	32,860,663	22,635,809	31,259,171	12,098,784	10,121,388

Fig. 5: Number of radio stations



INTERNATIONAL EVENTS CALENDAR, 2018

March 15

World Consumer Rights Day WCRD). It marks the day in 1962 when US President John Kennedy defined consumer as 'all of us' in his address to the US Congress. He outlined four consumer rights: the right to safety, to choose, to be informed and to be heard. The list of rights has since then grown. TCRA has been celebrating WCRD since 2012. This year's focus is electronic commerce with the theme: Making market places fairer.

April 26

International Girls in ICT Day. The event is celebrated every fourth Thursday In April as one of the efforts to encourage girls and young women to pursue studies in science, technology,engineering and mathematics (STEM). The International Telecommunication Union (ITU) encourages ICT stakeholders to organize events involving girls and young women around the theme 'Expanding horizons, changing attitudes'.

May 17

World Information Society Day. The event aims at raising awareness on ICTs. Previously it was celebrated as World Telecommunication Day. May 17 commemorates the founding of ITU in 1865. Tanzania has been celebrating the day through focussed public educaion campaigns including seminars, the airing of radio and television programmes and the publication of special supplements in newspapers.

Sept. 10-13

ITU Telecom World 2018, Durban South Africa. The event will feature an exhibition of products and services and a forum on ICTs. Experts from governments, businesses and international organizations will debate policies, strategies, business models and technologies shaping the industry. The theme is: *Better, Sooner;* underlining speedier innovations to bridge differences in access and to improve lives.

Oct. 9

World Postal Day. It marks the creation of the Universal Postal Union in 1874. Governments, postal services providers and regulators organize activities to raise public awareness to the role of the Post in social and economic development. UPU has organized an international letter writing competition for young people in which they are required to think of a message likely to be conveyed by a letter travelling through time.

Dec. 17

African Telecommunications and ICT Day. It marks the founding of the African Telecommunications Union (ATU) in 1977 as a specialised agency of the African Union for ICTs. Two reports released in 2017 by ITU and the UN Broadband Commission show the widening of the gap between the Continent and the rest of the world in access and use of the internet.

Digitizing Africa's gender divide

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Latest reports on the global status of ICTs shows that the gap in internet use between men and women in Africa has widened. This article addresses issues around the gender digital divide in the continent.

Grappling with post-independence development challenges in the early seventies; and painfully witnessing the growing development gap between Africa and the rest of the world, Mwalimu Julius Nyerere, the Father of the Tanzanian nation urged his people to run while the rest of the world walked. (1). That rallying cry is equally relevant today in Africa as the global differences in the use of information and communications technologies (ICTs) widens.

The 2017 Measuring the Information Society Report (MISR) released by the International Telecommunication Union (ITU shows that Africa is not only lagging behind in ICTs use, but key players in the implementation of African countries' development programmes are being left behind. Left unresolved, the digital divide may hold back development in the continent at a time when the world is experiencing a new technological revolution.

The Organization for Economic Cooperation and Development (OECD) defines digital divide as the gap between individuals, households, businesses and geographical areas at different socio-economic levels with regard both to their opportunities to access ICTs and their use of the internet for a wider variety of activities (2) .

ITU defines "digital divide" as the differences in the development (and use) of information and communications technologies (ICTS) within and between countries, regions and socio-economic groupings (3).

Other definitions are the gap that exists between those people who have access to, as well as the skills to operate, ICTs and those who do not have these. (4). Access can be both physical exposure to the technology and the ability to have and use it.

According to Hamilton Mphidi (2009) digital divide is the gap that exists between people who are information literate and those who are not; it is also the gap between people who have access to the necessary ICTs and those who do not have them. It is the disparity in access to ICTs which may result from differences in class, race, culture and geography (5).

Most definitions use the level of internet access as a factor in assessing these gaps. Internet penetration in Africa in 2017 was 21.8 per cent of the continent's population compared to 43.7 in Arab states, 65.9 in in the Americas and 79.6 in Europe.

The 2017 report of the UN Broadband Commission on ICT defines access in terms of broadband, quality network speed and digital services – including health, education and financial services. The Commission was set up in 2010 by ITU and the United Nations Scientific and Cultural Organization (UNESCO) to recommend action to expand countries' broadband access as part of efforts to meet national and international development targets. Its goals were to make broadband policy universal and affordable; to connect homes to broadband, to get more people online and to achieve gender equality in access to broadband.

"The definition of the digital divide is evolving, from the original definition of coverage and being connected/unconnected, to being connected with which speed of access. We must also prevent a new digital divide between those who live in the connected world benefiting from use-cases like connected health, connected education and smart transportation, and those without access to the use-cases the Internet of Things can provide" the report says.

It identified reasons for poor access as lack of infrastructure, non- affordability of the internet, lack of skills and lack of digital content (6).

There are gaps within gaps. For example, a gap between developed and developing countries can further be expressed in terms of the different geographical regions in the latter; and differences within a region could be between urban and rural, demographics (men, women and age groups); education levels, economic and social status and levels of education and skills (7).

In a lecture on gender and the digital divide (2009), Patricia Khati cited other gaps as physical disability, access, lack of skills, cultural and behavioural attitudes with regard to technology, age, relevancy and content in terms of

language. The use of English as the main medium of communication on the web also limits accessibility by some groups (8).

Where there are imbalances between men and women in accessing ICTs, the gap is referred to as the "gender digital divide"(9) and this has been widening in Africa where only 11.6 per cent of women access the internet. " If current trends continue, 71 Per cent of female Africans might still be offline in 2020, compared with 48 per cent of men." (10).

MISR 2017 notes the divides in terms of gender, generation (expressed in terms of age) and geographical location. Men have more access to ICTs than women; young people spend more time online than adults and there is an urban-rural divide in access.

The situation in Tanzania

A study published in August 2017 by Research Internet Africa (RIA) showed that 31 per cent of males accessed the internet compared with 27.8 per cent of females. Some 55.4 per cent of internet users were in urban areas compared with 13.6 per cent in rural areas. Rankings in other categories were higher for males and urban dwellers.

Table 1: Percentage of mobile phone and internet penetration in Tanzania (individuals aged above 15)

	Mobile phone ownership	Knowing what the internet is	Internet use	Use of social media
Country-wide	57	44.6	29.8	11.9
Male	62.7	51.3	31.5	14.3
Female	52	38.7	27.8	9.8
Urban	72.6	59.2	55.4	28.9
Rural	50.5	38.6	13.6	4.8

Source: *Research Internet Africa (RIA) report, 2017.*

So what are some of the factors leading to the divides?

The 2017 Affordability report 2017 by the Alliance for Affordable internet cites social and economic barriers, illit-

Group discussion at the University of Dar Es Salaam's College of Information Technologies.

eracy, and gender roles as among factors which keep many African women offline (11).

In Tanzania, they include school girl drop outs due to pregnancies, actions and cultures which constrain the access of girls to formal education and outdated stereotype thinking on the role of women. Consequently, girls do not finish secondary education, a basic prerequisite and foundation for absorption of global knowledge. Even those who proceed do not study subjects necessary to develop career in ICTs (12).

A third of women interviewed in a survey by the Uganda Communications Commission (UCC) Kampala showed that lack of digital know how stops them from using the internet. Only 21% of women reported having used the Internet compared with 61% of men (13).
The gender digital divide deals a double blow to society. Most African countries have more women than men. Women miss emerging opportunities, resources and information with which they could enhance theirs' and society's economic and social well being.
Access to ICTs is also essential for women entrepreneurs in starting and growing a business and overcoming barriers they face.
"When women become technologically equipped, they can easily participate actively in the mainstream economy in those previously male dominated societies and thus enable them to pull themselves out of poverty. If this group is ignored, problems such as economic dependency, violence against women, and low self-esteem will continue in Africa, "says Gibson Mhaka in an article on Bridging the gender digital divide through ICTs (14).

What is to be done?

Action on several areas has been recommended to address the gender. The progress report of the UN Broadband Commission's Working Group on the Digital Gender Divide: bridging the gender gap in internet and broadband access and use, released in September 2017 calls for the integration of gender perspectives in relevant strategies, policies, plans, and budgets.

Barriers related to affordability, threats that hamper access and use, digital literacy and confidence, and the availability of relevant content, applications and services should be addressed. Stakeholders should collaborate more effectively in addressing digital gender gaps by sharing good practices and lessons learned (15).
Two often cited impediments to ICT use are access – that is the availability of services and affordability – in terms of tariffs and charges.

The RIA survey quoted earlier puts Tanzania ahead in both. The converged licensing framework has opened up the market and led to the increase in internet services providers. Tanzania has seven mobile phone companies offering data services and is now among counties with the cheapest data packages.
Eighty per of internet users use mobile phones to access. However most users still complain of high costs of internet enabled smart phones. Some of the mobile service providers have been offering smart phones as part of packages. Competition has lowered the prices in Tanzania, which tops the Southern African Development Community (SADC) and is ranked fourth in Africa after Egypt, Tunisia and Guinea. Angola and Swaziland markets are monopolized - Swaziland has only one operator MTN; while Angola has two but one - UNITEL controls 87 per cent of the market (16).

Fig.2. Regional comparison of 1Gb prepaid mobile data

Country	Average US $ price of 1GB prepaid mobile data
Tanzania	2.27 (Down from 5.98 in 2016)
Uganda	2.43
Kenya	4.9
Burundi	5.34
Ethiopia	7.25
Angola	22.72 (Up from 28.78 in 2016)
Swaziland	35.26

Source: *Research Internet Africa (RIA) report, 2017.*

The United Nations recommends the implementation of the strategic development goals (SDGs), particularly goal 5 b which calls on countries to enhance the use of enabling technology in particular ICTs to promote the empowerment of women (17). One approach would be to expose young girls to ICTs at a very early age and to motivate and encourage them to embrace science subjects.

" Part of the answer lies in education and promoting girls' increasing engagement in science, technology, engineering and mathematics (STEM(subjects. Governments and entreprises also need to be more proactive in helping women to thrive in the ICT workplace", sasy Houlin Zhao, ITU Secretary General (18).

Countries are in different stages of promoting science, technology, engineering and mathematics (STEM) among

girls. ITU has dedicated the fourth Thursday of April every year as the International Girls in ICT day. Countries are encouraged to implement awareness and outreach programmes to equip young girls and women with the skills and inspiration needed to pursue a career in STEM and relevant qualifications. (19).

Karen Bartleson, the president of Institute of Electrical and Electronics Engineers (IEEE), the world's largest technical professional organization, told an ICT meeting in Kigali, Rwanda in 2017 that countries need to invest in STEM education if they are to rapidly bridge the gender digital gap (20).

"When young girls and women across the world are exploring educational and professional possibilities in front of them, they are increasingly seeing role models in science and engineering that reminds them of themselves. All of us here today are part of these dynamic role models. Providing educational support in STEM fields is very critical," Bartleson said.

Rwanda Minister for Gender and Family Promotion, Espérance Nyirasafari said that increasing access, affordability, and safety of women in tech; empowering women and girls with digital skills, and increasing participation of women and girls in STEM are the principles that will help Africa to bridge the digital divide (21).

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(Note: All online content was accessed in January 2018)

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Broadband for sustainable development

(Depending on the context, broadband means high speed data transmission associated with a particular speed).
***" In the 21st century, broadband networks need to be considered as basic critical infrastructure; like roads, railways, waterand power networks." - Houlin Zhao, ITU Secretary General* (2007).**

Some of the findings and recommendations of the UN Broadband Commission for Sustainable Development, whose report - ***The State of Broadband 2017: Broadband Catalyzing Sustainable Development was released in September 2017:***

Growing digital inequality between developed and developing countries
While 48% of the global population is now online, some 3.9 billion people still do not have access to the Internet – with the digital gap growing between developed and developing countries. According to estimates, Internet penetration in the developing world is projected to reach 41.3% by the end of 2017, while Internet user penetration is projected to reach only 17.5% in Least Developed Countries (LDCs) in 2017.

Gender divide
Men continue to outnumber women in terms of Internet usage worldwide, though women now outnumber men in Internet usage the Americas. Recent studies, though, show that the disparities in gender access are becoming wider in developing countries, especially in Africa.

Quality of connection and 'under-served' people
Only 76% of the world's population lives within access of a 3G signal, and only 43% of people within access of a 4G connection. Unless people have the opportunity to migrate from 2G to at least 3G to 4G and beyond, they will remain under-connected.

Affordability of broadband
Fixed and mobile broadband services are becoming progressively more affordable in a large number of countries. However, there are many challenges to making Internet access affordable for developing countries, in part due to the high costs of satellite access and fibre-optic cables. The consumers most affected by high costs of Internet access are those in landlocked countries.

Investments in ICT infrastructure
Over the last year, there has been impressive growth in the number of new Internet Exchange Points (IXPs), an important form of support infrastructure that can potentially help reduce latency and cut transit costs. The growth of IXPs in Africa over the last year is remarkable.

Five Key Recommendations
1. **Review and update regulatory frameworks for broadband**
Governments and regulators should review and update their regulatory frameworks on a regular basis to account for emerging issues and new technologies, benchmarking and comparisons with international best practices. Timely, consistent and well-enforced regulation developed in consultation with industry and other stakeholders may generally benefit operators, consumers and the domestic economy.

2. Develop and enhance national broadband plans
Defining and regularly reviewing NBPs that include approaches for achieving affordable broadband access can be helpful in aligning resources and policies within a country. Nowadays, given the move towards collaborative regulation, it may be necessary for ICT regulators to engage in more cross-sectoral collaboration and break down the silos with other Ministries and other regulators to consult on issues of cross-cutting importance, such as consumer protection and data protection.

3. Encourage investment in Internet infrastructure
Investment-friendly regulations can help incentivize investment, in full recognition of the benefits broadband availability for economic growth and a vibrant economy. Governments can promote competition to stimulate investment, and provide financial support for broadband investments through tax incentives, subsidized loans, universal service grants and PPPs.

4. Benchmark trends and developments in telecom, and ICTs
Policy choices can be implemented and improved on the basis of reliable data and indicators on ICT developments in countries. Statistical indicators are also essential to assess the impact of broadband policies and to track progress towards broadband goals and targets, such as the SDGs. Indicators should be identified and data collected to monitor broadband infrastructure and access, prices and affordability, and usage of services.

5. Consider infrastructure-sharing
Policy-makers may wish to consider open access approaches to infrastructure, including infrastructure-sharing. Examples of open access arrangements include Local Loop Unbundling (LLU), wholesale broadband access, ducts and submarine cables. Previous ITU research suggests that growth in services has happened most rapidly where regulatory enablers (e.g. industry consultations, infrastructure-sharing) have been put in place to leverage the latest innovations. Although various strategies for open access exist, it is vital that policy-makers ensure that access to new facilities is provided on fair, reasonable and equivalent terms.

Girls' blueprint fo

A Tanzanian NGO – She Codes for Change – seeks to motivate school girls to embrace Science, Technology, Engineering and Mathematics (STEM); and to empower and encourage them to consider careers in ICT as a step towards bridging the gender gap in ICT use in Tanzania. Isaac Mruma of the REGULATOR requested the She Codes for Change team coordinated by Doreen Bateyunga to respond to questions around the programme.

How wide is the gender gap in ICT use in Tanzania?

While there are no official statistics on the gender gap in the country, research shows that women will approximately hold one in five computing jobs in western countries come 2025 and that the gap is wider in Africa. In our local context, the gender gap in ICT fundamentally stems from the fact that for a long time technology has been considered a male-deserving industry hence more males partake in it as opposed to females; thus making it a male dominated industry.

There are fewer females opting for science subjects at secondary level and even in university level compared to men. For example, out of 51,840 university students enrolled in 2012/2013 in agriculture, medical science, natural science, ICT and educational science degree courses, only 16,241 (about 31.3 percent) were female and 35,599 (68.67 percent) were male.

Have you identified the factors leading to this gap? Why is there relatively low adoption of science, technology, engineering and mathematics (STEM) among girls?

Social cultural perceptions in the community have played a major role in the vast gender gap in ICT in Tanzania. While some cultural practices go to the extent of not allowing girls to go to school, others force girls to drop out of school before they can opt for a career in science due to early marriages. Additionally, there is a social misconception that science subjects are too rigorous to be managed by females. It is widely misconstrued that only males are intellectually capable of successfully conquering STEM and the ICT field.

As a consequence, a negative mentality has

or digital inclusion

been built in many young girls and women that science, related subjects and careers are difficult and are for men; thus most automatically choose not to opt for these subjects and careers. This has led to male dominated classrooms and workplaces; something that intimidates and discourages young women. The situation does not create role models for young girls.

The other factor is domestic structures in most families where females partake domestic chores such as cooking, washing dishes and clothes, fetching water and taking care of their siblings; tasks that most boys are not held responsible for. Even where girls attend school, they are expected to take on these chores as soon as they return home. This does not only become a barrier to many young girls, since they do not get enough time to study and practice science related topics which are known to demand enough time allocation for one to effectively master; it does not allow them enough time to think innovatively.

How can these be addressed?
We try to tackle the wrong perception that STEM courses are tough for most females. We do this through our training, where the programmes are designed to be fun and engaging as students work on their own ideas. This does not only remove the negative perception of science among the girls but it also empowers them to couple their ideas with STEM. We also use our social media pages (@shecodesforchange) as a platform to post our training programmes and projects by young girls to show other young girls that science and related subjects are not difficult and that girls are as capable as boys.

We also involve teachers in our training in order to make the approach more sustainable. Once the girls return to their schools the teachers can support them by further developing the girls' knowledge. This allows knowledge to be passed to other students who were not able to attend our training.

We address domestic structures by involving parents. We invite them to attend the events where their daughters showcase the products and projects they have been working on. We also urge parents to allow and encourage girls to take time to study, practice and learn. In each training, we have a motivational talk from a woman or a young girl involved in STEM in order to inspire other young girls. We also commemorate days such the International Day of Girls in ICT whereby the girls with the best innovative projects travel to Addis Ababa, Ethiopia to join other girls show their abilities and discuss the unlimited possibilities awaiting them in STEM.

While our beneficiaries are females, we involve males as well; for we believe that women empowerment in STEM and ICT should not be at the expense of males. We involve male trainers and male parents/guardians.

In addressing the factors leading to the gender gap in ICT we should have a wholesome approach that involves girls; and their parents and teachers. However, there is also a need for policies that favour more female participation in STEM and ICT.

Does the bringing up of girls – in general socialization; from the family level – contribute to this?
Definitely. As explained above, some cultures bring up girls to just be housewives, meaning there is lack of value of education for the girl child. As a result, some girls never get the chance to see the inside of a classroom while others go to school knowing their fate; hence lack the motivation to strive for subjects that require extra effort such as STEM. When girls are required to participate in domestic chores after school, the time to dedicate efforts to STEM subjects is taken away from them.

Other cultures uphold the attitudes of females being the weaker sex and with the idea that STEM is a tough field, this automatically creates the perception that it is for the stronger sex.

What prompted you to initiate this programme?
The world is a global village due to the contribution of transportation and ICT. There is a global shift towards the use of technology and we do not want our girls to be left behind. We saw the need for this initiative for young women as they prepare to venture into the global market space.

ICT and technology have created vast opportunities and if women continue to lag behind this might limit opportunities for them as the country heads towards industrialization. If not equipped women will not be competitive in the job market where more than 800,000 graduates enter every year. ICT knowledge and skills can position women in the same level of competiveness as men.

Which level of participation in ICT are you addressing?
Our current level of ICT participation is at the 'spark interest' stage where we engage secondary school girls between 12 and 19; and girls of the same age group who are out of school. This is the age where most young girls are at the level of seeking new knowledge and also thinking of their career paths. Our spark interest approach is meant to expose them to the numerous possibilities that exist in STEM.

You talk of igniting a spark in the young girls you have been training; how is this done?
Through fun and engaging programmes designed to use simple tools for young adults and through working in teams, which alleviates the burden of doing everything by oneself. It is also done by allowing participants to come up with their own ideas as solutions to various societal problems. Teaching them how to use the tools and turn them into projects creates a sense of ownership. Once they accomplish this and test their final products they get inspired by the learning process. We also motivate them by having motivational talks from females in STEM careers and through inspiration videos. As mentioned earlier, we teach them general self development skills such as how to pitch/ present an idea.

Is this the right approach towards bridging the gap?
Yes, due to the fact that this is the level where the girls select what combination (subjects) that they will pursue. It is also the appropriate time to inspire and expose them to STEM and STEM related careers; and to show them how technology can benefit them even as they venture into different career fields, i.e. the integration of technology in various sectors.

In one of your writings you state that Tanzania has 'a scarcity of female role models who have thrived in STEM and ICT'. Isn't this the same for men?
While the lack of role models may also apply to males, the void is greater for females. This is because the challenge starts in classrooms where too few girls are pursuing studies in computing and related subjects and this translates into careers. It is also evident worldwide in top ICT company start ups which have been mostly male dominated.

Your programme also seeks to expose girls to what you call non-traditional ways of using ICTs to serve the communities; what do you mean by non – traditional ways?
Our programs are designed in a way that students are inspired to speak up their thoughts and feel that they are engaged in fun. Their ideas are turned into projects and they work in teams. We include fun elements and simple tools and languages that are designed for young adults. We also incorporate ice breaking activities and team building. The trainers are young, energetic and passionate about teaching young girls. We allow and give the girls room to make mistakes while creating their projects. Also incorporated in the programme are other general life skills such as tools of idea/product pitching which builds up their confidence. This way, our setting of the training and the mode of teaching becomes non- traditional.

You target young girls who are currently in secondary school and do well in mathematics and science subjects and you pick your sample from the Form II National Examination's results; why don't you start earlier?
This is because we encourage them to keep pursuing science and related subjects and to select science combinations by exposing them to the possibilities of STEM and technology right at the

point when they can make that decision. However, we intend to phase out to earlier stages in our future projects so as to build the interest earlier.

Could you take us through the selection process and the programme itself?
For She Codes for Change, the selection process depends on the project at hand. Our summer and holiday camps ideally begin with sending out an open call for any girl between the ages of 12 and 19 who are interested in STEM to apply to our programme. From there we try to be as inclusive to all applicants as possible but at the same time ensuring that we include those who prove to have a genuine interest and passion for STEM. In other trainings done jointly with other partners, the selection criteria and process is developed jointly with the partner. For example, for in the Girls in ICT project where we worked with UCSAF, the selection was done by UCSAF who coordinated with the Regional Administration and Local Government offices (TAMISEMI to select participants from different public secondary schools in each region.

The programmes are also dependent on whether they are a She Codes for Change project or are in partnership. However, our aim in all projects is to expose young girls to the world of STEM in a way that will encourage and inspire them to pursue STEM careers. We teach them basic IT knowledge, coding, creation of mobile applications, animations, gaming and 'maker-tronics' using tools such as Scratch.

How many students and teachers have you trained since you took off in 2016 and how many have fully gone for STEM?
We have trained approximately 500 girls and 30 teachers. The beneficiaries that underwent the trainings in 2016 programmes are yet to select their high school (form five) subject combinations.

The number of trained beneficiaries is clearly very small, given the number of girls at the level of schooling you have been targeting: have you thought of working with the Ministry of Education to find ways of reaching more?
Yes, we are currently developing a curriculum that can be adopted after piloting it in our holiday camps and in few initiated classes that have been started. The curriculum developed will be available online and offline. We are also testing offline tools that can be functional in view of the infrastructure in rural areas (for example lack of proper internet connection). Once this curriculum is completed, we will present it to the Ministry of Education to be considered for adaption.

You have been basing your practical work on developing mobile applications using the Massachusetts Institute of Technology (MIT) App Inventor and presenting them to their peers and teachers. How do you link this to the promotion of ICT use among girls?
Our programmes are designed to start off with a basic introduction to ICT. We use the MIT Inventor as a means of solving problems or of creating a product out of their ideas. This leaves them with the impression of the power of ICT to the society; and this encourages the girls to want to interact with ICT in more ways than they are used to (i.e beyond calls, texts and social media).

Have any of these applications been adapted for practical use in the ICT market in Tanzania?
Not yet. We are currently on the sparking phase which simply aims to expose young girls to ICT in fun and engaging ways as well as provoking their minds and interests on the possibilities of technology. Once we roll out to our sustaining interest phase, we aim to ensure the products of our members enter the Tanzanian market to benefit our societies and the innovator as well.

The Tanzania Commission for Science and technology (COSTECH) has been promoting innovations in ICT through its programme known as Dar Teknohama Business Incubators (DTBi); have you networked with them?
Yes, we have networked with them through our interactions with COSTECH and other partners; however we hope to engage with them at a deeper level once we are in our sustaining interest phase.

Besides grants and assistance from UCSAF, what are your other sources of funds?
Other sources are through grants application, consultation services and working with other partners.

What are your plans for the next three to five years?
Our major plan is to establish a hub that will be female friendly and that will cater for the community especially in sustaining STEM interest in young females and other innovators. We also plan to support tech-journalism, increase the number of trained teachers in ICT and run exchange programs in Tech and innovation. Other plans are to localize programming and STEAM tools, coordinate internship and volunteering opportunities for young girls and women, support young female innovators start-ups and provide mentorship, advocate for clear strategies and policies and champion model curricula for adoption.

What has been your most difficult and pressing problem in implementing this programme and how have you solved it?

Having funds to run various projects for long periods and to reach out many beneficiaries. We have addressed it by working with other stakeholders to implement activities and by applying for grants.

It is also difficult to sustain interest in young girls who have to return to environments that are unsupportive of the interest. This includes a lack of tools such as computers and mobile phones, internet and electricity. We aim to solve this by creating tools and curricula that can operate offline by partnering with organizations that are already doing this.

How to pull more women to STEM

Theadora Mills of ITU News interviewed five leading women in the science and tech industries on how to get more women interested in Science, Technology, Engineering and Mathematics (STEM) studies and careers.

1. Start at a younger age

GIRLS should be exposed to STEM and encouraged at a younger age. Girls' negative perceptions around subjects like sciences and math must be altered. When we correct this negative perception – and encourage women to pursue their studies or career in a STEM field – we all stand to gain a lot not only as a country but as a society – ***Bernadette Wightman, President of Cisco Canada.***

2. Make learning STEM fun

We can get more girls and women into STEM by introducing girls to STEM at a much younger age even as young as 3-4 years when they start to daydream about what they might become; and moving away from stereotypes that show a girls' place is just in the kitchen cooking or playing with dolls. It is crucial to expose girls early to fun, creative and collaborative STEM disciplines.

Changing the way the STEM material is taught is important. Presenting STEM activities in real world applications that solve relevant problems that girls grapple with, especially in low-resource emerging economies is crucial. If, for example, software coding is presented as a bunch of rules, abstract algorithms and lines of codes, you are not likely to engage the interest of girls.

Rather if it is presented as hands on, fun activities with immediate or real applications for problem solving in areas girls care about, whether it be fashion, agriculture, nutrition, fetching water from a stream miles away or improving the lives of children, the interest of girls is piqued. - ***Unoma Okorafor, founder of Working to Advance STEM Education for African Women (WAAW Foundation.*** She is also winner of the 2016 ITU and UN Women GEM-TECH Award for impacting more than 20,000 women and girls through fun and interactive STEM education initiatives.

3. Provide role models and mentors

We need more female role models and ambassadors to encourage young girls to come into the STEM field - ***Abisoye Ajayi, Founder of the #GirlsCoding programme at Pearls Africa Foundation.*** Ms Ajayi founded a social enterprise in Nigeria to ensure that Africa's most vulnerable girls get the opportunity to study. The organization promotes positive role models and runs mentoring programmes to inspire girls to become future engineers, computer scientists and technology workers.

4. Build confidence for leadership

Studies have shown that many girls at the college level report having lower confidence in their math skills compared to boys with similar grades. This lack of confidence can affect future performance and their likelihood of graduation from STEM programmes.

It's really important to work with women to ensure that they have the skills and confidence to work as entrepreneurs and intrapreneurs within companies, to become problem solvers and agents for their own careers. - ***Sophia Mahfooz, Director of Global Partnerships at the San Francisco-based non-profit Girls in Tech***, which offers courses, mentorship and runs conferences to help women build their professional networks and to build confidence and leadership skills.

5. Work with partners to create solutions

By working together to address the challenges and implement solutions we can ensure that more women enter into STEM studies and careers.

We need industry, governments and organizations to work together, to create solutions and to actively encourage women and girls to enter the science and tech industry.

Encouraging more women to embark on STEM careers must be an ongoing priority. This is not just an equality issue but a bottom-line business imperative given that the tech sector is facing a severe skills shortfall – it is therefore a win-win, greater inclusion and equality. - ***Doreen Bogdan-Martin, ITU Chief of Strategic Planning and Membership.***

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African Union offers STEM Scholarships

The African Union is offering scholarships to girls and young women for masters and doctorate degrees in STEM; with an applications deadline of 30th April 2018. Eligible candidates; citizen graduates of African Union member states, under 35 for masters and 40 for doctorate; will get allowances for upkeep, purchase of books and a computer.

The scholarships are offered under the Mwalimu Nyerere African Union Scholarship Scheme which was launched in 2007. Students can study at any African university on condition that they would work in any African country for a term equal to the scholarship period.

Details of the STEM scholarships are available on the AU website: www.au.int>scholarships.

UNITED REPUBLIC OF TANZANIA

TANZANIA COMMUNICATIONS REGULATORY AUTHORITY

ISO 9001:2015 CERTIFIED

The Tanzania Communications Regulatory Authority (TCRA) is a statutory regulatory body responsible for regulating the communications and broadcasting sectors in Tanzania. It was established under the Tanzania Communications Regulatory Authority Act NO.12 of 2003.

Duties and Functions

TCRA's duties include:

a) Promoting effective competition and economic efficiency;
b) Protecting the interest of consumers;
c) Protecting the financial viability of efficient suppliers;
d) Promoting the availability of regulated services to all consumers including low income, rural and disadvantaged consumers;
e) Enhancing public knowledge, awareness and understanding of the regulated sectors including:
   i. The rights and obligations of consumers and regulated suppliers;
   ii. The ways in which complaints and disputes may be initiated and resolved; and
   iii. The duties, functions and activities of the Authority.

f) Taking into account the need to protect and preserve the environment

The Authority's functions include:

a) To perform the functions conferred on the Authority by sector legislation, i.e.
   i. To issue, renew and cancel licences;
   ii. To establish standards for regulated goods and regulated services;
   iii. To establish standards for the terms and conditions of supply of the regulated goods and services; and
   iv. To regulate rates and charges.
b) To monitor the performance of the regulated sectors;
c) To facilitate the resolution of complaints and disputes.

www.tcra.go.tz

Tanzania Communications Regulatory Authority

ISO 9001:2015 CERTIFIED

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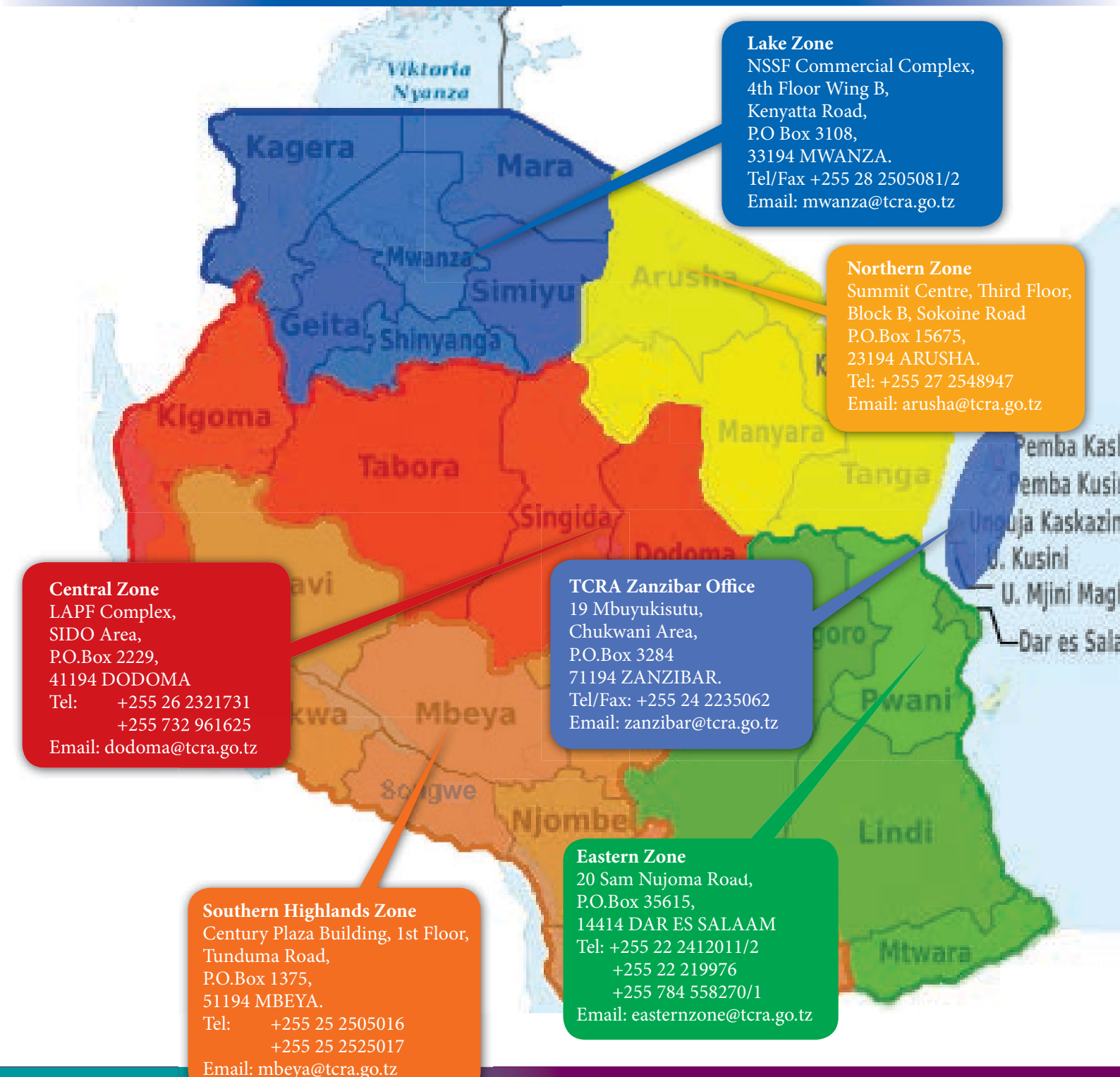

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