



ISO 9001:2015 CERTIFIED

THE

Regulator

FREE
COPY

ISSN: 0856 -8030 | ISSUE NO. 1/2020 January-March 2020

Quarterly magazine of the Tanzania Communications Regulatory Authority

SPECIAL EDITION

Delivering Beyond Promises

MAKALA MAALUM

Mawasiliano
Tanzania:
2015 – 2019

ICTS vs. COVID-19



TANZANIA COMMUNICATIONS REGULATORY AUTHORITY



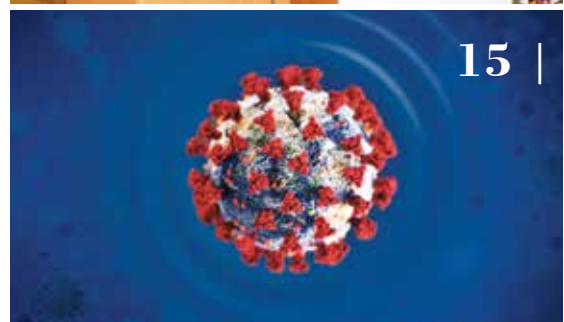
ISO 9001:2015 CERTIFIED

CORE VALUES

- Professionalism:** *We maintain the highest degree of professionalism and ethical standards, building value-added relationships with customers and stakeholders to deliver quality services.*
- Respect:** *We are an organization that values its employees and respects its customers.*
- Empowerment:** *We believe in empowerment and effective delegation enabling employees to make decisions and take challenges commensurate with their levels of responsibility.*
- Innovation:** *We encourage creativity and innovation leading to enhancement of our capacity in handling regulatory issues.*
- Integrity:** *We believe in integrity and we are determined to treat customers and each other with trust, confidentiality and honesty.*
- Accountability:** *We are accountable, undertaking our duties fairly, with care and transparency.*
- Teamwork:** *We benefit from teamwork, putting together diverse expertise to achieve success.*
- Objectivity:** *We undertake our activities objectively and we are result-oriented.*
- Efficiency:** *We believe in efficiently providing regulatory services.*
- Non-discrimination:** *We believe in equal opportunity and treatment for our internal and external stakeholders and do not discriminate against gender, religion, race, affiliation and origin.*

CONTENTS

- 2** | Letter from the Editor
- 3** | ICT awards to evaluate service quality
- 5** | Delivering beyond promises
- 7** | PAPU turns 40 with new strategies
- 8** | Postal Networks for financial inclusion
- 9** | Digitizing the African Post
- 11** | Arusha Postal Declaration
- 13** | Technology and the Corona Virus
- 14** | Digital solutions against COVID-19
- 15** | WHO tips on protection against COVID-19
- 16** | Minimum security guidelines for ISPS
- 19** | KISWAHILI SECTION



EDITORIAL BOARD

Chairman/ Editor

Dr. Emmanuel Manasseh

Editor/Coordinator

Mr. Semu Mwakyanjala

Members

Mr. Frederick Ntobi
Dr. Philip Filikunjombe
Eng. Gabriel Mruma

Ms. Thuwayba Hussein
Mr. Rolf Kibaja
Mr. Erasmo Mbilinyi

Production Editor

Mr. Isaac Mruma

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 electronic and postal communications in Tanzania. The Authority's functions and duties include enhancing public knowledge, awareness and understanding of the regulated goods and services, and to disseminate information about matters relevant to the functions of the Authority.



Letter from the Editor

AFRICA's Postal subsector dignitaries converged in Arusha in January this year to celebrate the 40th anniversary of the Pan African Postal Union (PAPU). This edition extensively covers the pomp and pageantry which included a special forum on the Post's role in financial inclusion and integration in Africa; the launching of a commemorative stamp and a ground breaking ceremony for the Union's 16-storey office and investment building.

This is the fifth year of the leadership of H.E President Dr. John Pombe Joseph Magufuli and we have a bumper report in the Kiswahili section on the implementation of programmes in the communications sector during the period.



Call for Contributions

The Editor invites articles and other contributions, including comments in all areas of electronic and postal communications.

Contributors are invited to submit full-length articles, including figures and pictures. Photographs should be in JPEG format.

Material should be in font size 12, single-spaced, up to four A4 pages. Articles must be original and should have references, where sources are quoted.



From our archives

The Regulator is distributed to the Authority's stakeholders and subscribers.

Electronic versions and past copies can be accessed on the TCRA website - www.tcra.go.tz.

Navigate to 'Publications and Statistics', - scroll down to The Regulator.

All the targets in the 2015 – 2020 CCM Election Manifesto; related to TCRA's functions, had been surpassed by December 2019. These are; enhancing communications infrastructure and promoting access to communications services; promoting competition in the communications sector, protecting consumers of communications services against cyber-attack and increasing the number of internet users to 20 million by 2020.

We also have a short piece on how technology can help in reducing the outbreak and management of corona virus (COVID 19). The pandemic has led to restrictions on physical contacts and proximity, forcing institutions to re-draw their conferences and meetings diaries.

Contributions should be submitted to:

The Editor,
Regulator Magazine,
Tanzania Communications Regulatory Authority,
Mawasiliano Towers, 20 Sam Nujoma Road,
P.O.Box 474, Postcode 14414 Dar es Salaam.
Email: regulator.magazine@tcra.go.tz
For more information please contact the Editor
on: regulator.magazine@tcra.go.tz





ICT awards to evaluate service quality

TCRA is promoting quality in service delivery through annual awards designed to recognize service providers using ICTs in their operations. The awards process was launched on 31 January 2020.



*Eng. James M. Kilaba
Director General*

Licensees were required to register online in the respective categories between 1 February and 15 March. The second phase was scheduled to start on 1 April in which the public would vote to nominate the best licensee in each of the 18 categories.

The event, the first of its kind in Tanzania, was expected to reach its climax on 15 May, 2020 to coincide with the commemoration of the World Communications and Information Society Day. It was expected to attract more than 350 local and international participants; at a time when many countries have introduced restrictions on foreign travel as part of precautions against the spread of COVID-19.

Subsequently in view of the recent Government directives on the pandemic, TCRA has reviewed the awards timelines and has deferred the ceremony to a later date; subject to Government directives.

Public voting and the final selection of the best service providers for the awards will continue as TCRA monitors the status of COVID 19 and as directed by authorities.

TCRA has extended the deadline to April 24 for the submission of nomination forms by service providers who failed to meet the earlier deadline. The awards dedicated website is: www.ictawards.tcra.go.tz.

The key objectives of the TCRA ICT Awards are to identify, recognize and reward outstanding institutions and individuals who positively contribute to the ICT industry in Tanzania through the licencing framework; provide knowledge and information by sharing best practices, experiences and expertise and foster innovation and creativity in using ICT to improve efficiency in service delivery.

Others are to build awareness and confidence to the public to accelerate the effective use of ICT in service delivery; enhance greater regional collaboration in the development and promotion of local content and promote universal access to ICT for the digital economy.

The awards are expected to promote the uptake of ICT services, increase the number of service providers in the sector, provide solutions and innovations for positive local/national content; promote innovation in other sectors of the Tanzanian economy and increase the number of youths engaged in ICT-based innovations.

I am confident that public voting for the best service provider in the respective categories will motivate licensees to improve their services and ultimately attain the overall objective of improving the communications sector and its contribution to promoting the digital economy and industrialization in Tanzania.

The participation of service providers is mandatory. Two key factors underlie this: i) As an ISO 9001:2015 certified institution, TCRA is duty bound to enforce service delivery standards and the TCRA ICT Awards are part of the evaluation. ii) The public and consumers deserve the right to evaluate the levels and standards of services against their expectations.

TCRA is mandated to require service providers to implement the Authority's directives; hence the non-participation of any service provider in this competition amounts to a breach of licence conditions; and an infringement of consumer rights to quality services.

On behalf of the TCRA Management and the TCRA ICT Awards 2020 organizers, I thank all TCRA licensees who have registered to participate in the awards for their commitment to this process. Their exemplary response has given us confidence and reassurance that we shall realize the key objectives of the awards.

EVENTS

Information Minister at TCRA



The Minister for Information, Culture, Arts and Sports; Hon. Dr. Harrison Mwakymbe (right front row) with TCRA Management at the Authority's head offices after routine consultations.

Committee appraises Morogoro media school



Members of the TCRA Content Committee, its secretariat and heads of the Authority's zonal offices at the radio training studio of the Morogoro School of Journalism. The committee's functions include monitoring compliance with broadcasting ethics.

Universal communications access



The Deputy Minister for Works, Transport and Communications; Hon. Eng. Atashasta J. Nditiye (second right) recently inspected the installation of facilities for universal access in Tarime district, Mara region. He was accompanied by the head of the TCRA Lake Zone office, Eng. Francis Mibayo (first right) and the Director of Communications in the Ministry, Eng. Clarence Ichwekeleza (third left)



The number of internet users increased from 17,264,000 in December 2015 to 25,864,000 in December 2019; with more than 96 per cent accessing the service on mobile communications devices.

Delivering beyond promises

By Lokila Mosso

The past four years have seen an upward trend for the broadcasting and telecommunications sub sectors, characterized by increased service providers, subscribers and variety of services. The 2015 Election Manifesto of Chama Cha Mapinduzi on which the government mapped its priorities for the 2015 – 2020 period set the following targets:

- 1) Enhancing communications infrastructure and promoting access to communications services to improve socio-economic opportunities.
- 2) Ensuring universal access to communication services in all villages in Tanzania.
- 3) Protecting consumers of communications services against cyber-attacks.
- 4) Establishing innovation centers that will promote the growth of emerging communications companies which will employ youths.
- 5) Connecting the national ICT broadband backbone (NICTBB) to all primary and secondary schools, district commissioners' offices, hospitals, district police stations, universities and post offices to facilitate e-health and e-education.
- 6) Promoting competition in the communications sector to enhance access to affordable communications services.
- 7) Increasing the number of internet users to 20 million by 2020.

Most of the targets set by the Fifth Phase Government for attainment by 2020 had been met and surpassed in most areas by December 2019.

For example the number of licenced radio stations increased by 72.6 percent, television stations by 48 percent, internet users by 49 per cent, SIM cards by 20 percent and mobile money accounts by 46.6 percent between December 2015 and December 2019.

Monthly average minutes per mobile phone user increased by 28 percent in December 2019. Voice tariffs for voice calls on subscribers' own networks (on net calls) dropped by 253 percent and to other networks (off net) by 366 percent.

Short message services (SMS) tariffs dropped by 134 percent and interconnection charges were lower by 450 per cent. The number of applications services providers, who facilitate internet connectivity, increased by 19 percent and courier companies by 156 per cent. Active decoders increased by an average 196 percent during the period under review.

This article is a synopsis of the report in the Kiswahili section, from page 22, on the performance of the communications sector between 2015 and 2019





A participant at the 2020 Safer Internet Day forum organized by TCRA as part of promoting safe use of communications services. The day is marked every second week of February. (see detailed article on page 20)

Fig.1. Communications sector status: 2015 – 2019			
Item	Dec. 2015	Dec. 2019	% increase
Application services licences	58	69	19%
Radio stations	106	183	72.6%
Free to air television stations	25	37	48%
Internet users	17,263,528	25,794,560	49.4%
Active SIM cards	39,665,600	47,685,232	20.2%
Average monthly minutes per user	100	128	28%
Mobile money accounts	17,639,349	25,864,318	46.6%
Digital terrestrial television (DTT) decoders	17,824	1,432,398	99.5%
Satellite, cable decoders	317,614	1,251,115	294%
Courier companies	36	92	155.5%
Source: https://tcra.go.tz/index.php/quarterly-telecommunications-statistics			

Fig. 2. Tariffs and charges trends: 2015- 2019			
Item	Dec. 2015	Dec. 2019	% Drop
Voice calls on subscribers' own networks per minute	306	87	253%
Voice calls on other networks per minute	419	90	365%
Short Messages System (SMS)	82	35	134
Interconnection charges	Dec. 2015	Jan. 2020	
	28.57	5.20	450%
Source: https://tcra.go.tz/index.php/quarterlytelecommunications-statistics https://tcra.go.tz/images/documets/reports/ Cost_Based_interconnection_Rates.pdf https://tcra.go.tz/licensing/licensed-operators			
About the Author:			
Lokila Mosso is the pen name of a Tanzanian writer and media consultant who specializes in ICTs and international issues.			





The Minister for Works, Transport and Communications; Hon. Eng. Isack A. Kamwelwe (fourth right) and the PAPU Secretary General Younouss Djibrine unveiling the plaque at the Union's building foundation stone laying ceremony. From right are Deputy Minister for Information, Culture, Arts and Sports; Hon. Juliana Shonza; Arusha Regional Commissioner, Hon. Mrisho Gambo and the Deputy Minister for Foreign Affairs and International Cooperation, Hon. Dr. Damas Ndumbo.



Pomp and splendour as PAPU turns 40

The Arusha-based Pan African Postal Union (PAPU) celebrated its 40th anniversary with an activity-packed programme that included the adoption of a declaration on financial inclusion and a ground breaking ceremony for its 16-storey headquarters building.

Representatives of PAPU member countries adopted an eight-point document on two major areas after a high-level forum on the 40th anniversary theme of “The Post: a veritable partner for financial inclusion and regional integration”.

PAPU Secretary General, Mr. Younouss Djibrine said the new headquarters building, set on a plot donated by the Tanzanian government, is a joint venture between the Union and TCRA; with 60% and 40% stakes respectively. It is expected to be completed by June 2022 and will be the tallest in Arusha.

A special commemorative stamp was also unveiled as part of the celebrations.

PAPU, a specialized agency of the African Union (AU) on all activities aimed at developing postal services in Africa, was established on 18 January 1980. Its membership has grown from the founding 35 member states to 45.

The Union is also responsible for supporting African countries in developing strategies and policies to improve access to information and communication infrastructure and services on the continent.

Additionally, PAPU represents the interests of its members at global decision-making conferences and delivers a valuable set of support services to its stakeholders



Statement by the PAPU Secretary General, Younouss Djibrine at the opening of the Union's 40th anniversary celebrations

Postal networks for financial inclusion

As you are aware, every year, PAPU Day is celebrated on 18 January with a distinct theme approved by the Plenipotentiary Conference. This year's theme, namely: "The Post: A veritable partner for financial inclusion and regional integration", appropriately captures the reality of today's information society.

This is in recognition of the great potential and abundant possibilities for postal services to significantly contribute to financial inclusion and regional integration. Leveraging on a global network with a grass-roots outreach, the postal sector is called upon to play a pivotal role as a catalyst of inclusive socio-economic development.

On the international and continental fronts, the Post embraces this theme with passion, in line with PAPU's vision, mission and strategic objectives.

As noted during the high - level forum, on the one hand, regional integration takes us back into history. Indeed since 1963, the quest for African unity has been inspired by the spirit of Pan Africanism, driven by a strong desire for liberation, as well as political and economic independence.

It is motivated by development based on self - reliance and self-determination of African people,

all of which are anchored in democratic and people - centered governance. This entails accelerating progress towards continental unity and integration for sustained growth in trading of goods and services, as well as free movement of people and capital.

In this regard, I am proud to observe that the Post is one of the best equipped facilitators of such interactions, especially with the birth of the African Continental Free Trade Area.

The overriding aim is to build the capabilities of the Post by equipping it with modern facilities and infrastructure, as well as the skills needed to contribute effectively towards inclusive socio-economic development across the continent.

On this note, it will be appreciated that the Post directly contributes to Aspiration 2 of the African Union's Agenda 2063 – "The Africa we want", which is seeking to achieve "an integrated, politically united continent, based on the ideals of Pan - Africanism and the vision of Africa's renaissance."

On the other hand, financial inclusion leads us to delve into the UN SDGs and AU Agenda 2063; both of which show that socio-economic inclusion and innovation are the key focus of government



development agenda nowadays.

The ultimate goal is to provide individuals and businesses with access to useful and affordable financial products and services that meet their evolving needs in the form of transactions such as payments, savings, credit and insurance, delivered in a responsible and sustainable manner. As you are aware, access to a transaction account is a first step towards broader financial inclusion, since it allows people to keep money, as well as send and receive payments to support household needs in the areas of education, health, etc. It also supports the activities of small, medium and micro enterprises (SMMEs).

Ultimately, member countries of PAPU and the UPU are committed to the development of a strong

and competitive physical, electronic and financial postal network which is inclusive, innovative and integrative.

This calls for Governments to play a central role and take deliberate measures to support postal development programmes.

Conscious of the necessity for PAPU Member States to better meet the growing and changing needs of customers, the General secretariat - in conjunction with the Universal Postal Union - is pursuing the Operational Readiness for E-commerce Project to ensure that designated postal operators in Africa are equipped with the necessary knowledge and skills to deliver e-commerce business.

Digitizing the African Post

Statement by Director General of the Universal Postal Union (UPU), Ambassador Bisbar Hussein, at the official opening of the PAPU 40th Anniversary celebrations



Forty years is a good age to look back and reflect on what you have been able to achieve; the challenges you have faced, and the lessons learned that will help shape the future.

We often say that life begins at 40. This is also true for PAPU given that the dynamics in the postal industry today will present exciting times ahead as you strive to further transform the African post.

I have also seen in the programme that today we shall be laying the foundation for the construction of the long-awaited PAPU headquarters. This is very good development that attests to the fact that, indeed, PAPU has come of age. The headquarter building has been a dream for many for a long time. Today may be the most befitting time for this dream to start unfolding to reality.

I congratulate PAPU and all those involved in making this great project a dream come true. The UPU is proud to be associated with PAPU, which is our biggest restricted union in terms of membership. In our work together, we have helped ensure the sustainable development of the region's Posts and promoted the invaluable efforts of the continent's designated operators to support their customers.



PAPU 40th anniversary conference delegates

Allow me to mention just a few areas of collaboration between our two organizations in the recent past:

The Regional Development Plans for Africa.

These focused on projects designed to steer the postal sector to greater modernization and prepare it for electronic business takeoff. Among these projects involved was the strategic project for “Electrification and Internet connectivity of post offices in Africa”.

The Postal reform and postal sector regulation. This was delivered through IPDPs to enable regulators and countries that still had no policy for the sector to better define and implement proper sectoral regulation.

The Development of postal financial services.

The project was aimed at extending the corridors of exchange and increasing its volume via the International Financial System and to promote the development of new services.

The Implementation of operational readiness for e-commerce – was aimed at improving the interoperability of network infrastructure and development of new products.

The establishment of three regional postal training centres. The centres were distributed as follows; Yaounde, Cameroon, for the French-speaking countries, Cairo, Egypt, for the English speaking countries and Tunis, Tunisia for the Arab countries.

The development of capacity building – was delivered through a budget of 4,500,000 CHF to offer consultancy missions with training workshops to cover the main topics and transfer knowledge associated with RDP projects. It also helped in

purchasing equipment and offering solutions leading to improvements in mail processing and delivery.

The next focus for African posts should now be to develop e-commerce capabilities and integrate with other players in the value chain to achieve competitiveness in pricing and service delivery.

Within this focus, UPU has developed the Ecom@ Africa to assist African posts design and implement viable e-commerce platforms that will incorporate SMEs to create robust virtual markets for their respective countries and for export.

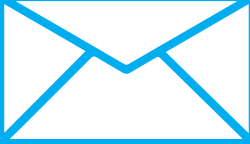
We are working with a number of countries to set up regional hubs that will later be replicated across the continent.

Tangible progress for the development of these hubs is being made in Ethiopia, Tunisia and Côte d’Ivoire. We are in discussion with a number of other countries to set up the project.

As we move to a new UPU cycle; 2021-2024, we shall be calling on our members in Africa, and the rest of the world to adopt radical policies that would make the post more profitable. We will also be expecting a review in the definition of universal service and renewed mechanism for its implementation.

(Editor’s note: the CHF/shilling exchange was 2,370 in mid-March 2020; hence 4,500,000 equals tshs.10,667,991,834). IPDP is the abbreviation of Integrated Postal Reform and Development Plan, an UPU project aimed at supporting Postal sector reforms).





Arusha Postal Declaration

In January 2020, delegates to a conference in Arusha on the “*Post and financial inclusion*” adopted a declaration named after Tanzania’s most ambitious post-independence development blue print adopted 53 years ago.

Two kilometres west of the headquarters of the Pan African Postal Union (PAPU) stands a monument marking the place where the Arusha Declaration was adopted in 1967; introducing a development model based on communal efforts and state ownership of the major means of production.

The Union celebrated its 40th anniversary with activities which included a forum on “*The Post: a veritable partner for financial inclusion and regional integration*”; at the end of which they adopted the eight-point Arusha Declaration on two key areas: financial inclusion and regional integration.

This is the full text of the declaration:

Preamble

We, delegates from the under listed PAPU Member States, assembled in Arusha, United Republic of Tanzania, on 17th-18th January, 2020 during the PAPU 40th Anniversary celebrations: Algeria, Benin, Burkina Faso, Cameroon, Chad, Congo (Republic), Congo (Democratic Republic), Egypt, Gambia, Kenya, Malawi, Mali, Madagascar, Morocco, Niger, Nigeria, South Africa, Tanzania and Zimbabwe.

In the presence of the following partners:

African Union Commission (AUC), African Airlines Association (AFRAA), African Telecommunications Union (ATU), International Fund for Agricultural Development (IFAD), Japan, Pan African Parliament, Universal Postal Union (UPU), Bank of Tanzania (BoT).

Expressing our gratitude to His Excellency Dr. John Pombe Joseph Magufuli, the President of the United Republic of Tanzania for his continued commitment to host the Pan African Postal Union Headquarters;

Further Expressing our gratitude to the Government of Tanzania for hosting and facilitating the 40th Anniversary which presented us with the opportunity to renew the Posts commitment to Financial Inclusion on the one hand and the Post and regional integration on the other in our respective countries; and to coordinate our efforts so

as to strengthen the implementation of the African Union Agenda 2063; “the Africa we want”, the United Nations Sustainable Goals (UND SDGs) as well as the Regional Development Plan for Africa (2017-2020);

Recalling the theme of the 40th Anniversary of PAPU “The Post: A veritable Partner for Financial Inclusion and Regional Integration”;

Taking note of new initiatives to foster Financial Inclusion and Regional Integration of our continent at the national, regional and continental levels such as Financial Inclusion Technical Assistance Facility;

Considering Resolution L12 on Postal Financial Services adopted by the Seventh joint AUC/ UNECA annual Conference of African Ministers of Finance, Planning and Economic Development held in Abuja in March 2014, which underscored, among others, the need for postal networks to deploy advanced ICTs in order to provide adequate access to basic financial and other services as well as confirmed its commitment to prioritizing the transformation of existing postal assets and resources with a view to increasing access to basic services and thereby promoting financial inclusion;

Determined to pursue an inclusive, innovative and integrative approach in implementing Financial Inclusion and Regional Integration initiatives via the post at all levels;



The Minister for Works, Transport and Communications; Hon. Eng. Isack A. Kamwelwe opening the PAPU 40th anniversary plenary meeting.

HEREBY AGREE AS FOLLOWS:

On Financial inclusion

- Access to financial services is a basic right to the majority of our people, especially the disadvantaged and those in rural settings;
- The need for the Post in Africa to be empowered to diversify their product portfolio to provide financial services such as license to operate Bureau de Change, work on behalf of the government for revenue collection;

On regional integration

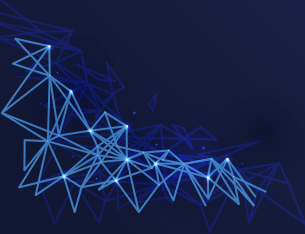
- The role of the postal operator is to develop partnerships that will lead to innovativeness, inclusiveness and interoperability;
- Africa must develop interdependent infrastructure to foster regional development.

Finally:

Request the African Union Commission in collaboration with the Regional Economic Communities, sub regional postal organizations and the Member States to harmonize and coordinate the formulation of such development goals by improving the performance of postal financial services and regional integration and promote innovation in the areas in which the Post faces particular challenges.

Call on the Universal Postal Union (UPU), the International Fund for Agricultural Development (IFAD) and other development partners to facilitate the adoption by the international community of such development goals delivered via the Post.

Done in Arusha, Tanzania, on 18th January, 2020



How technology can help manage COVID-19

As the world grapples with the novel corona virus pandemic (COVID-19) the need for fast, easy-to-use diagnostic tests is becoming ever more pressing. Technology can be employed to diagnose and monitor patients.

One characteristic of technology is its speed. In the case of COVID-19 speedy identification and accurate diagnosis is critical to help prevent the spread of the virus.

Although the community does not know everything about COVID-19, there are known signs and symptoms such as fever, increased respiration and shortness of breath. There are clinical-grade wearables now available that can monitor patients with confirmed or suspected COVID-19 who are under quarantine, whether it's in a home or healthcare setting.

Wearable devices can be used to measure multiple physiological signals such as temperature, respiration rate and heart rate of patients with confirmed or suspected COVID-19 symptoms while they are in quarantine to detect worsening conditions and impending issues.

They provide opportunity to detect physiology changes indicative of clinical deterioration that require medical intervention.

The information could improve clinical decision-making for providers, and the process can also help them learn more about the disease so they can better treat it.

Digital tools such as tele-health, remote patient monitoring, data analytics and even Artificial Intelligence (AI) could play a key role in containing the outbreak of COVID-19 and help people who think they've been exposed to the novel corona virus.

For example, AI-based algorithms could be most helpful in providing information about patients who have already been diagnosed with COVID-19 or who are suspected of being infected.

The learning from the AI-based algorithms could then be combined with other information to understand the disease better, and ultimately lead to better detection or prediction of the early symptoms.

Any platform that allows the general public to self-screen, virtually seek clinical guidance, be triaged or receive support during self-isolation/quarantine is going to be beneficial, not just in terms of diagnosis, but also in terms of containment as a preventive measure for public health.

To slow the spread of COVID-19, clinicians need tools that help them to quickly and accurately identify potentially infected patients, and efficiently and effectively share critical disease information.

In China, where COVID-19 originated, medical practitioners have been using software that reads CT lung scans to detect cancer to look for signs of pneumonia caused by the virus.

Although detecting pneumonia on a scan doesn't alone confirm a person has the disease, the software can identify typical signs or partial signs of COVID-19 pneumonia; hence help to diagnose, isolate, and treat patients more quickly.

Doctors can then follow up with other examinations and lab tests to confirm a diagnosis of the disease.

Reference: <https://www.healthcareitnews.com/news/technology-can-help-diagnose-contain-covid-19-within-limits>. <https://www.wired.com/story/chinese-hospitals-deploy-ai-help-diagnose-covid-19/>

Digital solutions against COVID-19

By Regulator Editor

Short codes assigned by TCRA have facilitated public interaction with the Government as preferences to mobile payments over cash push society to a digital economy

Digital connectivity is one of the effective tools for combating the outbreak of pandemic diseases. Information and Communication Technologies (ICTs) play a critical role in supporting the Government's efforts during the latest pandemic – COVID-19.

ICT applications and services are now the foundation of almost every element of society. Digital networks enable people to stay connected to their families, friends and businesses. They can manage their lives through remote working and health services get all the support that operators can offer.

We have witnessed the communications industry and the Government coming closer to ensure better outcomes for all citizens.

Some of the efforts undertaken include the assignment, by the Tanzania Communications Regulatory Authority, of a dedicated number used as a toll-free Voice/SMS/USSD code for COVID-19 service. TCRA has assigned number 199 for voice calls and short messages (SMS) and USSD code: *199#.

The number is accessed by the public to get information, including tips on prevention, as approved by the Ministry of Health. It is also used by the Government to communicate key messages on COVID-19.

Since these Voice/SMS/USSD codes are free, it may imply that mobile network operators (MNOs) have used their existing infrastructure to implement them for free.

The Government deserves praise for the way it has used MNO networks to disseminate COVID-19 awareness messages which have been quite informative. The Government has reached many citizens through their mobile phones.

We are also witnessing many African countries turning to mobile payments as a tool to curb the spread of COVID-19.

Amid the COVID-19 pandemic, consumers are increasingly using digital payments to buy and pay for essentials like groceries, medical supplies, telecommunications services and utilities.

Such measures have the potential of shifting a great volume of cash payment transactions to mobile money.

Through mobile money, which is currently an indispensable payment method, society will get used to electronic payments instead of physical cash.

With electronic payments, revenue authorities can easily verify the taxes and charges due to the Government by businesses. The introduction of the Government Electronic Payment Gateway (GEPG) attests to this.

To this end, lowering the cost of electronic transactions could attract more citizens to use electronic payments, thereby driving the adoption of electronic payments.

This is an opportunity to start accelerating the digital economy in Tanzania.



Basic protective measures against the new corona virus

We reproduce the World Health Organization (WHO) advice to the public on the Coronavirus disease (COVID-19) as part of TCRA's corporate social responsibility

Most people who become infected experience mild illness and recover, but it can be more severe for others. Take care of your health and protect others by doing the following:

Wash your hands frequently. Regularly and thoroughly clean your hands with an alcohol-based hand rub or wash them with soap and water. Washing your hands with soap and water or using alcohol-based hand rub kills viruses that may be on your hands.

Maintain social distancing. Maintain at least one metre (three feet) distance between yourself and anyone who is coughing or sneezing. When someone coughs or sneezes they spray small liquid droplets from their nose or mouth which may contain virus. If you are too close, you can breathe in the droplets, including the COVID-19 virus if the person coughing has the disease.

Avoid touching eyes, nose and mouth. Hands touch many surfaces and can pick up viruses. Once contaminated, hands can transfer the virus to your eyes, nose or mouth. From there, the virus can enter your body and can make you sick.

Practice respiratory hygiene. Make sure you, and the people around you, follow good respiratory hygiene. This means covering your mouth and nose with your bent elbow or tissue when you cough or sneeze. Then dispose of the used tissue immediately. Droplets spread virus. By following good respiratory hygiene you protect the people around you from viruses such as cold, flu and COVID-19.

If you have fever, cough and difficulty breathing, seek medical care early. Stay home if you feel unwell. If you have a fever, cough and difficulty breathing, seek medical attention and call in advance. Follow the directions of your local health authority. National and local authorities will have the most up to date information on the situation in your area.

Calling in advance will allow your health care provider to quickly direct you to the right health facility. This will also protect you and help prevent spread of viruses and other infections. Stay informed and follow advice given by your healthcare provider.

Stay informed on the latest developments about COVID-19. Follow advice given by your healthcare provider, your national and local public health authority or your employer on how to protect yourself and others from COVID-19. National and local authorities will have the most up to date information on whether COVID-19 is spreading in your area. They are best placed to advise on what people in your area should be doing to protect themselves.

If you are in or have visited areas where COVID-19 is spreading in the past 14 days. Follow the guidance outlined above. Stay at home if you begin to feel unwell, even with mild symptoms such as headache and slight runny nose, until you recover.

Avoiding contact with others and visits to medical facilities will allow these facilities to operate more effectively and help protect you and others from possible COVID-19 and other viruses.

If you develop fever, cough and difficulty breathing, seek medical advice promptly as this may be due to a respiratory infection or other serious condition. Call in advance and tell your provider of any recent travel or contact with travelers. Calling in advance will allow your health care provider to quickly direct you to the right health facility. This will also help to prevent possible spread of COVID-19 and other viruses.

Reference:

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>



Minimum Security Guidelines for ISPs

1. PURPOSE

The purpose of these minimum security guidelines is to ensure that users of internet services are properly secured and that reported incidents can be responded to in an effective and efficient manner. Compliance with these minimum security guidelines will ensure that businesses keep relying on the use of Information and Communication Technologies (ICT) to run and deliver critical services to their customers.

2. DEFINITIONS

In these guidelines, unless the context otherwise requires:

- a. Authentication means to confirm the identity of an entity when that identity is presented;
- b. Authorization means to access privileges granted to a user, program, or process or the act of granting those privileges;
- c. Dynamic Host Configuration Protocol, abbreviated DHCP, means a network protocol that enable computer hosts to get assigned IP addresses automatically from a defined range of IP addresses;
- d. Incident also known as Information Security Incident means a single or series of unwanted or unexpected information security events that have a significant probability of compromising business operations and threatening information security;
- e. Internet Service Provider, abbreviated ISP, means companies operating in Tanzania, with application service license and providing Internet Services;
- f. Internet Protocol also known as IP Address means a string of numbers separated by periods (or full colon for IPv6) that identify each host connected to a network;
- g. Log means a computer file that records events and activities that occurs when an operating systems runs a particular service.

3. MINIMUM SECURITY GUIDELINES

In providing services to their clients, Internet Service Providers (ISPs) are required to ensure the following set of requirements is implemented:

3.1 INFORMATION SECURITY GOVERNANCE, RISK AND COMPLIANCE

The ISPs are required to provide the foundations for Information Security management within their organization by implementing the following:

3.1.1 Information Security Policies

The ISPs shall develop, adopt and maintain appropriate information security policies to ensure secured, reliable and dependable services to their customers. The management of the ISPs shall ensure that information security policies are implemented, observed and adhered to in their service provisioning.

3.1.2 Information Security Governance, Risk Management and Compliance Framework

ISPs shall establish and maintain information security governance frameworks that establish and mitigate their Information security risks. The ISPs will establish and maintain the information security governance framework based on the nature of their organizations and the services offered. The management of the ISPs shall ensure that the information security framework implemented is observed and adhered to in their service provisioning.

3.1.3 Organization's Information Security Roles and Responsibilities

Internet Service Providers shall ensure they establish and maintain appropriate Information security roles and responsibilities of protecting themselves as well as their customers.

3.1.4 Management of Third Party Services

Where service is delivered through a third party, ISPs shall ensure these minimum guidelines are observed in the service provided by the third party.

3.2 SECURITY OF SYSTEMS AND FACILITIES

In providing services to their customers, ISPs are required to maintain a secure environment, by ensuring the following:

3.2.1 Physical Security

ISPs shall establish and maintain reliable physical security of facilities, systems and network infrastructure. To ensure reliable physical security, ISPs are required to ensure environmental controls are in place to provide protection against theft, fire and other related disasters that may affect their facilities. ISPs are required to take precautionary measures against natural calamities such as earthquakes, flood and related disasters.

3.2.2 Access Control

ISPs shall establish and maintain logical access control to their systems and network infrastructure. ISPs shall ensure they have mechanisms to identify and authenticate each of their users before providing services.

3.2.3 Audit and Accountability

ISPs shall implement mechanisms to provide auditability and accountability to the activity performed in their systems and networks. In implementing this mechanism, ISPs shall keep the logs for a minimum of six (6) months.

The logs that must be retained shall include but not be limited to:

- i. DHCP assignments;
- ii. Access and authentication logs to systems and network devices;
- iii. Services logs such as web services logs, database logs.

3.2.4 Security of Systems and Network Infrastructure

ISPs shall identify malicious traffic destined to their systems and adopt technical measures to filter such traffic. ISPs shall ensure appropriate privacy of the customer's information is maintained. ISPs shall ensure they detect and prevent propagation of incorrect routing

information as well as spoofed IP source addresses.

3.3 INCIDENT MANAGEMENT AND RESPONSE

ISPs are required to ensure the information security incidents reported are responded effectively and efficiently by doing the following:

- 3.3.1 Incident Response Procedures ISPs shall establish, adopt and maintain policies, processes and procedures for managing cyber security incidents within their organizations. The policies, processes and procedures shall, among other things, cover incident reporting, response and communication with customers. The policies shall provide for, among other things, the escalation procedures and the appropriate roles and responsibilities in responding to the incidents.

3.3.2 Incident Detection Capabilities

ISPs shall build incident detection capabilities by deploying security measures that can detect security incident. ISPs shall report to the Tanzania Computer Emergency Response Team all information security incidents detected.

The incidents shall include but not be limited to:

- i. Intrusions to the ISPs network;
- ii. Breach of customer's data;
- iii. Denial of Service and Distributed Denial of Service Attacks;
- iv. Malware outbreaks;
- v. Spam related incidents;
- vi. Phishing attacks;
- vii. Spoofing related attacks;
- viii. Web defacement.

Where the incidents concern the privacy and security of the customers, the ISPs shall inform the customer about the incidents, measures taken to handle the incidents and measures the customer need to take to protect themselves.

3.4 INFORMATION SECURITY TESTING AND AUDITING

ISPs are required to maintain a secure environment for delivering services to customers by ensuring the following:



Participants in this year's Safer Internet Day seminar organized by TCRA.

3.4.1 Contingency Plans Testing

ISPs shall perform contingency plans testing at least once a year in order to ensure the prepared contingency plans have been appropriately implemented to provide continuity of the ISPs services to customers.

3.4.2 Security Assessments

ISPs shall perform independent information security assessments at least once a year to ensure they continue to provide secure and reliable services to the customers. The information security assessment shall, among other things, cover the operating procedures, physical security and systems security.

3.4.3 Compliance Monitoring and Audit

ISPs shall perform an annual self or third party audit to verify the organization's compliance with their information security framework. The auditors shall also verify the relevance of the information security framework in protecting the ISPs and their customers.

3.5 BUSINESS CONTINUITY MANAGEMENT

To minimize the risks that may be suffered by

the customers and ensure business continuity, the ISPs shall be required to perform the following:

3.5.1 Business Continuity Strategy and Contingency plan

ISPs shall develop, maintain and adopt comprehensive business continuity plans to ensure continuity of reliable and dependable services to their customers.

3.5.2 Disaster Recovery capability

In implementing and adopting their business continuity plans, ISPs shall implement disaster recovery capabilities for restoring services after the disaster.

4. CONCLUSION

To provide secure and reliable services to the customers, ISPs are required to implement these mandatory minimum guidelines. It is to be noted that, these are minimum guidelines; and ISPs are encouraged to implement advanced standards/framework to protect their customers. The Authority may, from time to time, carry out regulatory checks to ensure compliance to these guidelines.

STATISTICS

Biometric SIM card registration update

Some 36,176,264 SIM cards had been registered biometrically by 13 March this year, according to the latest statistics.

TCRA Director General, Eng. James M. Kilaba said the figure represents 85.1 per cent of the 42,508,735 active SIM cards across networks. A total of 3,300,144 out of the 9,491,550 SIM cards which were switched off have been activated following their registration.

The registration of SIM cards is being enhanced with advanced features: using the national identity card or identity number and validating a subscriber's information and finger prints with those in the National Identification Authority (NIDA) database.

YALIYOMO

20 | Ujumbe wa Mkurugenzi Mkuu

22 | Maendeleo sekta ya Mawasiliano:
2015 - 2019

Hili ni toleo la Kiswahili la jarida la *The Regulator* linalotolewa mara nne kwa mwaka na Mamlaka ya Mawasiliano Tanzania (TCRA), taasisi ya serikali inayosimamia mawasiliano ya kielektroniki na posta nchini. Jarida hili ni sehemu ya Mamlaka ya kutekeleza majukumu yake. Huduma za shitariki zinapatikana kupitia kwa Mhariri, barua pepe: regulator.magazine@tcra.go.tz. Nakala za nyuma zinapatikana kwenye tovuti ya Mamlaka, ambayo ni: www.tcra.go.tz. Nenda 'Publications and Statistics halafu shuka hadi "The Regulator" kisha chagua toleo unalotaka.

BODI YA UHARIRI

Mwenyekiti/Mhariri

Dkt. Emmanuel Manasseh

Mhariri/Mratibu

Bw. Semu Mwakyanjala

Wajumbe

Bw. Frederick Ntobi

Dkt. Philip Filikunjombe

Mhandisi Gabriel Mruma

Bi. Thuwayba Hussein

Bw. Rolf Kibaja

Bw. Erasmo Mbilinyi

Mhariri wa uzalishaji

Bw. Isaac Mruma



BARUA YA MHARIRI

Toleo hili lina taarifa ya kina kuhusu hali ya mawasiliano Tanzania kati ya 2015 na 2019; kipindi ambacho kimeshuhudia mabadiliko makubwa katika utoaji wa huduma za mawasiliano na kuongezeka kwa watumiaji wa huduma hizo.

Mamlaka ya Mawasiliano Tanzania, msimamizi/mdhibiti wa sekta ya mawasiliano imechangia katika maendeleo hayo, kwa kutoa leseni na kusimamia masharti ya leseni hizo, kufuatilia wigo wa utoaji wa huduma na viwango, na pia kulinda maslahi ya wadau, hasa watumiaji.

Taarifa imefuatilia mafanikio ya serikali ya Awamu ya Tano ya Jamhuri ya Muungano wa Tanzania chini ya Rais Mhe. Dkt. John Pombe Joseph Magufuli katika utekezaji wa Ilani ya Uchaguzi ya CCM ya mwaka 2015; ambapo hadi Desemba 2019 malengo mengi yalikuwa yamefikwa na kupitwa kwa kiasi kikubwa sana.

Baadhi ya malengo hayo ni kuimarisha miundombinu ya mawasiliano na kuendeleza upatikanaji wa huduma za mawasiliano, kuendeleza ushindani katika utoaji wa huduma ili kuwawezesha wananchi kumudu gharama za mawasiliano, kulinda watumiaji, kuongeza watumiaji wa intaneti hadi milioni 20 ifikapo 2020 na kufikisha huduma za mawasiliano kwa wote.

Sehemu ya kiingereza ya jarida hili ina makala kuhusu maadhimisho ya miaka 40 ya Umoja wa Posta Afrika – PAPU; ambacho ni kifupisho cha Pan African Postal Union yaliyofanyika Arusha yalipo makao makuu ya taasisi hiyo Januari mwaka huu.

Tunavyo pia vidokezo kuhusu virusi vya corona (COVID 19) ambavyo vimeenea ulimwenguni pote na kulazimisha nchi mbalimbali kuchukua tahadhari na hatua za kuvithibiti. Kuna taarifa za namna ambavyo tekinokojia ya habari na mawasiliano inaweza kuchangia katika kugundua, kufuatilia na kuongeza uelewa wa wananchi kuhusu virusi hivyo.

Kuimarisha usalama mtandaoni

Mamlaka ya Mawasiliano Tanzania iliadhimisha Siku ya Usalama kwenye mtandao wa Intaneti (Safer Internet Day) nchini tarehe 11 Februari 2020 katika ukumbi wa maktaba kuu ya Chuo Kikuu cha Dar es Salaam. Maadhimisho hayo ni mpango wa kimataifa wenye lengo la kuhamasisha matumizi bora na salama ya mtandao wa intaneti. Huu ni ujumbe wa Mkurugenzi Mkuu wa TCRA Mhandisi James M. Kilaba.

Siku hii huadhimishwa wiki ya pili ya Smwezi Februari kila mwaka. Inaunganisha mamilioni ya watu ulimwenguni kwa nia ya kuhamasisha matumizi sahihi ya mtandao ili kuimarisha usalama wa anga la mtandao dhidi ya athari za kiusalama kwa kutoa elimu ya vionjo mbalimbali kuhusu matumizi bora na salama ya mtandao.

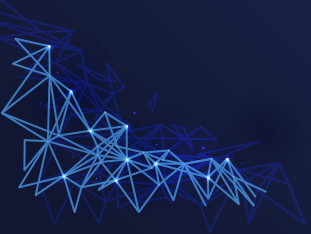
Katika zama hizi za kidijitali ambapo utekelezaji wa shughuli mbalimbali za kila siku katika jamii hutegemea Teknolojia ya Habari na Mawasiliano (TEHAMA), mtandao ni nyenzo muhimu ya kuiwezesha jamii kushiriki ipasavyo kwenye uchumi wa kidijitali (digital economy) na hivyo kujipatia maendeleo ya kiuchumi.

Mtandao umetoa fursa mbalimbali za kiuchumi kama vile kufanya biashara za kibenki kwa njia ya simu, kutafuta masoko kwa njia ya mitandao ya kijamii na hivyo kuiwezesha jamii ya Watanzania, hususan vijana, kujipatia kipato. Miaka ya hivi karibuni tumeshuhudia maendeleo makubwa ya sekta ya mawasiliano nchini. Jamii kubwa ya Watanzania mijini na vijijini imefikiwa na huduma ya mawasiliano ya simu na mtandao wa intaneti. Huduma ya mtandao kwa kiasi kikubwa imekuwa kichocheo kikubwa cha maendeleo ya kiuchumi na kijamii.

Mtandao kwa asili yake ya muunganiko na kutokuwa na mipaka, umepelekea nchi zote ulimwenguni kukumbana na athari za kiusalama. Hivyo, ni muhimu kwa wadau ulimwenguni kote kushirikiana ipasavyo katika kukabiliana na changamoto za kiusalama ili kuujenga mtandao ulio bora na salama kwa maendeleo ya kiuchumi na kijamii. Kauli mbiu ya mwaka huu ni “pamoja kwa mtandao bora”.

Hivyo jamii nzima haina budi kushirikiana ili kuhakikisha anga la mtandao linakuwa salama kwa watu wa rika zote. Kwa muktadha huo, kila mdau wa mawasiliano ana jukumu la kutekeleza ili kuimarisha usalama wa mtandao dhidi ya matukio hatarishi ya kiusalama kwa kufanya yafuatayo: -

1. Watoto na vijana – mnawajibika kuufanya mtandao kuwa salama kwa kuwa waadilifu mnapokuwa mnamtia mitandao, kulinda heshima zenu na za wenzenu walioko mtandaoni. Mtumie teknolojia hii kwa fursa chanya kama vile kujelimisha, kujadili mambo ya msingi na yenye staha, kufanya ushirika wenye mlengo chanya, kujiburudisha kwa kuzingatia miongozo na kanuni mbalimbali za kijamii, utamaduni wetu na kanuni za kiusalama zilizopo;
2. Wazazi na Walezi – tuwawezeshe na kuwasaidia vijana/watoto wetu kutumia teknolojia ipasavyo kwa sisi mwenyewe kuwa mfano bora, mfano kwa heshima, tahadhari na kuzingatia kanuni za usalama.
3. Waalimu na wakufunzi – kujenga mtandao bora kwa kuwaandaa wanafunzi na elimu ya TEHAMA kwa kuandaa vipindi vya kuelimisha zaidi matumizi yake na kutengeneza maudhui yatakayotumika kuelimisha umma kwani ukielimisha mtoto mmoja hapa ataelimisha 10 afikapo nyumbani au anapokuwepo kwenye jamii inayomzunguka.
4. Watoa huduma ya mtandao (Internet Service Providers) – Kuimarisha ulinzi wa miundombinu ya mtandao dhidi ya hatari (cyber-threats) na hivyo kutoa huduma





Mkurugenzi Mkuu wa TCRA, Mhandisi James M. Kilaba akiwa na Godwin Mpapalika (kushoto) na Karim Muya (kulia) baada ya kuwatunuku vyeti vya ushindi wa shindano la ubunifu katika masuala ya usalama mtandaoni (Cyber Stars) kwa mwaka 2019 wakati wa maadhimisho hayo.

bora ya mtandao zitakazojenga na sio kubomoa maadili ya jamii. Tuwe na vipindi vya kuelimisha umma sambamba na kutoa huduma hii ya intaneti.

5. Watoa huduma za maudhui mtandaoni (Online Content Service Providers) – kutengeneza maudhui bora na salama yanayokidhi mahitaji ya jamii yetu kwa kuzingatia kanuni za maudhui mtandaoni yaani the Electronic and Postal Communications (Online Content) Regulations, 2018.
6. Watoa maamuzi – kutunga sera, sheria na kanuni zitakazochangia kukua kwa TEHAMA hapa nchini kwani ni dhahiri kuwa hatuwezi kuepuka teknolojia hii kama tunataka kuendana na maendeleo ya hivi sasa ambapo kila kitu ni dijitali.
7. Watumiaji - kila mtumiaji wa mtandao anawajibika kutumia mtandao kwa usahihi na kwa kuzingatia taratibu, kanuni, sheria na sera za kitaifa na kimataifa. Pamoja na majukumu hayo kwa makundi, sote tunawajibika pia kuripoti matukio ya usalama mtandaoni kwa kituo cha kitaifa cha mwitikio wa kukabiliana na majanga ya kompyuta kiitwacho TZ-CERT, ambacho ni kifupisho cha Tanzania Computer Emergency Response Team kwa ajili ya ushauri na msaada wa kiufundi kwani imeanzishwa kutoa huduma kwa wananchi. Ni kwa kutambua umuhimu wa mtandao katika kuongeza tija na ufanisi na mchango kwa maendeleo ya kiuchumi na kijamii, Serikali yetu imekuwa ikifanya jitihada

mbalimbali ili kuhakikisha usalama wa mtandao na watumiaji wake. Jitihada hizo ni pamoja na kuanzishwa kwa “TZ-CERT”.

Kituo hiki kiliundwa mwaka 2010 ndani ya muundo wa Mamlaka ya Mawasiliano Tanzania (TCRA). Baadhi ya majukumu ya TZ-CERT ni:

- i. Kutoa elimu na kuhamasisha matumizi bora na salama ya mtandao na mifumo ya TEHAMA;
 - ii. Kufanya tathmini ya mashambulizi ya kiusalama kwenye miundombinu muhimu ya TEHAMA nchini ili kubaini udhaifu ulioko na kuchukua hatua stahiki. Huduma hii hutolewa bila ya malipo yoyote;
 - iii. Kuwajengea uwezo wataalamu wa TEHAMA kwenye eneo la usalama mtandao ili kuongeza ujuzi na weledi wa kukabiliana na matukio ya kiusalama;
 - iv. Kutoa angalizo na ushauri kwa wadau wake na jamii kwa ujumla juu ya hatari za kiusalama na hatua stahiki za kuchukua kuepuka athari za kiusalama.
- Mnakaribishwa kutembelea TCRA Makao Makuu ili mpate fursa ya kuijua zaidi TZ-CERT au kuitembelea mtandaoni kwa kupitia tovuti yao ya www.tzcert.go.tz. Kwa kushirikiana pamoja tutaweza kuujenga mtandao bora na salama kwa manufaa yetu binafsi na Taifa kwa ujumla.

Maendeleo makubwa sekta ya mawasiliano, 2015 – 2020

1. Utangulizi

KIPINDI cha kuanzia mwaka 2015 hadi 2020 kimeshuhudia mabadiliko makubwa katika sekta ya mawasiliano Tanzania. Kasi hii ya mabadiliko inaonyesha kuwa msukumo umetokana na sera za ndani na usimamizi bora wa sekta.

Kumekuwa na ongezeko la idadi ya watoa huduma na watumiaji wa huduma, kuanzishwa kwa huduma mpya na kukua kwa mapato ya serikali ama moja kwa moja au kupitia kodi na tozo mbalimbali.

Kwa mfano, kati ya Desemba 2015 na Desemba 2019 vituo vya redio vimeongezeka kwa asilimia 72.6; televisheni asilimia 48; watumiaji intaneti asilimia 49.4; laini za simu asilimia 20.2; akaunti za pesa mtandao wa simu za mkononi asilimia 46.6.

Wastani wa dakika za maongezi kwa mtumiaji zimeongezeka kwa asilimia 28.5. Gharama za kupiga simu kwa dakika kwenye mtandao wa mtumiaji zimepungua kwa asilimia 252.8; kwa mtandao mwingine kwa asilimia 365.5.

Gharama za kutuma ujumbe mfupi au meseji (SMS) zimeshuka kwa asilimia 134 na gharama za kuunganisha simu kwa mtandao mwingine (muungiliano) zimeshuka kwa asilimia 450.

Ving'amuzi vya mfumo wa televisheni kidijitali wa ardhi vimeongezeka kwa asilimia 99.5; vya mfumo wa televisheni wa satelaiti na waya kwa asilimia 294. Watoa huduma za kusafirisha vifurushi wameongezeka kwa asilimia 155.5.

Jedwali 1. Ongezeko la watoa huduma na watumiaji

Na.	Kipengele	Asilimia ya ongezeko
1	Leseni za huduma za mawasiliano (application services)	19%
2	Vituo vya redio	72.6%
3	Vituo vya televisheni	48%
4	Watumiaji wa intaneti	349.4%
5	Laini za simu	20.2%
6	Wastani wa dakika za maongezi kwa mtumiaji kwa mwezi	28%
7	Akaunti za pesa kwa simu za mkononi	46.6%
8	Ving'amuzi mfumo wa televisheni ardhi	99.5%
9	Ving'amuzi mfumo wa satelaiti na waya	294%
10	Watoa huduma kusafirisha vifurushi	155.5%



2. Sekta ya mawasiliano

Sekta ya mawasiliano ni wezeshi na kwa ujumla wake inachangia kukua na kuendelea kwa sekta nyingine; kwani mawasiliano ni muwezesaji/mhimili wa shughuli za maendeleo ya nchi. Huduma na bidhaa za Mawasiliano ni za msingi katika maisha ya wananchi kisiasa, kiuchumi na kijamii.

Kutokana na mabadiliko na maendeleo haya, sekta ya mawasiliano imekuwa ya kimkakati na ya msingi katika maendeleo ya Tanzania; kuanzia ngazi ya mtu binafsi, taasisi mbalimbali hadi serikali.

Ushindani unaotokana na kuongezeka kwa watoa huduma na aina ya huduma za mawasiliano umeleta ufanisi katika utoaji na matumizi ya huduma hizo. Kuenea kwa huduma za mawasiliano kunawezeshwa na sera imara na mfumo wezeshi wa kisera, kisheria na wa usimamizi/udhibiti.

Katika kipindi cha 2015 hadi 2019, Sera ya Teknolojia ya Habari na Mawasiliano (TEHAMA) imepitwa upya ili kuiandaa Tanzania kwenda sambamba na mabadiliko ya teknolojia ulimwenguni. Sera ya Posta ya mwaka 2003 inapitiwa upya ili kutoa mwongozo wa utendaji na usimamizi wa sekta hii ambayo inakabiliwa na changamoto zinazotokana na maendeleo ya teknolojia na pia kubadilika kwa mfumo wa biashara ya posta.

Mafanikio mengine ni pamoja na kuongeza ufanisi wa uthibiti na usimamizi vinavyofanywa na Mamlaka ya Mawasiliano Tanzania (TCRA) kwa kuipatia Mamlaka nyenzo na utaalumu zaidi wa kumudu majukumu yake kwenye mazingira ya maendeleo na mabadiliko makubwa ya TEHAMA na matarajio ya wadau wake.

Kujipanga kwa msimamizi wa sekta, yaani TCRA kutekeleza sera na mipango ya serikali

katika sekta ya mawasiliano kumechangia kwa kiasi kikubwa kwenye mabadiliko haya.

3. Mamlaka ya Mawasiliano Tanzania

TCRA ilianzishwa mwaka 2003 kusimamia/kudhibiti sekta ya mawasiliano nchini. Kazi zake ni pamoja na kutoa leseni za huduma za mawasiliano na pia kufuta inapobidi kwa kuzingatia ubora wa utoaji huduma; kusimamia bei ya huduma za utangazaji na mawasiliano pale ambapo hakuna ushindani.

TCRA pia inasimamia utendaji wa watoa huduma katika sekta, ikiwa ni pamoja na kuweka viwango vya huduma wanazotoa, kupanga gharama za maingiliano baina ya watoa huduma za simu pale wanaposhindwa kukubaliana; kudhibiti ubora wa utoaji na usambazaji wa huduma, kulinda maslahi ya watumiaji na kushughulikia malalamiko na kusuluhisha migongano na migogoro ndani ya sekta.

Lengo kuu la kimkakati la TCRA ni kusimamia huduma za mawasiliano ya kielektroniki na posta kwa ufanisi na kuendeleza ufanisi miongoni kwa watoa huduma na kulinda maslahi ya watumiaji wa huduma kwa lengo la kuchangia maendeleo katika Jamhuri ya Muungano wa Tanzania.

Aidha TCRA imeazimia kuendeleza maslahi ya Watanzania kupitia usimamizi makini wenye ufanisi ambao unaendeleza ubunifu na unaowezesha kupatikana kwa huduma za mawasiliano zilizo salama, imara, bora na za bei nafuu.

Jedwali 2. Kupungua kwa gharama za huduma		
Na.	Kipengele	Asilimia
1	Gharama za kupiga simu kwa dakika kwenye mtandao wa mtumiaji	252.8%
2	Gharama za kupiga simu kwa dakika kwenye mtandao mwingine	365.5 %
3	Gharama za kutuma ujumbe mfupi au meseji (SMS)	134%
4	Gharama za kuunganisha simu kwa mtandao mwingine (muungiliano) - Januari 2016 – Januari 2020	450%

Mamlaka inashirikiana na taasisi za kimataifa na kikanda zinazosimamia mawasiliano na wadhhibiti wa mawasiliano katika nchi nyingine na inatekeleza mikataba ya kimataifa katika sekta ya mawasiliano. Baadhi ya taasisi hizo ni Shirika la Mawasiliano ya Simu Ulimwenguni (ITU), Umoja wa Mawasiliano Afrika Mashariki (EACO), Umoja wa Wadhhibiti wa Mawasiliano Kusini mwa Afrika (CRASA), Umoja wa Posta Ulimwenguni (UPU), Umoja wa Mawasiliano ya Simu Afrika (ATU) na Umoja wa Posta Afrika (PAPU), ambayo ina makao makuu Arusha.

Kipindi hiki cha Serikali ya Awamu ya Tano kimeshuhudia TCRA ikitekeleza mipango ya kiudhibiti na kushiriki katika masuala ya kitaifa na kimataifa. Aidha, Tanzania imeng'ara kikanda na kimataifa kufuatia kuboresha utendaji kwenye maeneo kadhaa na kufanyika kwa mikutano muhimu ya kisekta ambamo Mamlaka imechukua uenyekiti.

TCRA ni mwenyekiti wa EACO na CRASA kwa kipindi cha 2019-2020; kama ambavyo Tanzania ni mwenyekiti wa Jumuiya ya Maendeleo Kusini mwa Afrika (SADC).

TCRA imepata nyenzo mbalimbali za utendaji ikiwa ni pamoja na mitambo ya kufuatilia matumizi na mwelekeo wa masafa, mitambo ya kufuatilia maudhui ya matangazo ya vyombo vya utangazaji na mfumo wa kusimamia mawasiliano ya simu.

Aidha, kupitiwa upya na kuchapishwa kwa Kanuni mbalimbali za Sheria ya Mawasiliano ya Kielektroniki na Posta (EPOCA) mwaka 2018 kumeiongezea TCRA uwezo wa kusimamia na kutekeleza majukumu yake.

4. Utekelezaji wa Ilani ya Uchaguzi ya CCM

Malengo yaliyowekwa na Serikali ya Awamu ya Tano ya Jamhuri ya Muungano wa Tanzania, kwenye sekta ya mawasiliano kati ya 2015 na 2020 na Ilani ya Uchaguzi ya Chama Cha Mapinduzi yameshafikiwa na mengine kupitwa. Yale ambayo utekelezaji wake unategemea utendaji wa Mamlaka ya Mawasiliano Tanzania (TCRA) ni:-

- Kuimarisha miundombinu ya mawasiliano na kuendeleza upatikanaji wa huduma za mawasiliano kwa lengo la kuboresha hali za kiuchumi na kijamii za watumiaji.
- Kuendelea kuweka mazingira bora ya ushindani kwenye sekta ya mawasiliano ili wananchi wengi waweze kumudu gharama za mawasiliano ya simu.

- Kulinda watumiaji wa huduma za mawasiliano dhidi ya uhalifu mtandaoni.
- Kuongeza idadi ya watumiaji wa intaneti hadi milioni 20 ifikapo 2020.

Ilani pia imeweka lengo la kufikisha huduma za mawasiliano ya simu za mkononi kwa wananchi wote kupitia Mfuko wa Mawasiliano kwa Wote (UCSAF) katika vijiji vyote vya Tanzania Bara na Zanzibar.

5. Kuimarisha miundombinu na kuendeleza ushindani

Mfumo wa leseni wa TCRA, ulioanza mwaka 2005 unalenga kuendeleza uwekezaji kwenye miundombinu ya mawasiliano, kutoa huduma kwa kutumia miundombinu ama ya mtoa huduma au ya mtu mwingine, kutoa huduma za intaneti na huduma za data na kutoa huduma za maudhui ya utangazaji. Mfumo huu wa utoaji wa leseni, unaozingatia muingiliano wa teknolojia, ambao una aina nne za leseni, umechangia kwa kiasi kikubwa katika kukua kwa huduma za mawasiliano Tanzania.

Leseni ya miundombinu (network facility) inajumuisha miundombinu ya setilaiti, mitandao inayotumia waya aina ya optic fibre, uwekaji wa nyaya na njia za mawasiliano, vifaa vya mawasiliano kutumia radio, milingoti ya mawasiliano ya simu za mkononi, minara na vifaa vya kurushia matangazo ya vyombo vya utangazaji. Kampuni zenye aina hii ya leseni zimefikia 23, tatu zikiwa zimepata leseni kati ya 2015 na 2019.

Leseni ya mtandao wa simu (network services) inaruhusu kutoa huduma za simu yaani sauti, picha na takwimu. Mtoa huduma anaweza kutumia miundombinu yake au ya kukodisha kutoa huduma. Watoa huduma za simu za mkononi wako chini ya kundi hili la leseni. Kuna leseni 14; ambazo ni pamoja na za watoa huduma za simu za mkononi; ambao saba miongoni mwao wanatoa huduma.

Leseni ya huduma (application services) inaruhusu mmiliki kutoa huduma kama vile intaneti, kupiga simu kupitia intaneti, takwimu kwa ajili ya biashara, na huduma za kutuma taarifa fupi. Kuna leseni 69 kwenye kipengele hiki, ambamo 11 zimetolewa kati ya 2015 na 2019.

Leseni ya huduma ya maudhui (content services) inaruhusu mmiliki kutoa huduma za utangazaji na taarifa kupitia mitandao (online publishing) na taarifa za habari. Machi 2018,



TCRA ilianzisha leseni za maudhui mtandaoni (online content).

Aina nyingine za leseni zinazotolewa na TCRA ni leseni ya Posta ya Taifa; leseni ya kusafirisha vifurushi; leseni ya kutumia masafa, leseni ya kufunga mitambo ya mawasiliano; leseni ya kuagiza na kuuza bidhaa za mawasiliano na leseni ya kutumia namba fupi (short codes).

Jedwali 3. Idadi ya Leseni Huduma/watoa huduma					
Mwaka	2015	2106	2017	2018	2019
Leseni za miundo mbinu ya mitandao	20	21	23	23	23
Leseni za kutoa huduma kupitia mitandao	14	14	14	14	14
Leseni za applications services	58	64	69	69	69
Makampuni yanayotoa huduma za simu	7	7	7	7	7

Chanzo: <https://tcra.go.tz/index.php/licensing/licensed-operators>

Jedwali 4. Idadi ya vituo vya redio na televisheni: Desemba 2015 – Desemba 2019			
Mwaka	Vituo vya redio	Vituo vya televisheni	
		Bila malipo	Kulipia
2015	106	25	6
2016	148	25	6
2017	156	27	6
2018	158	30	6
2019	183	37	6
Asilimia ya ongezeko	72.6%	48%	0%

Chanzo: <https://tcra.go.tz/index.php/quarterly-telecommunications-statistics>

Kufuatia kuanzishwa kwa kundi jipya la leseni za huduma ya maudhui mtandaoni, kumekuwa na hamasa katika kuomba leseni hizi. Desemba 2019 kulikuwa na redio mtandaoni 36, televisheni mtandao 169, blogu 97 na majukwaa ya majadiliano mtandaoni sita.

Jedwali 5. Idadi ya watoa huduma za maudhui mtandaoni: Machi 2018 - Desemba 2019				
Mwaka	Redio mtandaoni	Televisheni mtandaoni	Blogu	Majukwaa ya majadiliano mtandaoni
2018	31	90	88	2
2019	36	169	97	6

Ufafanuzi: Leseni za maudhui mtandaoni zimeanza kutolewa 2018

Chanzo: <https://tcra.go.tz/index.php/licensing/licensed-operators>

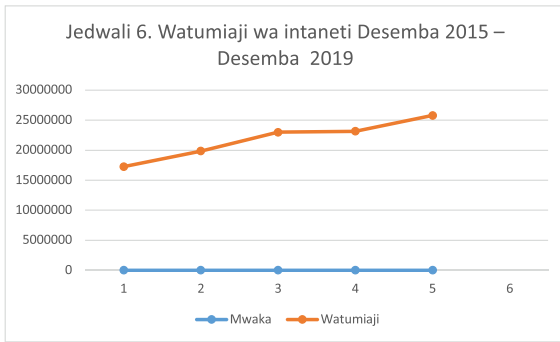
6. Kuongezeka idadi ya watumiaji wa intaneti

Matumizi ya intaneti ni neo lingine ambalo limepiga hatua kubwa katika kipindi cha 2015 hadi 2020. Lengo la watumiaji milioni 20 lililowekwa kwenye Ilani ya Uchaguzi ya CCM limepitwa kwa zaidi ya asilimia 25.

Mwezi Desemba 2019, kulikuwa na watumiaji wa intaneti 25,794,560.

Jedwali 6. Watumiaji wa intaneti Desemba 2015 – Desemba 2019		
Mwaka	Watumiaji	Kuenea mi-ongoni mwa Watanzania
2015	17,263,523	34%
2016	19,862,525	40%
2017	22,995,109	45%
2018	23,142,960	43%
2019	25,794,560	46%
Asilimia ya ongezeko	49.4%	12

Chanzo: <https://tcra.go.tz/index.php/quarterly-telecommunications-statistics>



Utafiti uliofanywa na TCRA juu ya mwenendo wa matumizi ya intaneti unaonyesha kuwa asilimia zaidi ya 96 ya watumiaji wa huduma za intaneti wanapata huduma hiyo kupitia simu na vifaa vya mawasiliano vya mkononi kama vile simu, kompyuta ndogo (tablets) na kompyuta mpakato (laptop). Matumizi ya intaneti yameenea nchini kwa asilimia 46; ambayo ni karibu mara mbili ya wastani wa Afrika wa asilimia 24.4 na alama 1 juu ya wastani wa asilimia 45 kwa nchi zinazoendelea. Kiwango cha kuenea kiko chini kidogo ya wastani wa dunia wa asilimia 51.

Jedwali 7. Nafasi ya Tanzania katika ukuaji wa matumizi ya intaneti. Wastani wa matumizi ya intaneti kwa watu 100.

Eneo	Lengo	Hali halisi
Africa		24.4%
Nchi zinazoendelea	65%	45%
Dunia	75	51
Tanzania		46%

Chanzo: Taarifa ta Tume ya ITU/UNESCO kuhusu masafa ya kasi (ITU/UNESCO Broadband Commission Report), 2019.

Kuongezeka kwa watoa huduma za mawasiliano na data, kuenea kwa huduma za simu, kupatikana kwa umeme wa uhakika, simu za bei nafuu zenye uwezo wa kuunganishwa kwenye intaneti, uelewa wa msingi na gharama ndogo za data kumechangia kuenea kwa matumizi ya intaneti.

Kwa mujibu wa utafiti wa hivi karibuni, bei za simu za mkononi Tanzania ni nafuu ukilinganisha na nchi nyingine kwenye ukanda huu wa Afrika.

Tanzania ni nchi ya tatu Afrika ambamo matumizi ya intaneti yamekuwa kwa kasi kati ya 2017 na 2018.

Huduma za intaneti kupitia simu za mkononi

zimewezeshwa na watoa huduma wengi kuweka mitandao inayotumia tekinolojia inayoweza mawasiliano ya kasi kupitia tekinolojia ya 4G LTE, ambayo ni ya kisasa zaidi. Teknolojia hii inahakikisha mawasiliano ya haraka, ya kuaminika, yenye ubora na rahisi kutumia.

Watoa huduma za simu Tanzania ni wa kwanza kuanzisha huduma kutumia tekinolojia ya 4G LTE barani Afrika. Wenye leseni za huduma za mawasiliano (application services), ambazo zinawezesha kupatikana kwa huduma za intaneti, zilizotolewa kati ya 2015 na 2019 waliongezeka kwa asilimia 32; kutoka 58 mwaka 2015 hadi 69 Desemba 2019.

Kuwepo kwa vituo vya kusambaza mawasiliano kwa intaneti (IXPs) ambacho ni kifupisho cha internet exchange points kumeleta nafuu katika gharama za intaneti. IXPs ni vituo vinavyoweza watoa huduma za interneti na taasisi zenye mitandao mipana kuunganishwa na kusambaza mawasiliano ya intaneti humu humu nchini. IXPs pia zinawezesha maudhui ya tovuti nyingi kubakia humu nchini.

TCRA inashirikiana na Chama cha Watoa Huduma za Intaneti, TISPA ambacho ni kifupisho cha Tanzania Internet Services Providers Association. Chama hicho kina vituo Arusha, Dar Es Salaam, Dodoma, Mbeya, Mwanza na Zanzibar.

Utaratibu huu unawezesha kuwepo kwa intaneti ya kasi, kwani mawasiliano yanasambazwa ndani ya nchi badala ya kwanza kwenda nje ya Tanzania.

Huduma za intaneti zina manufaa makubwa kwa watumiaji. Pamoja na kufanikisha mawasiliano ya kawaida, zinawezesha ufuatiliaji wa shughuli za kifisi, zina ufanisi zaidi na zinawezesha watumiaji kutuma na kupokea data kwa wingi, kufanya biashara mtandaoni na huduma nyingine zinazochangia ufanisi wa shughuli za kifisi.

Ongezeko la matumizi ya intaneti limechangiwa pia na matumizi ya Kiswahili. Katika kipindi cha uongozi wa Rais wa Awamu ya Tano, Mh. Dkt. John Pombe Joseph Magufuli, kumekuwa na juhudi za kuendeleza na kueneza matumizi ya Kiswahili kimataifa. Tayari, Kiswahili kinaelezwa kwamba kimechangia kiasi kikubwa katika kuendeleza matumizi ya intaneti.

Ripoti ya mwaka 2018 ya taasisi ya GSMA, ambayo inawakilisha maslahi ya watoa huduma za simu za mkononi ulimwenguni, inaonyesha kwamba maudhui ya Kiswahili kwenye intaneti



yameongezeka kwa kasi ndani ya miaka mitano iliyopita. Kwa mujibu wa ripoti hiyo, programu-tumizi (applications) kwa lugha ya Kiswahili zimeongezeka kutoka 5,000 mwaka 2014 hadi 30,000 mwaka 2017.

TCRA inaendelea kuhimiza matumizi ya intaneti. Ili kuendeleza matumizi ya intaneti yenye kasi, Mamlaka ilitoa masharti kwa watoa huduma walioshinda zabuni za kununua masafa ya mawasiliano kwenye wigo wa 700Mhz mwezi Juni 2018 kuhakikisha kwamba wanafikia malengo ya kueneza huduma za mawasiliano yanayotumia masafa yenye kasi.

Pamoja na mambo mengine, mnada wa masafa ya MHZ 700 ulilenga kufikia malengo ya Sera ya Taifa ya TEHAMA ya 2016, ambayo ni:

- i. Kuendeleza matumizi ya masafa kwa ufanisi (kwa maana ya kutoa masafa kwa wale ambao watayatumia kuleta faida zaidi za kijamii na kiuchumi;
- ii. Kuendeleza ushindani;
- iii. Kuongeza faida za matumizi kwa watumiaji kupitia utoaji endelevu wa huduma zenye ubora wa juu kwenye maeneo mengi zaidi; na
- iv. Kuendeleza uwekezaji na ubunifu.

Mkurugenzi Mkuu wa TCRA, Mhandisi James M. Kilaba alielezea manufaa ya mnada wa masafa hayo kwa taifa, ambayo ni:

- a) Kuendeleza ujenzi wa miundombinu ya mawasiliano ya simu za mkononi na uwezo wa kutoa huduma zenye kasi kama chachu ya maendeleo ya kiuchumi ya taifa.
- b) Kufanikisha shughuli za kijamii kwa kuwa mawasiliano ya simu za mkononi yenye kasi yatakuwa muhimu katika kuendeleza utoaji huduma za elimu, afya, kilimo, biashara na huduma za kifedha kwa ufanisi kupitia TEHAMA.
- c) Kushusha gharama za mawasiliano ya simu za mkononi, na uwezekano wa kuwa na bei ndogo zaidi kwa walioko maeneo ya vijjini.
- d) Kuendeleza, kuimarisha na kuwezesha ubunifu wa huduma zaidi za TEHAMA na teknolojia zitakazoanzishwa kupitia wigo huu wa masafa.
- e) Kuwa chanzo cha mapato ya taifa kwa kufaidika na matumizi ya masafa kwenye wigo huu kama rasimali adimu.

Katika mnada huo dola za kimarekani 20,005,000 zilipatikana. Mnada huo wa masafa umesifiwa kwamba ni wa aina yake kwa ufanisi barani Afrika.

Watoa huduma walioshinda walipewa masharti ya kuhakikisha wanafikisha huduma za mawasiliano kutumia masafa ya kasi (broadband) kwa asilimia 60 ya Tanzania ifikapo mwaka 2021 na asilimia 90 ifikapo 2024.

TCRA imefanya utafiti kuhusu gharama za kutumia intaneti ili watumiaji wengi zaidi waweze kuzimudu.

7. Kuongezeka watumiaji simu za mkononi

Kuongezeka kwa watoa huduma na aina ya huduma zinazowezeshwa na TEHAMA kumechangia katika maendeleo ya kasi ya matumizi ya teknolojia, huduma za msingi za mawasiliano na huduma za ziada.

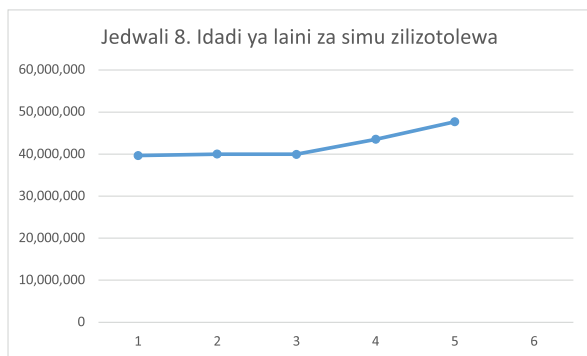
Watumiaji wa simu za mkononi wameongezeka. Idadi ya laini zilizotolewa imeongezeka kutoka 39,665,600 Desemba 2015 hadi 47,685,232 Desemba 2019 ambalo ni ongezeko la asilimia 20.21.

Asilimia ya Watanzania wanaofikiwa na huduma za simu za mkononi imeongezeka pia; kutoka 79% hadi 85%.

Ni vyema kutambua kwamba idadi ya laini za simu haionyeshi idadi halisi ya watumiaji kutokana na baadhi ya watumiaji kuwa na laini zaidi ya moja. Inakisiwa kwamba idadi la watumiaji mmoja mmoja ni milioni 26.

Jedwali 8. Idadi ya laini za simu zilizotolewa		
Mwaka	Laini	Kuenea miongoni mwa Watanzania
2015	39,665,600	79%
2016	40,014,186	80%
2017	39,953,860	79%
2018	43,497,261	81%
2019	47,685,232	85%
Asilimia ya ongezeko	20.21%	6

Chanzo: <https://tcra.go.tz/index.php/quarterly-telecommunications-statistics>



7.1 Huduma ya pesa mtandao kupitia simu za mkononi

Eneo moja ambalo limekuwa kwa haraka ni katika huduma za fedha mtandao. Taarifa ya mwaka 2019 kuhusu mwelekeo wa kidijitali Tanzania, iliyotolewa na taasisi ya kimataifa GSMA Intelligence imeonyesha kwamba Tanzania ni mojawapo kati ya nchi za Afrika ambapo huduma za fedha kupitia simu za mkononi zimeenea kwa kasi.

Akaunti za pesa mtandao kupitia simu za mkononi zimeongezeka kutoka 17,639,349 Desemba 2015 hadi 25,864,318 Desemba 2019; ongezeko la asilimia 46.6.

Kuongezeka kwa akaunti za pesa mtandao kumetokana na kuongezeka kwa watumiaji wa simu za mkononi na manufaa ya kutumia simu za mkononi kufanya miamala ya kifedha.

Kukua huku kumewezesha watumiaji wengi kujumuika katika mfumo wa kifedha ama kwa kutuma au kupokea fedha, kufanya miamala mbalimbali kielektroniki kupitia simu za mkononi na pia kumepanua fursa za ujasiriamali.

Idadi ya miamala ya kifedha kupitia mitandao na pia kiasi cha fedha kinachopitishwa vimeongezeka kwa kasi katika miezi ya hivi karibuni.

Katika kipindi cha miezi tisa kati ya Machi na Desemba 2019, idadi ya miamala na thamani ya miamala hiyo iliongezeka kwa asilimia 17 na 21 mtawalia.

Watumiaji wa huduma za pesa mtandaoni walifanya miamala milioni 244 yenye thamani ya shilingi trilioni 7.8 Machi 2019 na miamala

285 yenye thamani ya shilingi trilioni 9.5 Desemba 2019.

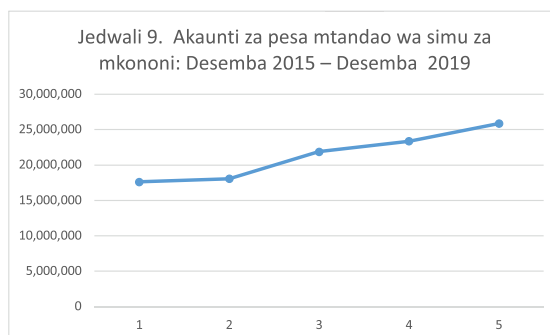
Masuala ya fedha yanasimamiwa na Benki Kuu ya Tanzania; lakini TCRA inahusika kama msimamizi wa sekta ya mawasiliano na mitandao, ambamo miamala ya kifedha inapitia.

TCRA inapanga, kugawa na kutoa namba fupi zinazotumika kwenye miamala ya pesa mtandaoni, bahati nasibu na huduma nyingine. Mifano ya hizo namba fupi ni *150*00# inayotumiwa na Vodacom, *150*60# (Airtel), *150*01# (Tigo), *150*71# (TTCL Pesa), *150*88# (Halotel), *150*02# (Zantel), *150*03# (CRDB Bank) na *150*66# ya NMB.

Jedwali 9. Akaunti za pesa mtandao wa simu za mkononi: Desemba 2015 – Desemba 2019

Mwaka	Idadi
2015	17,639,349
2016	18,080,622
2017	21,889,618
2018	23,367,826
2019	25,864,318
Asilimia ya ongezeko	46.62%

Chanzo: <https://tcra.go.tz/index.php/quarterly-telecommunications-statistics>



7.2 Kushuka kwa gharama za kupiga simu

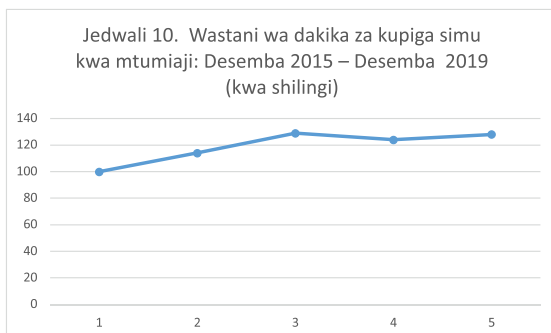
Kuwepo kwa laini za simu nyingi zaidi sokoni, na kwa tafsiri hiyo kuongezeka kwa watumiaji na matumizi, kumesababisha ongezeko la dakika za maongezi ya simu na kupungua kwa gharama za kupiga simu na za kutuma ujumbe mfupi (SMS au meseji). Katika kipindi hiki

muda wa watumiaji kuongea kwa simu na idadi ya ujumbe mfupi (meseji au SMS) wanaotuma vimeongezeka.

Desemba 2015 watumiaji wa simu za mkononi waliongea kwa wastani wa dakika 100 kwa mtumiaji kwa mwezi. Desemba 2019 wastani huo uliongezeka hadi dakika 128 kwa mtumiaji kwa mwezi. Kuongezeka kwa dakika za maongezi kwa watumiaji kumechangiwa na kushuka kwa gharama za kupiga simu na kuwepo kwa vifurushi vya muda wa maongezo vilivyopangwa kutoa unafuu kwa watumiaji. Aidha kupungua kwa tozo za kupiga simu kumesababishwa na kushuka kwa gharama za kupitisha simu kutoka mtandao mmoja kwenda mwingine, yaani gharama za muingiliano.

Jedwali 10. Wastani wa dakika za kupiga simu kwa mtumiaji: Desemba 2015 – Desemba 2019 (kwa shilingi)

2015	100
2016	114
2017	129
2018	124
2019	128
Asilimia ya ongezeko	28.5%
<i>Chanzo: https://tcra.go.tz/index.php/quarterly-telecommunications-statistics</i>	



Gharama za muingiliano huanza kutumika kila mwanzoni mwa mwaka; na mara ya mwisho zilipangwa na TCRA mwaka 2017. Gharama za kupiga simu zilishuka kutoka wastani wa shilingi 306 kwa dakika kwa mtandao wa mtumiaji Desemba 2015 hadi wastani wa shilingi 87 kwa mtandao wa mtumiaji kwa dakika Desemba 2019. Gharama za kutuma meseji pia zilishuka; kutoka shilingi 82 kwa meseji Desemba 2015 hadi 35 kwa meseji Desemba 2019.

Jedwali Na. 11. Muelekeo wa gharama za kupiga simu ndani ya nchi: Desemba 2015 – Desemba 2019 (kwa shilingi)

	Mtandao wa mtumiaji	Mtandao mwingine
2015	306	419
2016	300	405
2017	249	329
2018	248	321
2019	87	90
Asilimia ya punguzo	252.8%	365%
<i>Chanzo: https://tcra.go.tz/index.php/quarterly-telecommunications-statistics</i>		

Jedwali Na. 12. Muelekeo wa gharama za kutuma ujumbe mfupi kwa simu (SMS) ndani ya nchi: Desemba 2015 – Desemba 2019 (kwa shilingi)

Kutoka mtandao wa mtumiaji	
2015	82
2016	69
2017	51
2018	50
2019	35
Asilimia ya punguzo	134%
<i>Chanzo: https://tcra.go.tz/index.php/quarterly-telecommunications-statistics</i>	

Kwa mujibu wa jedwali la gharama za muingiliano lilitolewa 2017, gharama za muingiliano zimeshuka kwa asilimia 450 kutoka shilingi 28.57 kwa dakika Januari 2016 hadi 5.20 Januari 2020. Gharama zitashuka hadi shilingi 2.60 Januari 2021 na shilingi 2.00 Januari 2022.

Jedwali Na. 13. Gharama za kuunganisha simu kwenye mitandao mingine ya simu kwa dakika (muungiliano): Januari 2015 – Januari 2020 (kwa shilingi). Viwango vipya vilipangwa 2017

Januari 2016	Januari 2017	Januari 2018	Januari 2019	Januari 2020
28.57	26.96	15.60	10.40	5.20
Asilimia ya kushuka kwa gharama 449.4%				
Mwelekeo hadi 2022			Januari 2021	Januari 2022
			2.60	2.00
Chanzo: https://tcra.go.tz/images/documets/reports/Cost_Based_interconnection_Rates.pdf				

8. Mikakati ya kidijitali kwenye huduma na utawala

Mkongo wa taifa wa mawasiliano, ambao umeenea nchi nzima unawezesha kutekelezwa kwa mikakati ya kutumia mifumo ya kidijitali kutoa huduma za elimu, afya, utawala na uendeshaji.

Pamoja na kuwepo kwa programu-tumizi za aina mbalimbali zinazopatikana kupitia simu za mkononi, ubunifu wa watoa huduma umewezesha kuwepo kwa aina ya huduma ambazo zinachangia katika kufanikisha mikakati ya kitaifa ya kutumia mifumo ya kielektroniki kwa shughuli mbalimbali.

Hali hii ina matokeo chanya katika uchumi na shughuli za kijamii kwa kufanikisha upatikanaji wa huduma kupitia mifumo ya kielektroniki. Simu za mkononi zimefanikisha mikakati ya kutumia mifumo ya kielektroniki katika uendeshaji wa serikali.

Tanzania ilianzisha wakala wa Serikali Mtandao (eGA), ambacho ni kifupi cha e-government mwaka 2012 kusimamia mifumo ya uendeshaji wa serikali kidijitali na kuratibu viwango vya ubora. Taasisi ya eGA inawezesha wananchi kuwasiliana na serikali kupitia mitandao ya simu kupitia huduma ya ujumbe mfupi (SMS). Aidha taasisi za umma zaidi ya 173 zimeunganishwa kwenye mfumo wa serikali mtandao.

Mifumo ya malipo ya huduma za kiserikali na sekta ya umma zinatumiya mfumo mkuu wa

ukusanyaji wa fedha za umma, yaani GePG, ambacho ni kifupi cha Government e-payment gateway. Hii imeleta ufanisi na nidhamu katika masuala ya utawala na fedha na imezuia matumizi yasiyostahili ya fedha za umma.

Mwezi Novemba 2019, Wizara ya Afya imezindua mkakati mpya wa kutumia TEHAMA katika kutoa huduma; ambapo hospitali zote na nusu ya idadi ya vituo vya afya na zahanati zitakuwa na uwezo wa kutoa huduma za tiba mtandao ifikapo mwaka 2024. Chini ya mkakati huo watumishi wa afya watapata mafunzo maalum kuhusu matumizi ya TEHAMA na matumizi ya taarifa zinazopatikana kidijitali. Kati ya 2019 na 2024, asilimia 80 ya watumishi wa sekta ya afya watafundishwa kuhusu uhifadhi na matumizi ya data.

Taasisi zote za afya Tanzania Bara zitakuwa zinatumiya mfumo wa malipo wa GePG ifikapo Juni 2022.

Kwa upande wa Zanzibar, tayari vituo 24 vya afya vimeunganishwa na hospitali kuu ya rufaa Mnazi Mmoja kupitia mkongo wa taifa wa mawasiliano. Madaktari wanaweza kuwasilisha moja kwa moja matokeo ya vipimo vya wagonjwa kwa madaktari bingwa kwa ajili ya kutambua ugonjwa au tatizo la kiafya. Vituo hivi vina huduma za mawasiliano bila malipo miongoni mwa madaktari.

Awamu ya pili ya mkakati wa afya-mtandao Zanzibar itahusisha ujenzi wa kituo cha kuhifadhi data za kiafya na kitabibu kielektroniki ambamo taarifa za wagonjwa zitapatikana kila zinapohitajika.

9. Utangazaji

Kwa upande wa utangazaji, mafanikio katika kuhama kutoka mfumo wa utangazaji wa televisheni wa ardhini wa analojia kwenda mfumo wa dijitali kumeongeza ubora wa matangazo ya televisheni. Aidha, uhamaji huo umewezesha kupatikana kwa masafa ya ziada ambayo yametokana na ufanisi katika matumizi ya masafa.

Vilevile uhamaji umechochea kuanzishwa kwa fursa mbalimbali za kuandaa na kutoa maudhui. Utangazaji wa dijitali unatumia ving'amuzi ambavyo manunuzi yake yameongezeka katika kipindi hiki.

TCRA imeanza utaratibu wa kuandaa mfumo wa kuwezesha matumizi ya king'amuzi kimoja kuona chaneli zote za bure za televisheni.





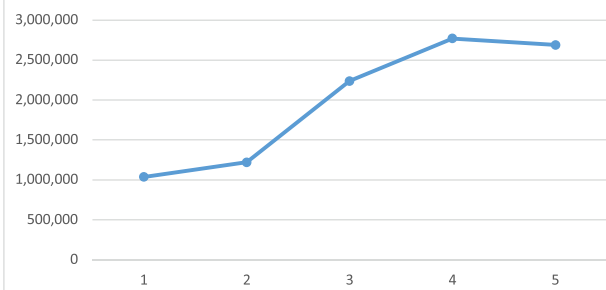
Mabalozi wanaoiwakilisha Tanzania nchi za nje na kwenye jumuiya za kimataifa wakipata maelezo kuhusu mtambo wa kufuatilia matumizi na muelekeo wa masafa ya mawasiliano walipotembelea TCRA mwaka 2019

Jedwali Na. 14. Idadi ya ving'amuzi vilivyoo hewani Desemba 2015 – Desemba 2019

Mwaka	Mfumo wa televisheni	
	Ardhini (DTT) bila malipo	Satelaiti na Waya (cable)
2015	717,824	317,614
2016	837,461	382,891
2017	1,508,229	728,348
2018	1,626,023	1,143,818
2019	1,432,398	1,251,115
Asilimia ya ongezeko	99.54%	294%

Chanzo: <https://tcra.go.tz/index.php/quarterly-telecommunications-statistics>

Jedwali Na. 14. Idadi ya ving'amuzi vilivyoo hewani Desemba 2015 – Desemba 2019



10. Posta

Mafanikio katika sekta ndogo ya simu na utangazaji hayakujionyesha kwenye posta, ambapo pamoja na kuongezeka kwa watoa huduma, kumekuwa na kushuka kwa wateja wa posta ya umma na idadi ya vitu vinavyosafirishwa kwa posta.

Kwa mfano, wakati idadi ya watoa huduma wa posta na kusafirisha vifurushi ikiongezeka kutoka 36 hadi 92 kati ya Desemba 2015 na Desemba 2019, wateja wa Shirika la Posta Tanzania wamepungua kutoka 522,945 hadi 346,684.



Mwenyekiti wa Mfuko wa Mawasiliano kwa Wote (UCSAF), Mhandisi Joseph Kilongola na Katibu Mtendaji wa Baraza la Ushauri la Watumiaji wa Huduma za Mawasiliano (TCRA CCC), Mary Shao Msuya wakifuatilia mada katika mkutano wa maadhimisho ya miaka 40 ya Umoja wa Posta Afrika (PAPU), Arusha Januari 2020

Vitu vilivyosafirishwa kupitia posta ya umma vimepungua kutoka 31,259,171 hadi 12,153,541. Ingawaje wateja wa posta ya umma waliongezeka kidogo kutoka 381,376 mwaka 2016 hadi 445,160 mwaka 2017, baada ya hapo wameendelea kupungua.

11. Mawasiliano kwa wote

Mamlaka ya Mawasiliano inafanya kazi kwa karibu na Mfuko wa UCSAF; ambao ulianza shughuli zake mwaka 2009 ili kuhakikisha

upatikanaji wa huduma za mawasiliano kwa wote katika maeneo ya vijijini na maeneo ya mijini yenye mawasiliano hafifu na ambamo watoa huduma hawapendelei kuwekeza kwa sababu za kibiashara.

Aidha mfuko unahamasisha ushiriki wa sekta binafsi katika mipango yake. Upatikanaji wa mawasiliano ya uhakika unahamasisha maendeleo ya kijamii na kichumi.

Jedwali Na. 15. Idadi ya watoa huduma za kusafirisha vifurushi: Desemba 2015 – Desemba 2019		Jedwali Na. 16. Idadi ya wateja wa posta: Desemba 2015 – Desemba 2019		Jedwali Na. 17. Idadi ya vitu viliyotumwa kwa posta: Desemba 2015 – Desemba 2019	
Mwaka	Idadi	Mwaka	Idadi	Mwaka	Idadi
2015	36	2015	522,945	2015	31,259,171
2016	33	2016	381,376	2016	12,098,784
2017	35	2017	445,160	2017	10,121,388
2018	26	2018	353,742	2018	10,819,272
2019	92	2019	346,684	2019	12,153,541
Asilimia ya ongezeko	155.5%	Asilimia ya kushuka	50.58%	Asilimia ya kushuka	157%

Chanzo: <https://tcra.go.tz/index.php/quarterly-telecommunications-statistics>



Hadi Machi 2019, Mfuko ulikuwa umefikisha huduma za mawasiliano kwenye vijiji 2,501 katika kata 511 na mkoa 27. Pamoja na kueneza mawasiliano vijijini, UCSAF pia inatekeleza mipango ya kuendeleza matumizi ya TEHAMA kwenye shule, hospitali na taasisi nyingine. Hadi Machi 2019 Mfuko ulikuwa umeunganisha kwenye mtandao wa intaneti shule zaidi ya 25 za umma zikiwemo zenye wanafunzi wenye mahitaji maalum.

Kupitia mradi wa tiba mtandao, mfuko wa UCSAF umetoa pesa kwa ajili ya kukarabati vyumba vitakavyotumika kutolea huduma kupitia tiba mtandao katika Hospitali ya Taifa Muhimbili pamoja na kitengo cha hospitali hiyo cha tiba ya mifupa (MOI).

Jedwali: 18. Mkoa na idadi ya vijiji vilivyofikiwa na Mfuko wa Mawasiliano kwa wote (UCSAF) hadi Machi 2019

Na.	Mkoa	Vijiji
1	Arusha	69
2	Dar Es Salaam	3
3	Dodoma	164
4	Geita	122
5	Iringa	75
6	Kagera	98
7	Kaskazini Pemba	3
8	Katavi	30
9	Kigoma	114
10	Kilimanjaro	31
11	Kusini Pemba	3
12	Lindi	143
13	Manyara	143
14	Mara	36
15	Mbeya	197
16	Morogoro	195
17	Mtwara	137
18	Mwanza	13
19	Njombe	77
20	Pwani	89
21	Rukwa	128
22	Ruvuma	169
23	Shinyanga	32
24	Simiyu	78
25	Singida	100
26	Tabora	163
27	Tanga	89

Chanzo: Jarida la The Regulator, Aprili –Juni 2019, Uk. 29 https://tcra.go.tz/images/documents/regulator/REGULATOR_April_June_2019.pdf

12. Kulindawatumiaji wa huduma za mawasiliano dhidi ya uhalifu mtandaoni

Tanzania imeweka mfumo wa kuhakikisha usalama wa mitandao ya mawasiliano iliyounganishwa kwa mifumo ya kompyuta na watumiaji wa mitandao hiyo. Kuna kituo cha kitaifa cha mwitikio wa kukabiliana na majanga ya kompyuta kiitwacho TZ-CERT ambacho ni kifupisho cha Tanzania Computer Emergency Response Team kwa ajili ya ushauri na msaada wa kiufundi kwani imeanzishwa kutoa huduma kwa wananchi.

Kituo kimeundwa ndani ya muundo wa TCRA. Baadhi ya majukumu yake ni:-

- Kutoa elimu na kuhamasisha matumizi bora na salama ya mtandao na mifumo ya TEHAMA;
- Kufanya tathmini ya mashambulizi ya kiusalama kwenye miundombinu muhimu ya TEHAMA nchini ili kubaini udhaifu ulioko na kuchukua hatua stahiki. Huduma hii hutolewa bila ya malipo yoyote.

Kwa mfano, mwaka 2019, CERT ilitoa taarifa nyingi ikiwemo ya namna ya kujilinda dhidi ya proramamu hasidi.

Kazi za CERT zimechangia katika kuipa Tanzania nafasi ya juu kimataifa kwenye eneo la udhibiti wa uhalifu mtandaoni. Uboreshaji wa mfumo wake wa kisheria na kiudhibiti wa usalama mitandaoni katika miaka mitatu iliyopita umeifanya Tanzania kuwa mojawapo kati ya nchi 10 zinazoongoza Afrika kwenye eneo hili.

Tanzania imepanda ngazi kutoka ya 12 Afrika mwaka 2017 hadi kuwa ya sita mwaka 2018, kwa mujibu wa fahirisi ya 2018 ya kimataifa (2018 Global Cybersecurity Index), ambayo imechapishwa na ITU. Tanzania imezipita Zambia, Cameroon na Ghana.

Kimataifa Tanzania ni ya tatu kwa upande wa SADC, ikiwa imepanda ngazi mbili; kutoka kuwa ya tano mwaka 2017. Imezipita Botswana, ambayo ilikuwa ya tatu 2017 lakini sasa ni ya nne; na Zambia ambayo ilikuwa ya nne 2017 lakini sasa ni ya tano.

Kwa Afrika, Tanzania imepanda ngazi moja na kuwa ya tatu, na imeipita Uganda iliyokuwa ya tatu 2017 lakini sasa ni ya nne. Rwanda na Kenya zinaongoza. Tanzania imepaa kutokana na kupitishwa, mwaka 2015, kwa Sheria za Makosa Mtandaoni (Cyber Crimes Act) na Sheria ya Malipo Mtandaoni (Electronic Transactions Act), kwa mujibu wa taarifa hiyo.



Wadau wakipitia mwongozo wa watumiaji kuhusu huduma na bidhaa za mawasiliano ambao umetolewa na TCRA na unasambazwa bila malipo kama sehemu ya elimu kwa watumiaji kwa lengo la kurwalinda.

Kuwepo kwa CERT na ushirikiano wa Tanzania na taasisi nyingine za kimataifa pia kumechangia katika kuboresha ufanisi wa Tanzania katika eneo hili.

Jedwali 19. Nafasi ya Tanzania kimataifa na kikanda katika usalama wa mtandao (2015 – 2018)

Mwaka	Afrika	EAC	SADC
2015	11	4	3
2017	12	4	5
2018	6	3	3

https://www.itu.int/en/ITU-D/Cybersecurity/Documents/draft-18-00706_Global-Cybersecurity-Index-EV5_print_2.pdf

TCRA inaendelea kutoa elimu kwa wananchi na watumiaji wa huduma na bidhaa za mawasiliano kuhusu matumizi bora ya huduma hizi. Elimu hii pia inahusu namna ya kujilinda dhidi ya uhalifu kwenye mitandao ya simu na intaneti. Januari 2018, Mamlaka ilichapisha na



kuanza kusambaza Mwongozo wa Watumiaji wa Huduma na Bidhaa za mawasiliano ambao una vidokezo muhimu kuhusu namna ya kujilinda dhidi ya utapeli, ulaghai na uhalifu mwingine mtandaoni.



13. Usajili wa laini za simu za mkononi

Eneo jingine ambalo linachangia katika kuimarisha usalama katika matumizi ya huduma za mawasiliano ni usajili wa laini za simu za mkononi, ambao kwa sasa unafanyika kibiometria.

TCRA kwa kushirikiana na wadau inasimamia mpango wa kusajili upya laini za simu za mkononi au vifaa vya mawasiliano ambavyo vinaweza kufanya mawasiliano kwa mfumo wa kutumia laini.

Utaratibu wa sasa wa usajili unahusisha kuchukua alama za vidole vya mtumiaji na kutumia kitambulisho cha taifa kinachotolewa na Mamlaka ya Vitambulisho vya Taifa (NIDA).

Uboreshaji wa usajili wa laini za simu unalenga kuwa na kanzidata imara, ya kuaminika ya watumiaji wa laini za simu na vifaa vya mawasiliano vinavyotumia laini ili kuendeleza sekta, kulinda watumiaji na kuthibiti matumizi mabaya ya huduma za mawasiliano.

Usajili wa laini ulianza 2009 baada ya Mamlaka ya Mawasiliano Tanzania (TCRA) kutoa maelekezo ya kiutawala kwa makampuni ya simu kuanza kusajili wateja wao. Uliwekwa kisheria mwaka 2010 kupitia sheria ya Mawasiliano ya Elektroniki na Posta (EPOCA) na kanuni zake; ambazo zimehuishwa Machi 2018.

Uamuzi wa kutumia kitambulisho cha taifa na namba ya utambulisho ya taifa umetatuwa changamoto kubwa iliyokuwepo mara nyingi katika uhakiki wa laini za simu. Vitambulisho 11 vilikuwa vinatumika; na uhakiki wa usajili iligundua matukio ya vitambulisho kughushiwa au usajili kufanyika kwa kutumia vitambulisho vya watu wengine. Ilionekana kwamba matumizi ya kitambulisho cha taifa yataondoa changamoto hii.

Usajili wa laini una faida kwa wadau wote wa sekta ya mawasiliano – Serikali, TCRA, watoa huduma na watumiaji.

Unawezesha kuwepo kwa takwimu sahihi za watumiaji kwa ajili ya matumizi ya kiusimamizi na kiuchumi. Aidha unawezesha kupatikana takwimu kuhusu watumiaji wa simu za mkononi kwa ajili ya kuweka mipango ya kuendeleza sekta na hivyo kuendeleza uchumi wa nchi kwa ujumla.

Watumiaji wanatakiwa kulindwa dhidi ya matumizi mabaya ya huduma za mawasiliano.

Imani ya watumiaji na watoa huduma inajengeka kukiwa na utaratibu wa kutambua watumiaji. Kwa mfano imani ya watumiaji wanaofanya miamala ya kifedha kupitia simu zao inajengeka iwapo watajua kwamba kuna kumbukumbu za wanayemlipa au kumtumia pesa; ili hata ikitokea tatizo waweze kufuatilia wakiwa na ushahidi kamili.

Usajili wa laini unawawezesha watoa huduma kuwajua wateja wao na hivyo kudumisha ushirikiano nao. Usajili unawawezesha watumiaji kupata huduma za ziada kutoka kwa watoa huduma, kwa mfano mikopo midogo ya muda wa maongezi na mingineyo inayotolewa na watoa huduma husika.

Njia mojawapo ya kuwalinda watumiaji ni kutatua malalamiko yao. Usajili unarahisisha kufuatilia na kushughulikia malalamiko ya watumiaji ambao wanakumbana na matatizo katika matumizi ya huduma za simu.

Usajili unaiwezesha TCRA kufanya kazi za udhibiti/ usimamizi na kuokoa mapato ya taifa. Wahalifu kadhaa wameshakamatwa na kufikishwa kwenye vyombo vya sheria baada ya kugundulika wakitumia laini za simu za mkononi ambazo hazikusajiliwa kupitisha simu za nje kwa kuzifanya zionekane ni za humu nchini; hivyo kuikoshesha Serikali mapato.

Wahalifu wakitumia laini ambazo hazijasajiliwa au zilizosajiliwa kwa majina bandia na wanapopitisha simu za nje kinyemela wanakwamisha juhudi za kuleta maendeleo kwa wote.

Watumiaji wanapojisajili, kwa mfumo huu wa biometria na kutumia Kitambuliho cha Taifa, wanapata kitambulisho cha kidijitali ambacho ni muhimu katika kufanya miamala ya kibenki na ununuzi wa bidhaa kwa njia ya simu au mtandao.

14. Rajisi ya namba tambulishi za simu za mkononi

Tarehe 16 Juni 2016 TCRA ilizindua kanzidata ya namba tambulishi za vifaa vya mawasiliano. Lengo ni kuwa na sehemu moja ambako namba tambulishi za watoa huduma wote wa simu za mkononi zinahifadhiwa.

Kila simu au kifaa cha mawasiliano vinavyotumia laini ya simu kina namba maalum ambayo haifanani na nyingine; na inaitwa IMEI, ambacho ni kifupi cha International Mobile Equipment Identity.



Afisa wa Mamlaka ya Vitambulisho vya Taifa (NIDA) akisajili wananchi mjini Morogoro kwa ajili ya vitambulisho ambavyo ni muhimu katika kupata huduma mbalimbali pamoja na kusajili laini za simu kibiomtria.

Kuanzishwa kwa kanzidata hiyo, ambayo inaitwa CEIR, kifupisho cha Central Equipment Identity Register, ni mojawapo ya hatua za kuimarisha usalama katika matumizi ya simu au vifaa vya mawasiliano vya mkononi vinavyotumia laini, kuthibiti wizi wa simu na kufanikisha kupatikana kwa simu au vifaa vya mawasiliano ambavyo vitapotea au kuibwa. Aidha CEIR itadhhibiti uingizaji na matumizi ya simu na vifaa vya mawasiliano vya mkononi visivyokidhi viwango au vifaa feki.

15. Mfumo wa kuratibu na kusimamia mawasiliano

Tanzania, kupitia TCRA, imekuwa nchi ya kwanza ulimwenguni kuwa na mfumo wa kusimamia data za pesa kupitia simu za mkononi. Hii inafuatia kufungwa kwa mfumo wa kuratibu na kusimamia mawasiliano yote ya simu – teletraffic management system (TTMS); mwaka 2013.

Mfumo huu ulikabidhiwa kwa Mamlaka na mhandisi – kampuni ya ubia wa Societe Generale de Surveillance (SGS) na Global Voice Group (GvG) Januari 2019. Makabidhiano hayo yalishuhudiwa na Rais wa wa Awamu ya Tano ya Serikali ya Jamhuri ya Muungano wa Tanzania, Mhe. Dkt. John Pombe Joseph Magufuli.

Mfumo una vipengele saba – kusimamia ubora wa mawasiliano; kupata takwimu sahihi za mawasiliano ya simu; kutoa takwimu za matumizi ya huduma za mawasiliano kwa njia ya sauti, matumizi ya data na ujumbe mfupi na kubaini mawasiliano ya simu za kimataifa yanayofanyika kwa njia za udanganyifu.

Mfumo pia unafuatilia miamala ya kifedha inayofanyika kwa njia ya mtandao; unatambua namba tambulishi (IMEI) za simu za kiganjani na pia unahakikisha kwamba vifaa vyote vilivyunganishwa na mitambo ya watoa huduma vinakidhi viwango vya kimataifa, na unahakiki mapato yatokanayo na huduma za mawasiliano ya simu.

Malengo makuu ya TTMS ni:

- Kusimamia kikamilifu simu za kimataifa zinazolingia Tanzania kwa kuhakiki simu kutoka nje kwenye mitandao ya simu;
- Kufuatilia simu za kimataifa zinazopita kwenye mitandao ya Tanzania, simu zinazopigwa na watumiaji wanaotumia mtandao ya nchi zao wakiwa humu nchini ili kuzuia simu hizo kuonekana kama ni za ndani;



- Kuendeleza uwajibikaji na uwazi katika mitandao na kuboresha utoaji wa huduma;
- Kuwezesha upimaji wa viwango vya huduma katika uunganishaji wa simu kati ya mitandao kwa simu za ndani na za kimataifa;
- Kuweka viwango na mfumo wa usimamizi vinavyotosheleza vya kupima ufanisi katika uunganishaji wa simu kati ya mitandao kwa mujibu wa viwango vilivyowekwa na Shirika la Mawasiliano Uimwenguni (ITU);
- Kuweka uwiano wa utaratibu wa kupitisha simu za kimataifa kwenye mitandao ya watoa huduma;
- Kuweka ufanisi kwenye mitandao ya mawasiliano ya watoa huduma;
- Kuweka vifaa vya kupima ubora wa simu zote za ndani na za kimataifa zinazotoka kwenye mitandao ya simu;
- Kusimamia kwa ufanisi mawasiliano ya simu ili kuwa na tozo na gharama zenye uhakika za simu za kimataifa zinazolingia Tanzania;
- Kuweka mifumo bora ya usalama kwa taifa na kwa mitandao ya mawasiliano na sekta ya huduma kwa kutambua na kuzima mifumo yote ya kihalifu na ya kilaghai ya kuingiza simu za kimataifa nchini;
- Kuweka uwiano katika utendaji wa watoa huduma wenye leseni ambao ndio wenye idhini kisheria kupitisha simu za kimataifa na kitaifa;
- Kuweza kubaini taarifa za laini za simu na kutambua vifaa vya mawasiliano vinavyotumia laini;
- Kuimarisha uwezo wa TCRA wa kuhakiki usahihi wa mifumo ya watoa huduma ya kutoza gharama za simu za kimataifa zinazolingia Tanzania;
- Kuhakikisha upatikanaji wa takwimu za kuaminika na taarifa za simu za kimataifa zinazolingia nchini na zinazopigwa kutoka Tanzania;
- Kuweka kwa njia bora taarifa za takwimu za simu zote zinazolingia na zinazotoka Tanzania ili kuwezesha kuandaa kanzidata inayojitegemea kuhusu simu za ndani na za kimataifa kwa ajili ya shughuli za usimamizi/uthibiti;

- Kufuatilia miamala inayofanyika kupitia mitandao ya watoa huduma za pesa kupitia simu za mkononi ili kuhakikisha usahihi wa kuwasilisha kwa Mamlaka taarifa ya miamala yote ya pesa mtandao;
- Kuhakiki mapato ya watoa huduma za simu kutokana na huduma wanazotoa.

16. Mchango wa TCRA kwa Hazina

Mamlaka ya Mwasiliano Tanzania imetoa mchango wa jumla ya shilingi 241,284,034,533 (bilioni mia mbili arobaini na moja, milioni mia mbili themanini na nne, elfu thelathini na nne mia tano thelathini na tatu) kwa Serikali katika kipindi cha miaka minne – 2015 – 2019. Fedha hizo zinatokana na malipo ya leseni na tozo nyingine za kiusimamizi. Mchanganuo wa mchango hiyo uko kwenye jedwali namba 20.

Jedwali 20: Mchango ya TCRA Hazina, 2015/16 – 2018/19		
Na.	Mwaka wa fedha	Mchango (shilingi)
1	2015/2016	44,129,146,015
	2016/2017	29,921,929,945
	2017/2018	81,377,143,631
	2018/2019	85,855,814,942

17. Mawasiliano na maendeleo ya viwanda

Serikali ya Awamu ya Tano imeazimia kuibadilisha Tanzania kuwa nchi ya viwanda na yenye uchumi wa kati ifikapo 2015. Sekta ya mawasiliano ina majukumu katika kufanikisha malengo haya.

Sekta hii inasimamia rasimamali ambazo ni pamoja na masafa ya mawasiliano. Aidha, TCRA inasimamia upatikanaji wa huduma katika maeneo mengi ikiwa ni pamoja na kwenye miradi ya viwanda. Kuimarika kwa mifumo ya mawasiliano ni muhimu katika maendeleo ya viwanda na biashara kwa ujumla.

18. Mawasiliano katika miradi ya Kitaifa ya Kimkakati

Serikali ya Awamu ya Tano inatekeleza miradi kadhaa ya kimkakati ya kitaifa, ambayo ufanisi wake unategemea ubora wa mawasiliano.

TCRA imejipanga kuhakikikisha kwamba mawasiliano kwenye miradi ya kitaifa ya kimkakati yanaboreshwa.



Wajumbe wa Bodi ya Wakurugenzi ya TCRA, Kamati ya Maudhui, mengineji na maafisa wa Mamlaka wakiwa ndani ya jengo jipya la abiria Uwanja wa Ndege wa Kimataifa wa Julius Nyerere, Dar Es Salaam.

Miradi hii ni pamoja na reli ya viwango vya kisasa, yaani standard gauge railway (SGR), Mradi wa Umeme Mwalimu Nyerere Rufiji; maktaba ya kisasa Chuo Kikuu cha Dar Es Salaam, kukamilika kwa jengo la tatu la abiria Uwanja wa Ndege wa Julius Nyerere Dar Es Salaam na ujenzi wa miundombinu mingine ya usafiri na usafirishaji.

Mradi wa SGR, utahitaji mawasiliano ya aina ya GSM R, ambacho ni kifupisho cha Global System for Mobile Communications Railway. Viwango vya mfumo huu vinafanikisha mawasiliano bora kwenye mifumo ya reli na treni za mwendo kasi.

Mkutano wa kila miaka minne kuhusu masafa ya mawasiliano uliofanyika Sharm El Sheikh, Misri mwishoni na mwezi Oktoba na mwanzoni mwa Novemba, 2019; ambamo Tanzania ilishiriki kupitia TCRA, ulipitisha azimio la kuendeleza mawasiliano katika mifumo ya reli; yaani kati ya treni na stesheni.

19. Mfumo wa anwani na postikodi

TCRA imeendelea kuratibu mradi wa postikodi na mfumo wa anwani kitaifa.

Postikodi ni utaalumu wa kiposta wa kutumia tarakimu au mchanganyiko wa tarakimu na herufi kutambulisha eneo kitu au mtu alipo.

Postikodi ni kitambulisho kwenye anwani ya makazi na kinapotumika humtambulisha mtu au kitu kwa usahihi zaidi.

Mfumo huu una manufaa kwa Serikali, watoa huduma za posta, wafanyabiashara, jamii na taasisi zisizo za kiserikali. Unarahisisha kutambua eneo anapoishi mtu au kitu kilipo kwa usahihi. Kwa kazi za posta unarahisisha uchambuzaji, usambazaji na ufikishaji wa barua, nyaraka, vipeto, vifurushi na mizigo kwa ufanisi.

Postikodi zinatumiwa kufanikisha utoaji wa huduma nyingine kwa madhumuni mbalimbali, kama vile huduma za kuokoa, ulinzi na usalama, afya na ukusanyaji wa kodi. Kwa upande wa watoa huduma za posta, mfumo huu unaongeza ufanisi katika usafirishaji na usambazaji wa barua na vifurushi.

TCRA imeandaa na kuchapisha orodha ya postikodi kwa nchi nzima. Orodha hiyo inapatikana kwenye tovuti ya Mamlaka kupitia kiungo: <https://tcra.go.tz/index.php/publication-and-statistics/postcode-list>.



20. Maandalizi kwa teknolojia mpya

Katika kipindi hiki tumeshuhudia mabadiliko makubwa na maendeleo ya TEHAMA. Teknolojia imefungua fursa mpya za mawasiliano na inazidi kuboresha maisha ya watumiaji.

TCRA imejiandaa kwenda sambamba na kasi hii ya maendeleo ya teknolojia. Kwa mfano, dunia inashuhudia kukua kwa mawasiliano baina ya vifaa.

Vifaa vilivyowezeshwa kuwasiliana vinaweza kuwasiliana na mmilki, au baina ya vyenyewe, moja kwa moja bila ushiriki wa moja kwa moja wa binadamu. Kwa mfano, friji lililowezeshwa kuwasiliana kupitia mtandao linaweza kutoa taarifa kwa mmilki, au kuagiza kutoka duka la rejareja pale ambapo vyakula au vinywaji vinapopungua, ili viongezwe.

Mashine ya kisasa ya kufulia inaweza kutuma ujumbe kwa mmilki inapomaliza kufua au kukausha nguo. Teknolojia pia inawezesha mashine kufanya kazi za binadamu wakati wa dharura au kumhudumia mgonjwa mwenye mahitaji maalum.

Wataalamu wameainisha namna ambavyo teknolojia mpya zinaweza kutumika katika ufuatiliaji wa watu waliosafiri kutoka kwenye maeneo yenye maambukizi ya virusi vinavyoleta ugonjwa wa COVID-19 ili kuthibiti kuenea kwake.

Mamlaka ya Mawasiliano Tanzania imeandaa mpango wa namba za mawasiliano zitakazotumiwa na vifaa vinavyoweza kuwasiliana vyenyewe vilivyounganishwa kwenye mtandao wa intaneti.

21. TCRA ilivyojipanga kwa majukumu mapya

Pamoja na kuwa na nyenzo za kufanyia kazi, na raslimali watu wenye weledi, TCRA imeweka malengo ya ubora wa huduma zake; na imeanza utekelezaji wa mfumo wa wa utoaji wa huduma bora kwa kuzingatia viwango vya ubora wa utendaji vya kimataifa. Mamlaka ina hati ya viwango vya utendaji vya kimataifa ya ISO 9001:2015.

Mwaka 2019 TCRA ilizindua Mkataba wa Huduma kwa Mteja wa Mamlaka ya Mawasiliano Tanzania ambao umeweka viwango vya huduma zinazotolewa, muda wa kutoa huduma hizo na utaratibu wa kulalamika dhidi ya huduma hizo.

Kama sehemu ya kutekeleza mkataba huo, TCRA imepanua huduma zake kwa lengo la kuwafikia Watanzania na kufanya kazi za usimamizi karibu zaidi na wananchi. Hivi sasa, Mamlaka ina ofisi Zanzibar na kwenye kanda tano ambazo ni Kanda ya Mashariki (Dar Es Salaam), Kanda ya Kati (Dodoma), Kanda ya Ziwa (Mwanza), Kanda ya Nyanda za Juu Kusini (Mbeya) na Kanda ya Kaskazini (Arusha).

22. Hitimisho

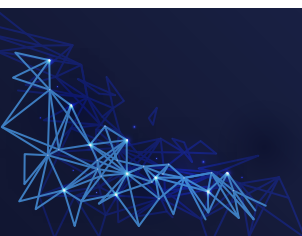
Makala hii imeonyesha mafanikio ya mipango ya Serikali ya Awamu ya Tano iliyolenga kufikia malengo yaliyoainishwa kwenye Ilani ya Uchaguzi ya CCM ya 2015 – 2020 kwa sekta ya mawasiliano. Malengo yote yamefikwa na kupitwa kwa kiasi kikubwa. Utekelezaji wa malengo kwenye Ilani hiyo unawasilishwa kwa muhtasari kwenye jedwali namba 21.



Wajumbe wa Bodi ya Wakurugenzi ya TCRA, Kamati ya Maudhui, mengineji na maafisa wa Mamlaka kwenye picha ya pamoja walipotembelea mradi wa umeme wa bwawa la Mwalimu Nyerere, Rufiji.

Jedwali 21. Utekelezaji wa mipango ya serikali kutokana na malengo kwenye Ilani ya Uchaguzi ya CCM: 2015 – 2020

Malengo:	
<ul style="list-style-type: none"> • Kuimarisha miundombinu ya mawasiliano na kuendeleza upatikanaji wa huduma za mawasiliano ili kuboresha hali za kiuchumi na kijamii za watumiaji. • Kuendelea kuweka mazingira bora ya ushindani kwenye sekta ya mawasiliano ili wananchi wengi waweze kumudu gharama za mawasiliano ya simu. 	
Utekelezaji/mafanikio	<ul style="list-style-type: none"> • Kuuza masafa ya mawasiliano ya kasi katika wigo wa 700 MHz kwa mnada. • Kuweka malengo ya kufikisha mawasiliano ya kasi kwa asilimia 60 nchini ifikapo mwaka 2021 na asilimia 90 ifikapo 2024 wa walionunua masafa hayo. • Kupata nyenzo mpya za kufuatilia upatikanaji na kuenea kwa huduma. • Kuongezeka kwa mapato kutokana na leseni na tozo. • Kuongezeka kwa mchango wa TCRA serikalini. • Kuimarisha mawasiliano kwenye miradi ya kitaifa ya kimkakati na miradi ya viwanda • Kuweka mikakati ya kuboresha huduma za posta ya umma.
<ul style="list-style-type: none"> • Kuongezeka kwa watoa huduma. • Kuanzishwa makundi mapya ya leseni. Kuanzishwa kwa huduma mpya. • Kuongezeka kwa watumiaji wa huduma. • Kushusha gharama za kuunganisha simu kati ya mitandao (gharama za muingiliano). • Kupungua kwa gharama za mawasiliano. • Kuongezeka kwa uwekezaji, ajira na ujasiriamali kwenye sekta ya mawasiliano na huduma za mawasiliano. • Kuwezesha kwa shughuli za kiuchumi ikiwa ni pamoja na kushirikisha watumiaji wengi wa mifumo na huduma za pesa na malipo 	
Lengo: Kulinda watumiaji wa huduma za mawasiliano dhidi ya uhalifu mtandaoni.	
Utekelezaji/mafanikio	<ul style="list-style-type: none"> • Kuanzisha Rajisi Kuu ya Namba Tambulishi. • Kupitia upya na kupitisha kanuni za Sheria ya Mawasiliano ya Kielektroniki na Posta zinazolinda watumiaji. Kusajili laini za zamani na mpya za simu za mkononi kibiometria kwa kutumia kitambulisho cha taifa au namba ya kitambulisho hicho. <ul style="list-style-type: none"> • Kupitisha Sheria ya Makosa Mtandaoni
<ul style="list-style-type: none"> • Kuimarisha kituo cha kitaifa cha mwikio wa kukabili na majanga ya kompyuta TZ-CERT. Kuimarisha vyombo vya kiutawala vya kulinda watumiaji. • Kuendeleza elimu kwa watumiaji. • Kuchapisha na kusambaza Mwongozo wa Watumiaji wa Huduma na Bidhaa za Mawasiliano 	
Lengo: Kuongeza idadi ya watumiaji wa intaneti hadi milioni 20 ifikapo 2020.	
Utekelezaji/mafanikio	<ul style="list-style-type: none"> • Kufuatilia masharti ya leseni ili kuhakikisha upatikanaji wa huduma. • Kuuza masafa katika wigo wa 700MHz na masharti ya waliopewa leseni kufikisha huduma za mawasiliano ya kasi ili kuwezesha kukua kwa matumizi ya intaneti. • Kuendeleza vituo vya usambazaji wa huduma za intaneti.
<ul style="list-style-type: none"> • Kuongezeka watumiaji wa intaneti hadi milioni 25 Desemba 2019. • Kuongezeka watoa huduma zinazowezesha kupatikana kwa intaneti. • Kuongezeka kwa huduma za kiuendeshaji, kibiashara na za kijamii zinazotumia intaneti. • Kuhimiza matumizi ya tekinolojia ya 4G LTE ambayo inafanikisha upatikanaji wa intaneti ya kasi. 	
Lengo: Kufikisha huduma za mawasiliano ya simu za mkononi kwa wananchi wote kupitia Mfuko wa Mawasiliano kwa Wote (UCSAF) katika vijiji vyote.	
Utekelezaji/mafanikio: Mfuko wa UCSAF umetekeleza miradi kwenye vijiji zaidi ya 2,500 kwenye mikoa 27 nchini, ikiwemo Zanzibar na Pemba.	





Katika kufanya kazi zake, TCRA inajitahidi kuendeleza ustawi wa jamii ya Tanzania kwa:-

- Kukuza ushindani unaofaa na ufanisi wa uchumi
- Kuendeleza upatikanaji wa huduma kwa watumiaji wote ikiwa ni pamoja na wenye kipato kidogo waliopo vijijini na wateja walio katika mazingira magumu.
- Kulinda maslahi ya watumiaji.
- Kuendeleza elimu kwa wananchi kuhusu utambuzi na uelewa wa sekta zilizothibitiwa. Hii ni pamoja na: haki na wajibu wa watumiaji wa huduma; utaratibu wa kuwasilisha malalamiko kuhusu huduma, na majukumu, kazi na shughuli za Mamlaka.





MAMALAKA YA MAWASILIANO TANZANIA

ISO 9001:2015 CERTIFIED

Mamlaka ya Mawasiliano Tanzania (TCRA) ni taasisi ya Serikali inayosimamia sekta ya mawasiliano. TCRA ilianzishwa chini ya Sheria ya Mamlaka ya Mawasiliano Tanzania Na. 12 ya 2003. TCRA ina viwango vya ISO 9001:2015.

MAENEO YANAYOSIMAMIWA

Mitandao ya simu na intaneti, masafa ya mawasiliano, huduma za Posta na usafirishaji wa vipeto katika Jamhuri ya Muungano wa Tanzania na huduma za utangazaji (kama vile redio na televisheni) kwa Tanzania Bara tu. Zanzibar ina Tume inayosimamia utangazaji.

KAZI ZA TCRA

- Kutoa leseni, kuongeza muda wa leseni na kufuta leseni.
- Kuweka viwango kwa bidhaa na huduma zinazosimamiwa.
- Kuweka viwango vya kanuni na masharti ya kusambaza bidhaa na huduma zinazosimamiwa.
- Kufuatilia utendaji wa sekta ya mawasiliano kuhusiana na viwango vya uwekezaji; upatikanaji wa huduma, ubora na viwango vya huduma; gharama za huduma;
- Ufanisi wa bidhaa na usambazaji wa huduma.
- Kufanikisha utatuzi wa malalamiko na migogoro baina ya watoa huduma na kati ya mtoa huduma na mtumiaji wa huduma.
- Kufanya kazi na kutekeleza majukumu mengine kwa mujibu wa sheria husika.
- Kusambaza taarifa kuhusu mambo ambayo ni muhimu kwa ajili ya shughuli za Mamlaka.

Mawasiliano Towers, Na. 20 Barabara ya Sam Nujoma
S.L.P. 474 Postikodi 14414 DAR ES SALAAM.

Simu: +255 22 21 99 760 - 9 ; +255 22 24 12 011 - 2 ; +255 784 55 82 70 - 1 • Nukushi: +255 22 24 12 009
Baruapepe: dg@tcra.go.tz • Tovuti: www.tcra.go.tz

OFISI ZA KANDA

<p>Na. 19 Mtaa wa Mbuyukisutu, S.L.P. 3284 71194 Mjini Magharibi, Zanzibar Simu: +255 24 223 5062 Baruapepe: zanzibar@tcra.go.tz</p> <p>OFISI YA ZANZIBAR</p>	<p>Jengo la PSSSF Plaza, Ghorofa ya 6 Barabara ya Old Moshi, S.L.P. 15675, 23194, ARUSHA Simu: +255 27 297 0286 Baruapepe: arusha@tcra.go.tz</p> <p>KANDA YA KASKAZINI</p>	<p>Jengo la NHIF, Ghorofa ya 5 7 barabara ya Karume, S.L.P. 1375, 53194, MBEYA Simu: +255 25 250 5016 Nukushi: +255 25 250 5017 Baruapepe: mbeya@tcra.go.tz</p> <p>KANDA YA NYANDA ZA JUU KUSINI</p>
<p>Jengo la LAPF, Ghorofa ya 4, 2 Mtaa wa LAPF, S.L.P. 2229 41194 DODOMA Simu: +255 26 232 1731 Baruapepe: dodoma@tcra.go.tz</p> <p>KANDA YA KATI</p>	<p>Jengo la NSSF Mafao, Ghorofa ya 4 Wing B, 13 Barabara ya Jomo Kenyatta, S.L.P. 3108, 33194, MWANZA Simu: +255 28 2505082 Baruapepe: mwanza@tcra.go.tz</p> <p>KANDA YA ZIWA</p>	<p>Na. 147 Barabara ya Kajenge, S.L.P. 35615, 14194, DAR ES SALAAM Simu: +255 25 277 5110 Nukushi: +255 22 2775114 Baruapepe: easternzone@tcra.go.tz</p> <p>KANDA YA MASHARIKI</p>