

ANNUAL REPORT 2017-2018



OPENING YOUR WORLD

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<https://ke.linkedin.com/company/communications-authority-of-kenya-ca->



Opening New Worlds

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ACRONYMS AND ABBREVIATIONS

ITU	International Telecommunication Union	ITU
KEBS	Kenya Bureau of Standards	KEBS
KE-CIRT/CC	Kenya National Computer Incident Response Team Coordination Centre	KE-CIRT/CC
KENIC	Kenya Network Information Centre	KENIC
KE5	Kenya Shilling	KE5
KICA	Kenya Information and Communications Act	KICA
LTE	Long Term Evolution	LTE
Mbps	Megabits Per Second	Mbps
MHz	Mega Hertz	MHz
MoICT	Ministry of Information, Communication and Technology	MoICT
NCC	National Cohesion and Integration Commission	NCC
NEMA	National Environmental Management Authority	NEMA
PAYG	Pay-As-You-Go	PAYG
PWDs	Persons with Disabilities	PWDs
SHE	Super High Frequency	SHE
SMS	Short Message Service	SMS
Tbps	Tebabits Per Second	Tbps
TEAMS	The East African Marine System	TEAMS
TKL	Telkom Kenya Limited	TKL
UHF	Ultra-High Frequency	UHF
UPU	Universal Postal Union	UPU
USAC	Universal Service Advisory Council	USAC
USD	United States Dollar	USD
USF	Universal Service Fund	USF
VHF	Very High Frequency	VHF
VoIP	Voice over Internet Protocol	VoIP
VSAT	Very Small Aperture Terminal	VSAT
WEO	World Economic Outlook	WEO
WIMAX	Worldwide Interoperability for Microwave Access	WIMAX
2G	Second Generation	2G
3G	Third Generation	3G
4G	Fourth Generation	4G
AFRALT	African Advanced Level Telecommunications Institute	AFRALT
ASK	Agricultural Society of Kenya	ASK
ATU	African Telecommunications Union	ATU
BSD	Broadcast Signal Distributor	BSD
BTS	Base Transmitter Stations	BTS
CA	Communications Authority of Kenya	CA
cTLD	Country Code Top Level Domain	cTLD
CIRT	Computer Incident Response Team	CIRT
CERT	Computer Emergency Response Team	CERT
COP	Civil Online Protection	COP
CTO	Commonwealth Telecommunications Organization	CTO
DTT	Digital Terrestrial Television	DTT
EAC	East African Community	EAC
EACO	East African Communications Organization	EACO
EASg	East African Sub-Marine Cable System	EASg
E-CSP	Electronic Certification Service Provider	E-CSP
EMKA	Environmental Management and Coordination Act	EMKA
FTA	Free-To-Air	FTA
FWA	Fixed Wireless Access	FWA
Gbps	Giga Bits Per Second	Gbps
GDP	Gross Domestic Product	GDP
GHz	Giga Hertz	GHz
GSM	Global System For Mobile Communication	GSM
HF	High Frequency	HF
ICANN	Internet Corporation for Assigned Names and Numbers	ICANN
ICT	Information and Communications Technology	ICT
IMF	International Monetary Fund	IMF
ISO	International Organization For Standardization	ISO

ACKNOWLEDGEMENTS

The Authority acknowledges and appreciates the hard work that went into developing this Annual Report and wishes to thank the following individuals:

- Dr. James Njeru
- Mrs. Patricia Kemei
- Mr. Bernard Ndetitu
- Mr. Lukas Musembi
- Ms. Rachel Kiondo
- Mr. Nelson Wasilwa
- Ms. Jane Kinyanjui
- Mr. Francis Strati
- Ms. Dolphine Maseee
- Ms. Stella Abongo
- Ms. Winnie Owiti
- Ms. Agetha Ndungu
- Ms. Diana Rono
- Ms. Anastasia Makacha
- Ms. Caroline Riroh
- Mr. Lewis Muriithi

EXECUTIVE SUMMARY

Section 22(1) of the Kenya Information and Communications Act, 1998 (as amended), requires the Authority's Board to prepare a report of its operations within three months of the end of each Financial Year in compliance with this statutory obligation, the Authority prepared this report based on the activities and initiatives for implementation under year five of the Strategic Plan 2013-18.

During the year, there was significant growth in the ICT sector as a result of the Authority's continued provision of an enabling environment for service providers. The sector grew from 9.7 per cent in 2016 to 11.0 percent in 2017. This was witnessed by the uptake of mobile telephone services whose subscriptions increased from 40.3 million to 45.6 million. The broadband services increased from 15.4 million to 20.4 million in comparison to the previous reporting period. Additionally, the number of mobile money subscriptions stood at 297 million with 266,022 active mobile money transfer agents. As a result, the number of Kenyans accessing mobile communication services, mobile money services, e-commerce, high-speed internet/broadband service, and other ICT services has continued to grow.

During the year, the Authority implemented several activities that focused on fostering development in the ICT sector and empowerment and protection of consumers of ICT services with respect to prices charged, quality and diversity of those services. These activities included:

- Issuance of 4G license and assignment of additional frequency in the 800MHz band to an additional MNO and extension of 4G trial licenses in the 700 MHz band.
- Issuance of 260 Telecom licenses and 216 postal and courier licenses.
- Monitoring and review of tariffs & promotions and interconnection agreements
- Improvement of management of cyber space through deployment of enhanced detection system for the National KE-CIRT/CC
- Stakeholder engagements and consultations via County ICT Consumer Fora dubbed 'Kikao Kikuu', Kuza Awards, exhibitions and promotional activities.
- Active participation and representation in regional and international ICT sector policy forums.

In an effort to enhance service delivery, the Authority embarked on the implementation of an Enterprise Resource Planning (ERP) system to automate some of its processes. It also installed video-conference and tele-conference facilities at its headquarters and regional offices to facilitate online meetings.

A detailed explanation of all these accomplishments and more for the FY 2017/18 is highlighted in this Annual Report.

BOARD OF DIRECTORS



MR. NGEINE B. GITUKU
Chairman, CA Board of Directors

Mr. Ngeine B. Gituku, (Born in 1955) is the Chairman of the Communications Authority of Kenya (CA) Board of Directors. He served as CA Chairman from 2014, to 2017, prior to which he was the Chairman of the defunct Communications Commission of Kenya (now CA) for a period of one and a half years.

He has served as a Board member at Kenya Broadcasting Corporation (KBC) and Kenya Pipeline Company (KPC).

He holds a BSc. Degree in Mathematics and Meteorology from the University of Nairobi and Diploma in Marketing. Mr. Gituku was re-appointed to the position on 18th April 2018 for a three-year term.

BOARD OF DIRECTORS



DR. KARANJA KIBICHO, CBS
Principal Secretary, State Department of Interior, Ministry of Interior and Coordination of National Government

Dr. Karanja Kibicho, CBS (Born in 1967) is the Principal Secretary, State Department of Interior, Ministry of Interior and Coordination of National Government.

He holds a doctorate in Mechanical Engineering from the University of Cape Town, South Africa, a Master of Science (MSc) degree in Mechanical Engineering and a Bachelor of Science (BSc) in Mechanical Engineering.

Dr. Kibicho has taught in various institutions of higher learning, including Jomo Kenyatta University of Agriculture and Technology (JKUAT) where he served as the chairman and senior lecturer in the department of Mechanical Engineering. He has served as an external examiner at the University of Dar es Salaam, visiting lecturer at the Central University of Technology, Free State, South Africa and a part-time lecturer at the University of Cape Town.



MR. SAMMY IREMERE, CBS
Immediate Former Principal Secretary, Telecommunications

Mr. Sammy Iremere, CBS (Born in 1960) is the immediate former Principal Secretary in the ICT Ministry in charge of Broadcasting and Telecommunications.

Prior to the appointment in December 2015, Mr. Iremere was Senior Partner at Business Persons Mentor Limited, a consultancy firm dealing with Business Development, Strategy formulation, Partnerships growth, training and up-skilling.

A career banker, he has a wealth of experience spanning over 20 years in running Retail, Corporate, Enterprise Banking as well as Bank operations. He was the Country Managing Director of KCB South Sudan limited a subsidiary of KCB Group. He has also held senior positions in Imperial, ECK, Barclays and Credit banks. Mr. Iremere holds a BA Economics (Hons) and MBA (Marketing Option) from University of Poona, India.

BOARD OF DIRECTORS



DR. KAMAU THUGGE
Principal Secretary, National Treasury

Dr. Kamau Thugge, EBS, MBS is the Principal Secretary at the National Treasury. He was appointed to this position on 7th June 2013. He serves in the Communications Authority of Kenya Board in his capacity as Principal Secretary at the National Treasury.

Dr. Thugge holds a Doctorate of Philosophy (PhD) in Economics from Johns Hopkins University, Master in Economics from Johns Hopkins University, USA and Bachelors of Arts (Economics) from Colorado College, USA.



MR. DAVID KITUR
Executive Director, Microfin Africa

Mr. David Kitur (Born in 1963) is a businessman and an engineer with interests in the technology industry. He is the Executive Director of Microfin Africa.

He has vast experience in the ICT industry having worked as an engineer at the then Voice of Kenya (now KBC), Kenya Railways, Kenya Power, Amaro and Ummame Services. He holds a Master of Science (MSc) degree in Software Systems Technology from Sheffield University, UK and a BSc. in Electrical and Electronics Engineering from the University of Nairobi.

Mr. Kitur has attended short courses in Public Procurement and Corporate Governance among others. He was appointed to the CA Board on 29th April 2016 for a three-year term.

BOARD OF DIRECTORS



MR. PAUL KUKUHO, MBS
ICT Consultant

Mr. Paul Kukuho, MBS (Born in 1967) is a consultant with vast experience in the local and regional ICT sector.

Mr. Kukuho holds Global MBA from United States International University (USIU-Africa) and a Bachelor of Arts in Economics and Sociology from the University of Nairobi. A former chairman of the Marketing Society of Kenya, Mr. Kukuho is also a member of the International Association of Business Analysts and has previously served as chairman of the National ICT Master Plan committee, the Task Force on Creative Industries and a board member of Multimedia University.

He was appointed to the Communications Authority of Kenya (CA)'s board on 29th April 2016 for a period of three years.



MR. CHRISTOPHER GUYO
Human Resource Professional

Mr. Christopher Guyo (Born in 1967) is a seasoned Human Resource professional with over 22 years' experience. He has vast experience in Oil & Gas Industry (Caltex/Chevron Oil Kenya Ltd and Kenya Petroleum Refineries) and Banking sector (Barclays Bank, Dab Bank Kenya and Postbank) having served in various senior management capacities. He is currently the Senior Technical Advisor to the CS – Labour and Social Protection.

He holds an MBA in Human Resource Management from the University of Nairobi and is currently pursuing his Doctor in Business Administration at the Catholic University of Eastern Africa.

He also holds a Bachelor of Education (Arts) degree from Moi University Higher National Diploma in HRM and Practitioners Diploma in Executive Coaching from Academy of Executive Coaching and an Advanced Certificate in Strategic HR Management from Cornell University, USA. He was appointed to the CA Board on 29th April 2016 for a period of three years.

BOARD OF DIRECTORS



MR. MUGAMBI NANDI
Advocate, High Court of Kenya

Mr. Mugambi Nandi (Born in 1977) is an advocate of the High Court of Kenya with many years' experience in corporate and commercial law. He is the Senior Partner at KN Law LLP Advocates & Notaries Public, where he specializes in mergers & acquisitions, private equity, capital market transactions and energy law. He was cited as a Recognized Practitioner in Corporate and Commercial Law rankings for Kenya by Chambers Global in 2017 and 2018.

He holds a Bachelor of Law degree and a Master of Business Administration degree from the University of Nairobi, and a Diploma in Financial Management from the ACCA. He currently sits on a number of boards, including Mayfair Bank Limited. He has previously served on the Boards of the Privatization Commission, Sereni Asset Managers Limited and Council for Kenya University. He was appointed to the Board of Communications Authority of Kenya in April 2016 for a period of three years.



MS. PATRICIA KIMANI
Transformational Lead, Commercial Bank of Africa

Ms. Patricia Kimani (Born in 1973) has over 20 years' experience in the banking, telecommunication and water sub sectors. She has held roles in business transformation project, sales, service and operational management.

She is currently the Transformation Lead at the Commercial Bank of Africa where she is charged with the responsibility of driving and implementing a legacy-setting strategic transformation project for the CBA Group.

She holds a Masters in Business Administration (Strategic Management) from Daystar University, a Masters Certificate in Project Management from George Washington University as well as Senior Management Leadership training from Statehouse University. She was appointed to the CA Board on 29th April 2016 for a period of three years.



PROF. LEVI OBONYO
Dean, School of Communication, Language and Performing Arts, Daystar University

Prof. Levi Obonyo (Born in 1966) is an Associate Professor of Communication and Media Studies, and also the Dean of the School of Communication, Language and Performing Arts at Daystar University.

Prof. Obonyo holds a PhD in Mass Media and Communications from Temple University, Philadelphia, USA. He also holds a Postgraduate Diploma in Tertiary Education from Potchefstroom University for Christian Higher Education, South Africa.

He is a former Chairman of the Media Council of Kenya. He currently serves as a member of the Advisory Council to Kenya National Commission to UNESCO (KNATCOM) specializing on communications.

He joined the CA Board in May 2014 and was appointed in 29th April 2016 for a further term of three years.



MS. KENTICE TIKOLO, OGW
Managing Director of Impact Africa Limited

Ms. Kentice Tikolo, OGW (Born in 1964) is a communications expert with over 15 years' experience in Strategic Corporate Communications and Public Relations.

She is the founder and Managing Director of Impact Africa Limited, a strategic Public Relations & Communications firm based in Nairobi, Kenya. Prior to going to private business, Ms. Tikolo worked at the Kenya Wildlife Service as the Head of Corporate Communications.

Ms. Tikolo holds a Master of Science degree in Public Relations from the University of Stirling in Scotland, and a first degree in Education from Kenya University.

She was appointed to the Communications Authority of Kenya's Board on 29th April 2016 for a period of three years.

ALTERNATE BOARD OF DIRECTORS



MR. MWENDA NJIKA
Communications Director and Advisor to the
Minister of Information, Public Relations and
Governance of National Government.

Mr. Mwenda Njika (Born in 1963) is the Communications Director and Advisor to the Cabinet Secretary in the Ministry of Interior and Co-ordination of National Government.

Prior to joining the Government, Mwenda worked at Royal Media Services as a Senior Editor and Political Analyst. He has also worked at the Standard Media Group (Standard on Sunday) as Managing Editor. Prior to that, he had worked as Associate Investigations Editor with the Nation Media Group.

He is currently pursuing an MA in Intelligence and Security Studies. He was appointed to the Communications Authority of Kenya's Board on 19th August 2016 as an Alternate Director to the Principal Secretary, State Department for Interior. He held this position up to February 2018.



MS. JUDY MURIYINI MUMO
Alternate to the Principal Secretary, State
Department of Information, Public Relations
and Telecommunications, Ministry of Information,
Communications and Technology

Ms. Judy Muriyini Mumo (Born in 1971) is the Acting Secretary for Information and the alternate to the Principal Secretary, State Department of Broadcasting and Telecommunications, Ministry of Information, Communications and Technology.

She has over 15 years' experience in communication, specifically in Government communication, print media, broadcast media, digital media and development communication. Until her appointment to the current position, Ms. Muriyini was the Director of Research in the Presidential Strategic Communications Unit (PSCU) based at State House, Nairobi.

Ms. Muriyini holds a Bachelor's Degree from Daystar University and is currently pursuing her Masters in Diplomacy and International Studies at the University of Nairobi.

ALTERNATE BOARD OF DIRECTORS



MR. PETER WANJOHI
Alternate Director to the Principal
Secretary, State Department of Interior.

Mr. Peter Wanjohi (Born in 1965) is the alternate Director to the Principal Secretary, State Department of Interior. He holds a Bachelors Degree in Ethnic-Musicology from the University of South Africa (UNISA) and a Bachelor of Business Administration degree from New Port University. He has extensive experience in planning and coordinating international, regional and local conferences as the current Director of State functions.

He has also been a member of several committees such as Kenya Vision 2030, National Communication Dissemination Strategy and the task force on restructuring of Human Resource requirement of the permanent Presidential Music Commission, 2006.

Mr. Wanjohi was appointed on 7th February 2018.



MR. FESTUS KINCORI
Alternate to the Principal Secretary,
National Treasury

Mr. Festus Kincori (Born in 1963) is the Alternate to the Principal Secretary/ National Treasury. He holds a Bachelor of Commerce degree from the University of Nairobi and is finalizing an MBA from JKUAT.

He also holds a post graduate certificate in Investment Appraisal and Management from Harvard University among others. He has also undergone extensive training in general management, strategic leadership and financial management.

He has extensive experience in public policy, particularly with regard to public investments, gained from local and international institutions, having worked on secondment by the Cok to the World Bank.

Mr. Kincori was appointed on 10th May 2017.

MEMBERS OF UNIVERSAL SERVICE ADVISORY COUNCIL (USAC)



DR. CATHERINE NJAHU, EBS
Chairwoman, USAC

Dr. Catherine Njahu, EBS (Born in 1961) is the Chairperson of the Universal Service Advisory Council (USAC).

She holds a PhD in Business Administration from the University of Nairobi and Professional certificate in Technology and Development from IPS UK. She was a Business Research Fellow at Wharton Business School, University of Pennsylvania, USA. Dr. Njahu is a member of several Boards.

She is the former chairperson of the Kenya ICT Board and was awarded the Kenyan Order of the Burning Spear (EBS) by the President of the Republic of Kenya in 2011 for devoted service.

She was appointed to USAC in May 2014 for a three-year term and re-appointed with effect from 8th May, 2017.



MS. RHODA MASAVIRU

Ms. Rhoda Masaviru (Born in 1956) has vast working experience spanning over 34 years, most of which was in the postal sector, both in Kenya and at the African continental level where she held senior positions, among them Secretary General and Assistant Secretary General of the Pan-African Postal Union (PAPU). She also served as a Manager in the defunct Kenya Posts & Telecommunications Corporation and its Successor, Postal Corporation of Kenya.

Ms. Masaviru holds a Master of Arts degree in Population Studies, University of Nairobi, and a Bachelor of Education degree in Economics and Geography, University of Nairobi.

She was appointed as a member of USAC in May 2014 for a period of 3 years and reappointed with effect from 9th May 2017.



MS. JOSEPHINE TOWETT

Ms. Josephine Towett (Born in 1967) is an ICT Business expert with experience spanning 20 years in various functional areas that include Sales and Marketing, Market research, Customer service and capacity building. She holds a Masters degree in Business Administration and a Bachelor's degree in Political Science and Linguistics from the University of Nairobi.

Josephine is also well versed in ICT capacity building, Research and Consultancy having joined the African Advanced Level Telecommunication Institute (AATLTI), a regional capacity building intergovernmental organisation.

She was appointed as a member of USAC in May 2014 for a period of 3 years and reappointed with effect from 9th May 2017.



AMB. WELLINGTON PAKIA GODO

Amb. Wellington Pakia Godo (Born in 1953) has served in the Kenya government for over three decades. He has risen through the ranks and served as a Permanent Secretary in various areas including the Office of the Vice President and the Ministry of Regional Development.

He also served as the Permanent Representative in the Kenya Mission to the United Nations Environmental Programme (UNEP).

Amb. Godo holds a Master of Social Science from the University of Birmingham, United Kingdom and a Bachelor of Arts degree from the University of Nairobi where he majored in Government and Sociology.

He was appointed a member of USAC in May 2014 for a period of 3 years and reappointed with effect from 9th May.



MR. NIXON MAGERIA GICHU

Mr. Nixon Mageria Gichu (Born in 1976) is a Governance and ICT for Development (ICT4D) expert with over 12 years ICT experience and 4 years experience consulting for large donor, private and public sector organisations. He is the immediate former ICT and Media Advisor to the Cabinet Secretary, Ministry of Agriculture. He worked at the Office of the Ombudsman and East African Business Council in Australia.

Mr. Gichu holds a Masters in Communication Management from Kigali Institute of Science and Technology, Rwanda and BSc. in Information Technology from JKUAT.

He was appointed a member of USAC in May 2014 for a period of 3 years and reappointed with effect from 9th May 2017.



DR. KENNEDY J. OKONG'O

Dr. Kennedy J. Okong'o (Born in 1982) is a certified Project Manager and a holder of PhD in Information Systems from the University of Cape Town, South Africa. He has a practical policy and a research experience in the ICT for Development (ICT4D) space. In both private and public sectors, he has consulted in Africa and beyond as a business analyst, policy researcher and a project manager. He has broad corporate experience and is a Professional Member of Computer Society of Kenya (CSK).

He was appointed a member of USAC in May 2014 for a period of three years and reappointed with effect from 10th August 2017.

MEMBERS OF UNIVERSAL SERVICE ADVISORY COUNCIL (USAC)



MR. LONGOLE
WANG'GUS JAMES

Mr. Longole Wang'gus James, (Born in 1975) is a participation specialist with over 10 years' experience working with international NGOs, quasi-government and Government institutions. His sectoral expertise includes rural development, conflict transformation and humanitarian assistance with a geographical focus on the Great Horn of Africa.



MR. SAMUEL MUTUNGI

Mr. Samuel Mutungi, (Born in 1955) has over 30 years' experience in ICT and corporate business leadership. He has served in various key executive management positions at Co-Operative Bank of Kenya including Director Operators, Director Retail Banking, Director Corporate Banking and Chief Manager ICT.



MR. MICHAEL M. ITOE

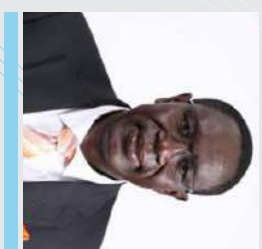
Mr. Michael M. Itoe (Born in 1954) is a Fellow of the Institute of Certified Public Accountant (ICPA) of Kenya and a Certified Public Secretary (CPS) with over 30 years of experience. He has served as the Chairman of the Institute of Certified Public Accountants of Kenya from 2009 to 2011. He is also a Member of the Institute of Internal Auditors (IIA), the Institute of Directors, Kenya, and an accredited Governance Auditor.

He holds a M.Sc. degree in Business Systems Analysis & Design from City University, London and a Bachelor of Education degree in Mathematics and Business Studies from the University of Nairobi. He also holds a Diploma in Electronic Data Processing from Dawson College, Montreal Canada.

He was appointed to the Universal Service Advisory Council in May 2014, for a three-year term and re-appointed with effect from 10th August 2017.

He was appointed a member of USAC in May 2014, for a period of three years and re-appointed with effect from 10th August 2017.

MANAGEMENT TEAM



MR. FRANCIS W. WANGUSI, MBIS
DIRECTOR GENERAL, COMMUNICATIONS AUTHORITY OF KENYA

Mr. Francis W. Wangusi, MBIS, (Born in 1958) is the Director General of the Communications Authority of Kenya (CA). He has been in the position since 2012 and currently serving his second term. Mr. Wangusi has over 33 years' experience in the ICT sector. He has presided over landmark projects that have revolutionized the sector, the most recent being the successful transition to digital broadcasting in Kenya. He has previously served as Director in the departments of Broadcasting and Licensing Compliance & Standards

Mr. Wangusi is currently pursuing a PhD in Management. He holds a Masters Degree in Space Sciences (Satellite Communications), BSc. Degree (Telecommunications Engineering), Chartered Engineer-UK Certificate and Global Executive Masters Degree in Business Administration (CEIMBA).



MR. JUMA KANDIE
DIRECTOR, HUMAN CAPITAL & ADMINISTRATION

Mr. Juma Kandie
B.Com.
PCCert Strategy



MR. JOHN OMO
DIRECTOR, LEGAL SERVICES

Mr. John Omo
LL.M.
LL.B.
Diploma Law



MR. CHRISTOPHER KEMBI
DIRECTOR, LICENSING, COMPLIANCE AND STANDARDS

Mr. Christopher Kembi
M.Sc. Operational Telecommunications
BSc. Physics



MR. TOM OKWERO
DIRECTOR, FREQUENCY SPECTRUM MANAGEMENT

Mr. Tom Okwero
MBA
BSc. Electrical Engineering

MANAGEMENT TEAM



MR. MATANO NDARO
DIRECTOR, COMPETITION, TARIFFS AND MARKET ANALYSIS
MBA (current pursuit)
BA Economics
PCDip Regulation of Telecommunications



MR. MICHAEL KYUNDU
DIRECTOR, INFORMATION TECHNOLOGY AND DIGITAL INNOVATION MANAGEMENT
MSc. Computer Science
BSc. Computer Science



ENG. LEOK BORUTTI
DIRECTOR, MULTIMEDIA SERVICES
MPhil Information Engineering
Executive MBA
Registered Professional Engineer - ERI
BSc. Electrical & Electronics Engineering



CMA JOSEPH KIMANI
DIRECTOR, FINANCE & ACCOUNTS
MBA Finance
BEd. Economics & Business Studies
CPA (K)



MR. CHRISTOPHER WANJAU
AG. DIRECTOR, CONSUMER AND PUBLIC AFFAIRS
MA International Studies
PCDip Mass Communications
PCDip Public Relations
BEd.



CMA ROSALIND MURIHI
DIRECTOR, RISK MANAGEMENT AND INTERNAL AUDIT
MBA
B.Com.
CPA (K)



MR. VINCENT NGUNJIRI
ASSISTANT DIRECTOR, CYBER SECURITY AND E-CRIME BCE
Global Executive MBA
BSc. Computer Science



MRS. JANE ROTICH
AC. ASSISTANT DIRECTOR, PROCUREMENT
MBA Strategic Procurement
BA
PCDip Purchasing and Supplies



CHAIRMAN'S STATEMENT

On behalf of the Board of Directors, I am pleased to present this Annual Report for the Financial Year 2017/2018, which highlights the Authority's achievements and strides taken towards the fulfilment of its mission to facilitate the transformation of lives through progressive regulation of the ICT sector.

These achievements are based on activities and initiatives for implementation under year five of the 4th Strategic Plan 2013-18, that had four pillars: Enabling Environment; Market Development; Infrastructure and Service Development; and Institutional Capacity. The 4th Strategic Plan, which came to a conclusion on 30th June 2018, has been critical in steering the Authority towards the fulfilment of its mandate and the country's Vision 2030. I am pleased to report that its implementation contributed immensely towards the country's GDP with the ICT sector recording a growth of 11.0 percent in 2017 compared to 9.7 per cent recorded in 2016. This has commendably propelled the country to be recognised as a budding ICT hub in the region. The Authority has since developed a Strategic Plan for the period 2018-2023 that will provide the basis for planning and allocation of resources to achieve our mandate going forward.

As outlined in this report, the Authority continued to work harmoniously with stakeholders and nurtured collaborative frameworks and strategic partnerships, to develop an enabling regulatory environment that meets the needs of the ICT industry. Notably, during this period, the Authority played a critical role in the development of the Computer Misuse and Cyber Crimes Bill that was enacted to law as the Computer Misuse and Cyber Crimes Act, No.5 of 2018 thus institutionalizing the management of cyber security. During the year, the Authority enhanced its cyber security management capabilities, thus reducing the prevalence of cybercrime in the country.

The Authority has an obligation to ensure that people in all parts of the country get the best possible mobile telephone services. In pursuit of this obligation, the Authority, through the Universal Service Fund, provided core infrastructure for basic voice mobile services in 30 sub-locations considered not to be economically viable by Mobile Network Operators.

We have a sharp focus on improving broadband, phone and mobile services for consumers as the country embraces modern technologies such as the 4G. During the year, the Authority issued an additional 4G frequency license in the 800MHz band and extended the 4G trial licenses in the 700 MHz and 800 MHz bands. This led to increased deployment of 4G base stations thus impacting positively on the quality of communication services offered in the country.

In an effort to bring services closer to the people and enhance enforcement activities, the Authority established two additional regional offices in Nyanza and Central Regions bringing the total number of regional offices to four.

In conclusion, I would like to express the Board's sincere gratitude to the entire Government of Kenya, the Ministry of ICT, industry operators, industry stakeholders and the entire public for the trust shown to us since inception and the invaluable support to the Authority as it strives to ensure a digitally transformed nation towards vision 2033 and beyond. I further wish to acknowledge the dedicated service and commitment of the Board, Management and the Staff of the Authority in the attainment of these achievements.

Ngere B. Gituku
Chairman of the Board

MESSAGE FROM THE DIRECTOR GENERAL

Kenya's ICT sector continued to register improved performance, which has contributed significantly to the country's GDP growth. This accelerated growth has to a large extent been attributed to the flourishing digital economy, through mobile communication services, mobile money services, e-commerce, and the continued uptake of high-speed internet services. The number of mobile subscribers stood at 45.6 million, up from 40.3 million recorded in the previous year. In the mobile financial services market, the number of active mobile money transfer agents increased to 266,022, facilitating transactions worth KES. 72 trillion in value.

Frequency spectrum remains a critical enabler of our country's digital communications development. During the year under review, the Authority issued an additional frequency license in the 800MHz band. In addition, the Authority extended the 4G trial licenses in the 700 MHz and 800 MHz bands. This allocation of additional spectrum resources led to increased deployment of 4G base stations, and hence impacting positively on the quality of communication services offered in the country.

In order to mitigate the negative effects of cyber crime activities in Kenya, the Authority continued to discharge its responsibilities as the Country's trusted point of contact for coordinating responses to cyber attacks and remediation of cyber security.

The Authority embarked on the implementation of the Voice Infrastructure and Services and Education Broadband Connectivity projects under the Universal Service Fund (USF). These projects were aimed at extending services to the un-served and under-served areas of the Country.

In order to enhance capacity, modernize systems and improve internal processes, the Authority began implementation of the first project of the Business Process Re-engineering and Automation (BPRA) programme. This project comprises of implementation of an Enterprise Resource Planning (ERP) System to automate human capital and administration, procurement and finance and accounts functions respectively.

In furtherance of its consumer protection mandate, the Authority continued to educate ICT consumers. This was achieved through County ICT Consumer Forums, dubbed Kilao Kikuu, which provided a platform for consumers to directly interact with the Authority and service providers.

The aforementioned achievements would not have been realized without the support of the Authority's dedicated staff. I also wish to express my sincere thanks to the Authority's Board of Directors and the Ministry of Information, Communications and Technology for their continued support.

Lastly, as we embark on the implementation of the Strategic Plan 2018-2023, I wish to call on the industry to join us in serving our citizens, while ensuring that Kenya continues to remain at the helm of ICT innovation in Africa.

Francis W. Wangusi, MBS
Director-General



PREAMBLE

ESTABLISHMENT AND MANDATE OF THE AUTHORITY

The Authority, established in 1999 by the Kenya Information and Communications Act, 1998, is the regulatory body for the Information and Communications Technology (ICT) sector in the country. The Authority is entrusted with the responsibility of facilitating the development of the telecommunications, radio communications, postal and courier, broadcasting and e-commerce sub-sectors in Kenya through adoption of best and most appropriate technologies.

CORPORATE GOVERNANCE

As a State Corporation, the Authority is expected to ensure compliance with the principles of good governance that are entrenched in Article 10 of the Constitution, the State Corporations Act, 2016 and the Code of Governance for State Corporations (Mwongozo). The Principles of good governance seek to ensure effectiveness, transparency and disclosure, accountability, risk management, internal controls, ethical leadership and good corporate citizenship.

COMPOSITION OF THE BOARD OF DIRECTORS

The management of the Authority is bestowed on the Board of Directors (the Board), which consists of the following members:

- A Chairman who is appointed by the President;
- The Principal Secretary responsible for matters relating to broadcast, electronic, print and all other types of media;
- The Principal Secretary responsible for matters relating to finance;
- The Principal Secretary responsible for matters relating to internal security; and
- Seven persons appointed by the Cabinet Secretary, Ministry of ICT.

The Director-General is the Chief Executive Officer of the Authority, an ex-officio member of the Board and the Secretary to the Board. He is responsible for the day-to-day affairs of the Authority, on behalf of the Board.

BOARD MEETINGS

The State Corporations Act, Section 8 (1) (a) provides that Boards of State Corporations should meet at least four times in every financial year. The Board held fifteen (15) Board meetings, which included ten (10) Special and five (5) Full Board meetings.

BOARD COMMITTEES

The Board reserves the right to delegate the exercise of any of its functions or duties to constituted Committees, as envisioned under Section 9 of the State Corporations Act. The Board develops Terms of Reference that provide an operational framework for the said committees.

In line with this requirement, the Board has established six committees namely:

1. Finance Committee

This committee, formerly known as the "Finance and Risk Management committee", provides oversight on matters pertaining to finance, performance and strategy.

The members of the Finance and Risk Management committee were: Mr. Mugambi Nandi, (Chairman), Ms. Patricia Kimani, Mr. David Kitur, Mr. Mwenda Njoka, Mr. Festus Kingori and Ms. Judy Muninyi Wumro.

The membership was re-constituted on 26th April 2018 and the members were: Prof. Levi Obonyo (Chairman), Ms. Patricia Kimani, Mr. Paul Kukuho, Mr. Festus Kingori, Mr. Peter Wanjohi and Ms. Judy Muninyi Wumro. The committee held six meetings.

2. Technical Matters Committee

This committee handles regulatory issues including: licensing and compliance, Spectrum management, market development and competition, cyber security, Consumer Protection, and other regulatory interventions.

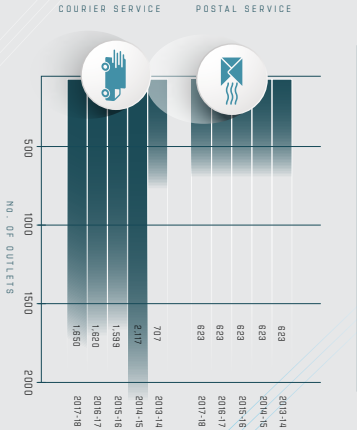
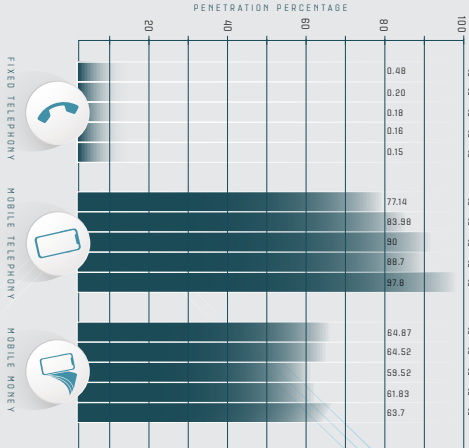
The members of this committee were: Mr. Paul Kukuho (Chairman), Ms. Kerence Thilo, Mr. David Kitur, Mr. Mwenda Njoka and Ms. Judy Muninyi Wumro. During the year, Mr. Mwenda Njoka left the Board and was replaced by Mr. Peter Wanjohi. The committee held seven meetings.

3. Staff & Administration Committee

This committee is responsible for human resource and administrative matters. The members of this committee were: Mr. Christopher Hula Guyo (Chairman), Prof. Levi Obonyo, Mr. Paul Kukuho, Ms. Judy Muninyi and Mr. Mwenda Njoka

The committee was re-constituted on 26th April 2018 and the members were: Mr. Christopher Hula Guyo (Chairman), Mr. Mugambi Nandi, Ms. Kerence Thilo, Ms. Judy Muninyi, Mr. Festus Kingori and Mr. Peter Wanjohi. This committee held three meetings.

SECTOR STATISTICS AT A GLANCE



UNIVERSAL ACCESS AND SERVICE

The Authority is mandated to facilitate universal access to ICT services. This is in recognition of the fact that there are certain areas in the country still underserved and unserved. In fulfillment of the above, the Universal Service Fund (USF) was established with the objective of supporting wide spread access to ICTs including related capacity building and technological innovations. The Authority hinged USF activities in Pillar 3 on Infrastructure and Service Development of its Strategic Plan (2013 – 18) to realize its vision to facilitate access and use of information and communication services by all in Kenya by 2018.

During the year, the Authority embarked on the implementation of two inaugural projects under the Universal Service Fund (USF). These were: Voice Infrastructure and Services; and Education Broadband Connectivity.

Voice Infrastructure and Services Project

The Authority contacted two service providers to roll out voice infrastructure in 78 sub-locations. During the year under review, voice infrastructure sites in 30 sub-locations were completed and are on air. This has improved communication services in those areas that were previously under-served and un-served.

Education Broadband Connectivity Project

The Authority continued to implement the education broadband connectivity project aimed at enhancing ICT connectivity in public secondary schools. The education broadband connectivity project is expected to deliver a minimum of 5 Mbps download and 1Mbps upload speeds. Three service providers were contracted to implement the project. Out of the identified 896 schools, 882 schools have been connected to wireless broadband.

RESEARCH AND DEVELOPMENT

Research and Development (R&D) is critical to the Authority's success, sustainability and its overall organizational health. The dynamism of the ICT industry and the increased uptake of technology makes innovation a critical ingredient for effective regulation. In recognition of this, the Authority established an Innovation, Research & Development (IRD) Division to adequately address these emergent as well as future consumer and regulatory issues in the sector.

CAPACITY BUILDING

In an effort to enhance the capacity of the Board and USAC to appreciate the dynamics of the industry, members attended the Telecommunication Regulatory Master Class programme. In addition, the Board attended a workshop on Globalizing Corporate Governance

COMPLIANCE WITH CODE OF GOVERNANCE FOR STATE CORPORATIONS (MwONGOZO)

The Authority continues to streamline and ensure implementation and compliance with the provisions of Mwongozo Code of Conduct in its organizational and operational structure through administrative and legislative actions. In this regard, the Authority has proposed amendments of provisions of RICA to align it with Mwongozo Code of Conduct.

RISK MANAGEMENT AND INTERNAL CONTROLS

Risk Management

The Authority has continued to implement the Institutional Risk Management Policy Framework (IRMPF) in line with the Treasury Circular 3/2009 and Mwongozo Code of Conduct. The Board oversees risk management within the Authority and ensures that adequate, effective and appropriate risk management strategies and policies are in place. The Audit and Risk Committee assessed quarterly reports on the status of risk exposures. These quarterly reports provided assurance that risks are identified, mitigated and managed to acceptable levels. In addition, staff were trained on Risk Management in an effort to ensure integration of risk management processes within the Authority.

Internal Controls

The Authority has put in place a system of internal control that is geared towards ensuring that its activities conform to its mandate. The Board has delegated the responsibility for the establishment of a framework of internal control and ethical standards to the Management.

Policies and procedures have been put in place by Management which are designed to safeguard the assets of the authority, and to ensure the integrity of financial and non-financial reporting.

During the year, the Authority continued to monitor the internal control system and review of operations by undertaking internal audits with the objective of assessing the effectiveness of these controls.

4. Broadcasting Standards Committee

This committee sets media standards, regulates and monitors compliance with those standards.

The members of this committee were: Prof. Levi Obonyo (Chairman), Ms. Kenice Tikolo, Mr. Christopher Huka Guyo, Mr. Mwenda Nyoka and Ms. Judy Muriyinyi Murno. The committee was re-constituted on 26th April 2018 and the members are: Mr. David Kiur (Chairman), Mr. Christopher Huka Guyo, Prof. Levi Obonyo, Mr. Festus Kingori and Ms. Judy Muriyinyi Murno. The committee held one meeting.

5. Audit and Risk Committee

This committee, previously known as Audit committee, provides oversight over risk management activities, internal and external audits, and integrity of financial statements. The committee also ensures an effective system of internal control is established and maintained.

The members of the audit committee were: Ms. Patricia Kimana (Chairperson), Mr. Mugambi Nandi and Mr. Festus Kingori. The membership of the committee was reconstituted on 26th April 2018 and the members are: Ms. Kenice Tikolo (Chairperson), Mr. Mugambi Nandi and Mr. Festus Kingori. The committee held two meetings.

6. Ad-Hoc Committee

During the year, the Board set up an ad-hoc committee tasked with the responsibility of reviewing a matter that was filed in the Employment and Labour Relations Court.

The members of this committee were: Mr. Mugambi Nandi (Chairman), Prof. Levi Obonyo and Mr. Christopher Huka. The committee held one meeting.

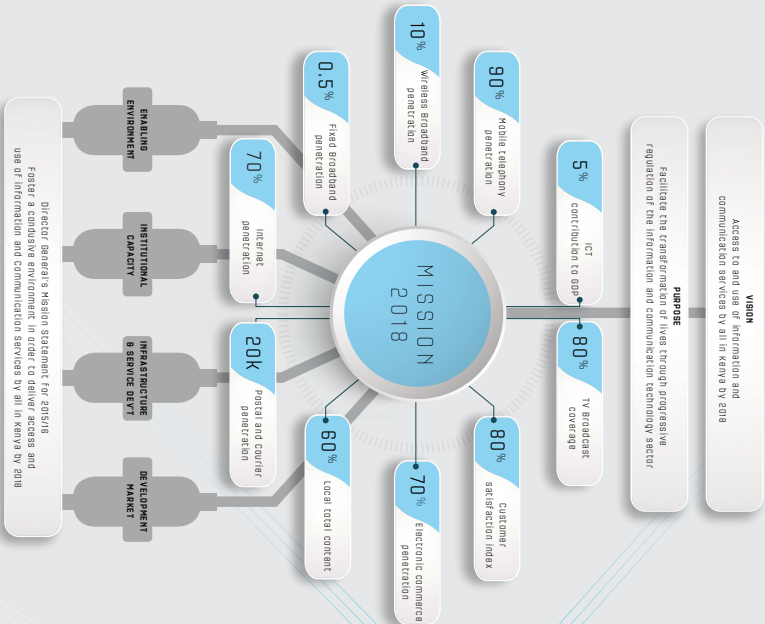
UNIVERSAL SERVICE ADVISORY COUNCIL (USAC)

Section 84J of the Kenya Communications (Amendment) Act, 2009, and the Kenya Information and Communications (Universal Access and Service) Regulations, 2010 provided for the establishment of a Universal Service Fund (USF) to be managed and administered by the Authority. Section 102A of the Act established USAC to provide strategic policy guidance for the administration of the Fund on behalf of the Board of the Authority. The fund was created to support widespread access, capacity building and promotion of innovation in information and communications technology services.

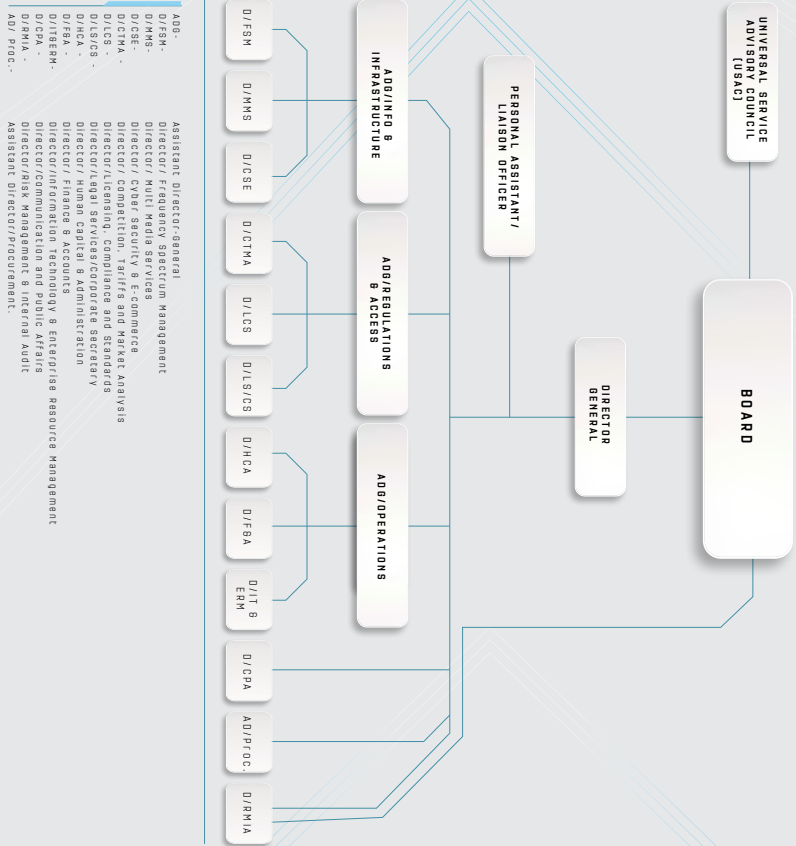
USAC consists of a chairperson and eight members appointed by the Cabinet Secretary, MoICT pursuant to Section 102K of the Act. During the period under review, the Council held four (4) meetings.

STRATEGIC PLAN (2013-18)

The plan articulated the Authority's strategic roadmap for the period 2013-18. The implementation of the set strategies stimulated the development of the ICT sector and spurred uptake of communication services in the country.



ORGANISATIONAL STRUCTURE



MACROECONOMIC ENVIRONMENT

1.1 Global Economy

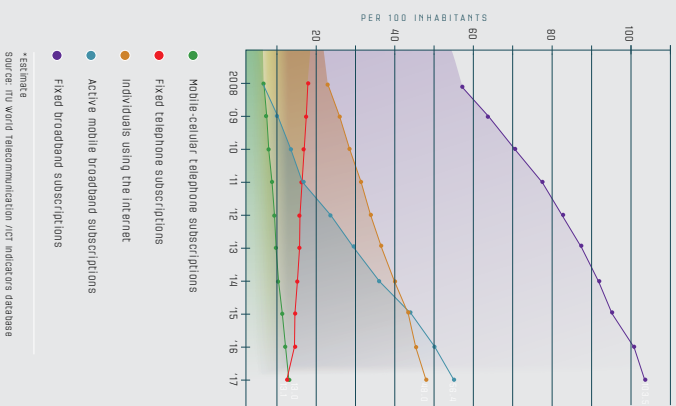
The global economy picked up in 2017 after a long period of modest growth, following the global financial crisis of 2008. World economic growth is estimated to have expanded by 3.7 per cent in 2017, in comparison to 3.2 per cent in 2016, according to the World Economic Outlook (WEO) report, 2018.¹ by the International Monetary Fund (IMF). The improvement in global economic growth was driven by investment recovery in advanced economies, consistent growth expansion in emerging Asia, upswing in emerging Europe, and an end to the investment decline in some commodity-exporting emerging markets and developing economies. In 2017, while the Gross Domestic Product of advanced economies expanded by 2.4 per cent, projections of growth in the medium-term remained subdued. Emerging markets and developing economies grew by 4.7 per cent, which was slightly higher than 4.4 per cent growth recorded in 2016, as a result acceleration in private consumption.

Despite the gradual recovery in the world economy, policy makers and business leaders are concerned about prospects for long-term growth and economic development. The Global Competitiveness Report 2018 attributed this concern to high levels of uncertainty experienced by governments, businesses and individuals, as technology and geopolitical forces reshape the economic order that has underpinned international relations and economic policy for the past 25 years.

According to the Africa Economic Outlook (AEO) Report 2018,² the real GDP output in Africa is estimated to have grown by 3.6 per cent in 2017 up from 2.2 per cent in 2016. This improvement in economic activities in Africa has been supported by better global economic conditions, recovery in commodity prices especially for oil and metals, sustained domestic demand partly sustained by import substitution, and advances in agricultural production. Overall, several African economies have shown commendable resilience and are now better placed to withstand external headwinds.



FIGURE 11. GLOBAL ICT INDICATORS*



Notwithstanding the foregoing positive developments, growth in Sub-Saharan Africa (excluding Nigeria) slowed in 2017 to 3.2 per cent, down from 3.8 per cent in 2016. However, this growth is projected to increase to more than 4 per cent in 2018, due to structural reforms, sound macroeconomic conditions and increased domestic demand. Subsequently, forecasts indicate that overall Africa's GDP will accelerate to 4.1 per cent in 2018 and 2019.

The Kenya Economic Outlook 2018³ reported that the real GDP in East Africa Community stood at 5.4 per cent in the year 2017. The EAC inflation rate rose to 6.7 per cent in 2017 up from 5.7 per cent recorded in 2016, owing to rising food and oil prices.

1.2 Global Information and Communication Technology Industry

The exponential evolution and growth of ICTs has transformed global and local systems of production, consumption, business, governance and socialization, which are driving the fourth industrial revolution. However, there are concerns that ICTs may enhance inequality, create unpredictability in markets and create platforms for extreme ideologies to spread. Therefore to harness the full potential of ICTs for economic and social welfare and manage the downside risks, there is need for concerted efforts and collaboration between governments, private sector, civil society and academia.

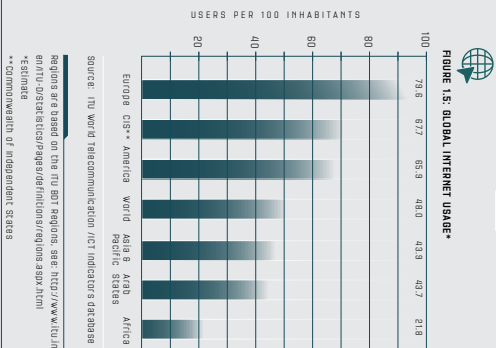
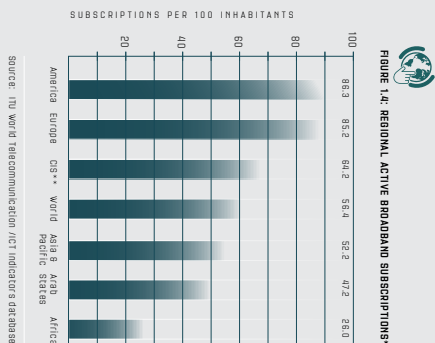
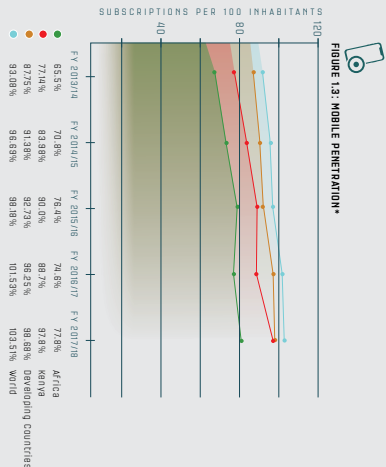
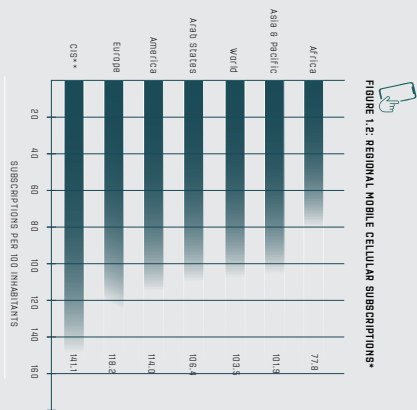
Over the last decade, global trends have revealed a continuous increase in the uptake of mobile-cellular services, mobile broadband services and fixed broadband services. Similarly, global internet usage has been on the rise over the last ten years. On the other hand, fixed telephony services have been on a downward trajectory, owing to the increased popularity of mobile cellular services over fixed telephony services. This is shown in Figure 11.

- <https://www.imf.org/en/Publications/WEO/Issues/2018/07/02/world-economic-outlook-update-july-2018>
- <https://www.africafirst.com/News/2018/03/20/world-economic-outlook-april-2018>
- <https://www.kbfi.or.ke/download/economic-survey-2018/>

The number of mobile cellular telephone subscriptions, globally is estimated to have increased from 7.5 billion in 2016, to 7.7 billion recorded in 2017, translating to a penetration rate of 103.5 per cent as illustrated in Figure 11. The Commonwealth of Independent States (CIS) recorded the highest penetration rate of 141.1 per cent, albeit being slightly lower than 141.2 recorded in 2016. While all the other regions recorded penetration rates above 100 per cent, Africa registered the lowest mobile penetration rate of 77.8 per cent. Cumulatively, mobile cellular subscriptions in developing countries were estimated to be four times more than subscriptions in developed countries, to stand at 79.2 per cent and 20.8 per cent respectively. This is as shown in Figure 12.

Kenya's level of mobile penetration continued to be above the African average. However, it remains below the global and developing world performance levels. Mobile telephony subscriptions in Kenya were recorded as 45.6 million representing a penetration rate of 97.8 per cent. This is as illustrated in Figure 13.

The number of active broadband subscriptions in the world increased from 3.9 billion in 2016 to 4.2 billion in 2017, representing a penetration rate of 56.4 per cent up from 52.2 per cent recorded in 2016. The Americas recorded the highest broadband penetration rate of 86.3 per cent, closely followed by Europe at 85.2 per cent. The Commonwealth of Independent States (CIS), Asia & Pacific, Arab States and Africa recorded 64.2 per cent, 52.2 per cent, 47.2 per cent and 26.0 per cent respectively, which was slightly above their 2016 penetration rates. The global fixed broadband penetration rate grew marginally by 0.7 percentage points to stand at 13.1 per cent in 2017, with Asia and Pacific, Arab States and Africa's rates falling below the global fixed penetration level. This is as shown in Figure 14.



The International Telecommunication Union (ITU) estimated that in 2017, 53.6 per cent of households in the world had access to the Internet, with Europe having the highest number of households connected to the Internet at 84.2 per cent. On the other hand, Africa was estimated to have the least number of households connected to the Internet, at 18.0 per cent.

Globally, the number of estimated internet users grew from 3.4 billion in 2016 to stand at 3.6 billion users in 2017 as shown in Figure 15. Subsequently, the global penetration rate grew from 45.9 per cent to 48.0 per cent in 2017. Europe continued to register the highest internet penetration rate in comparison to other regions, to post a rate of 79.6 per cent, while Africa recorded the lowest internet penetration of 21.8 per cent.

1.3 Local Environment

According to the Economic Outlook 2018, Kenya's GDP is estimated to have expanded by 4.9 per cent in 2017 compared to 5.9 per cent growth rate recorded in 2016. The uncertainties surrounding the long electroneering period as well as adverse weather conditions experienced in 2017, were the primary causes of the decelerated economic growth rate. Despite these challenges, the macroeconomic environment remained stable for the better part of 2017, with the information and communication sector growing from 9.1 per cent in 2016 to 12.7 percent in 2017. Conversely, transport and storage, manufacturing, finance and insurance and construction sectors experienced slow growth in 2017.

1.4 Growth and Contribution of ICT to GDP

According to the Economic Outlook 2018, Kenya's GDP is estimated to have expanded by 4.9 per cent in 2017 compared to 5.9 per cent growth rate recorded in 2016. The uncertainties surrounding the long electroneering period as well as adverse weather conditions experienced in 2017, were the primary causes of the decelerated economic growth rate. Despite these challenges, the macroeconomic environment remained stable for the better part of 2017, with the information and communication sector growing from 9.7 per cent in 2016 to 12.7 percent in 2017. Conversely, transport and storage, manufacturing, finance and insurance and construction sectors experienced slow growth in 2017.

Table 11 shows the trend in contribution of ICT against GDP in Kenya in the past 5 years. The information and communications sector has experienced steady growth over the past three years, which has contributed to the growth of the country's real gross output during the same period. The accelerated growth is mainly attributed to the growth in the digital economy through mobile communication services, mobile money services, e-commerce, and the continued uptake of high-speed internet services. Figure 16 shows the contribution of ICT to GDP vis-à-vis growth in GDP.

1.5 Future Outlook

Global growth is projected to strengthen moderately to 3.9 per cent in 2018, supported by favourable market conditions, accommodative financial conditions, and domestic and international repercussions of expansionary fiscal policy in the United States of America (IMF, WEO 2018, July Edition). Moreover, the partial recovery in commodity prices is expected to allow economies in commodity exporting countries to gradually improve. Amid the relatively positive outlook, expansion is becoming more uneven within global economic classes and risks to the outlook are escalating. These risks include rising oil prices, trade tension, currency instabilities, and tightening global financial conditions.

In an effort to ensure long-term future economic growth, there will be need for creative solutions that spur economic growth not only in terms of increased GDP, but also lead towards sustainable and equitable welfare of a country's population. Countries will be compelled to look for policies that balance state, market and community needs, to make sure their economies are more productive, competitive and prosperous.

The on-going investment in infrastructure, increased investor confidence, strong private consumption and the prevailing political certainty following the end of the long electroneering period in Kenya, are anticipated to contribute to the growth in 2018. These favourable variables are expected to contribute to the growth of the ICT sector in 2018.

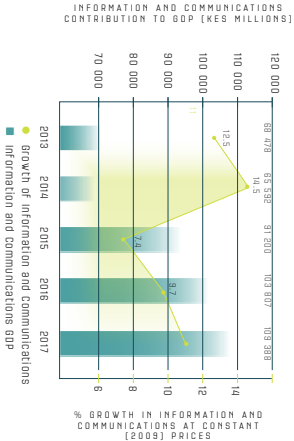


TABLE 11: SUMMARY OF ECONOMIC INDICATORS

INDICATOR	2013	2014	2015	2016*	2017**
Population (millions)	41.8	43.0	44.2	45.4	46.6
GDP at market prices (KSh. Billion)	4,745.1	5,402.4	6,294.2	7,194.1	7,749.4
Growth of GDP at constant prices (%)	5.9	5.4	5.7	5.9	4.9
GDP per capita at constant prices (KSh.)	97,260.9	89,420.3	91,596.6	94,768.5	96,719.8
Transport and storage GDP at current prices (KSh. millions)	373,525	462,457	510,468	567,757	599,428
Information and communication GDP (KSh. millions)	88,479	65,592	91,200	103,807	109,388
Information and communication as % of GDP	1.4	1.2	1.5	1.4	1.4
Growth of information and communications at constant (2009) prices (%)	12.5	14.5	7.4	9.7	11.0
Private sector wage employment in information and communication ('000)	90.6	97.3	103.8	109.7	115.2
Public sector wage employment in information and communication ('000)	1.8	1.8	1.9	1.9	1.9
Consumer prices Annual Average (index numbers February 2009=100)	140.1	149.7	158.6	169.7	183.2
CPI Annual inflation rate (overall) %	5.7	6.9	6.6	6.3	6.9

* Revised
** Estimate
Source: Economic Survey 2018

FIGURE 16: CONTRIBUTION OF ICT TO GDP VIS-A-VIS GROWTH IN GDP



MANAGEMENT OF
ICT RESOURCES

2.1 Frequency Spectrum Management

Radio Frequency Spectrum is a scarce national resource that is held in trust and managed by the Authority on behalf of the people of Kenya. The availability and prudent management of spectrum is a major determinant of digital communications development in any country. To this end, the Authority manages the Frequency Spectrum to ensure efficient utilization of the resource towards creating a conducive environment for the development of ICT services and uptake of emerging technologies in the country. Spectrum management involves planning, allocation, assignment, issuance of licenses, monitoring, surveillance and coordination of the usage of the radio frequency spectrum.

2.1.1 Mobile Cellular Services

During the year the Authority assigned additional frequencies in the 800MHz band to Airtel Networks Kenya Ltd. In addition, the validity period for 4G trial license earlier issued to Telkom Kenya Ltd on the same band was extended. The Authority also extended Jamil Telecom's 4G trial license in the 700 MHz band.

The number of 4G base stations deployed increased over the period and hence impacting positively on the quality of 4G services offered in the country. There was also an increase in deployment of 2G transceivers despite the anticipated decline in uptake of 2G technology. 3G transceivers increased marginally showing a stable growth in data services. The deployment of 2G, 3G and 4G transceivers in the country are as shown in Table 2.1 and Figure 2.1.

2.1.2 Fixed Links

Fixed links are used as backhaul links for mobile network services. They provide secure point-to-point communication between two sites. Higher frequencies are assigned to these communication channels due to their capacity and directivity. The Authority assigns frequencies above 5GHz for deployment of Fixed Links. For the first time, the Authority assigned three Fixed Links in the millimeter band of 80GHz which indicates interest in deployment of services in this band.

The cumulative number of Fixed Links assigned as at the end of the year stood at 7473, which was a decline from the previous year's 8423. The decline in the number of Fixed Links is attributed to the high uptake of Fiber Links as backhaul to the main mobile networks. Table 2.2 and Figure 2.2 show the status of fixed links in the country.



TABLE 2.1: MOBILE CELLULAR SYSTEMS

Operator	2013/14	2014/15	2015/16	2016/17	2017/18
telkom kenya ltd	20	6,393	7,631	8,594	16,952
	30	3,056	3,892	3,813	41,905
airtel networks kenya ltd	20	15,591	16,811	18,848	19,407
	30	1,686	1,882	5,235	6,580
	40	-	-	-	255
safaricom limited	20	156,847	65,552	65,120	105,582
	30	10,639	14,216	21,710	31,191
	40	-	-	-	3,618
					6,219
					37,787
					157,580
					154,630
					53,557
					442,716
					3,673
					7,469

Source: Communications Authority of Kenya



FIGURE 2.1: MOBILE CELLULAR SYSTEMS

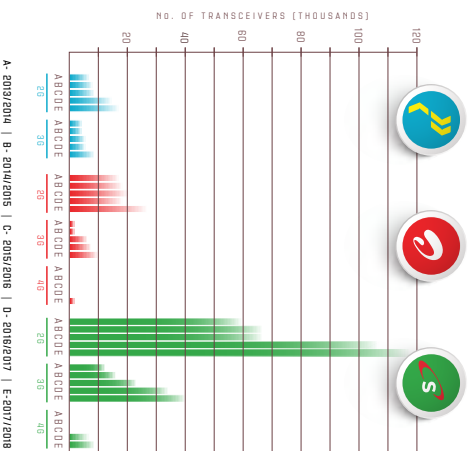


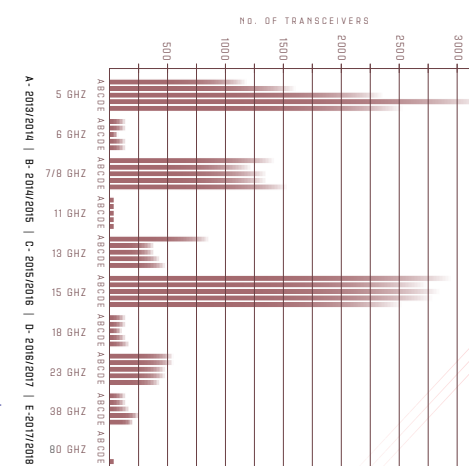
TABLE 2.2: FIXED LINKS

FREQUENCY BAND	2013/14	2014/15	2015/16	2016/17	2017/18
5 GHz	1,144	1,501	2,214	3,188	2,301
6 GHz	66	66	29	72	73
7/8 GHz	1,307	1,109	1,265	1,288	1,469
11 GHz	4	5	12	12	12
13 GHz	799	349	351	406	481
15 GHz	2,619	2,679	2,783	2,791	2,965
18 GHz	76	75	59	72	121
23 GHz	513	513	491	488	436
28 GHz	108	107	126	188	182
80 GHz	-	-	-	-	3
Total	6,685	6,403	7,280	8,423	7,673

Source: Communications Authority of Kenya



FIGURE 2.2: FIXED LINKS



2.1.3 Fixed Wireless Access Systems

Fixed Wireless Access (FWA) systems are deployed in the 1.7 GHz, 3.3 GHz and 3.5 GHz frequency bands for the provision of last mile connectivity services. There has been a declining trend in the utilization of FWA system which is attributed to availability of competing technology in the unprotected 2.4 GHz and 5.8 GHz bands and the preference for robust fiber connectivity in provision of integrated services of voice, video and telephony. Table 2.3 shows the status of Fixed Wireless Access Systems.

2.1.4 Satellite Systems

The uptake of Satellite Services has been declining due to the emergence of competing technologies in Terrestrial and Fiber Optics. During the year under review, the Authority did not receive any new applications for satellite earth stations frequencies.

2.1.5 Private Radio Networks

There has been a general downward trend in the application for Private Radio Networks (PRN) licenses also referred to as Private Land Mobile Services. This is attributed to the increasing uptake of cellular mobile and broadband services as an alternative communication. During the year under review, the Authority licensed 207 new PRN networks comprising of 10 base stations and 52 mobiles in the HF and VHF bands which were mainly sought by security firms. This is shown in Table 2.4.

2.1.6 Aeronautical Radio

Aircraft radio stations are radio installations aboard aircraft that provide ground-to-ground and air-to-ground communication services to aviation operators. There has been an increase in aircraft license renewals as a result of the mandatory requirement that aircraft be installed with radio communication equipment must be licensed for flight clearance. During the year, the Authority issued 673 aircraft station licenses as compared to 594 in the FY 2016/17.

2.1.7 Amateur Radio

The Authority, in collaboration with the Amateur

Radio Society of Kenya (ARSK), issues Amateur radio licenses to individuals who are certified by ARSK or an equivalent body from another country. In the FY 2017/18 the Authority issued 19 Amateur radio operator licenses as compared to 27 in the previous year.

2.1.8 Radio Alarm Network

The total number of radio alarm networks remained unchanged at 287 with the number of radio alarm transmitter units also remaining unchanged 37,632 as shown in Figure 2.4.

2.1.9 Digital TV Broadcasting Frequencies

The Authority has cumulatively assigned 333 Digital TV Transmitters as shown in Table 2.5 and Figure 2.5.



TABLE 2.3: FIXED WIRELESS ACCESS SYSTEMS

FREQUENCY BAND	2013/14	2014/15	2015/16	2016/17	2017/18
1.7 GHz	276	278	80	82	61
3.3 GHz	232	201	218	137	110
3.5 GHz	1,915	1,682	1,784	1,783	1,779
Total	2,423	2,169	2,082	2,002	1,950

Source: Communications Authority of Kenya



FIGURE 2.3: FIXED WIRELESS ACCESS SYSTEMS

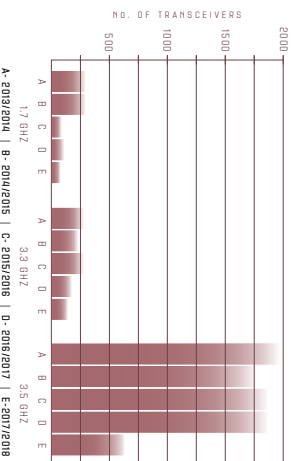


TABLE 2.4: ADDITIONAL PRIVATE LAND MOBILE STATION

FREQUENCY BAND	STATION TYPE	2013/14	2014/15	2015/16	2016/17	2017/18
VHF	Fixed	112	113	79	72	10
	Mobile /Portables	565	1,188	649	559	52
	Total	677	1,301	728	631	62
HF	Fixed	0	10	41	1	2
	Mobile	0	34	5	3	0
	Total	0	44	46	4	2

Source: Communications Authority of Kenya



FIGURE 2.4: VHF ALARM UNITS

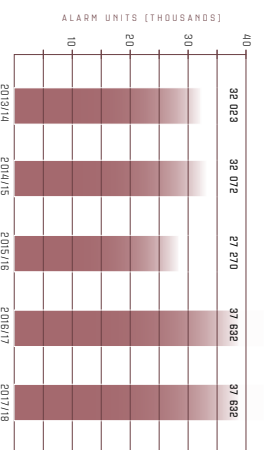


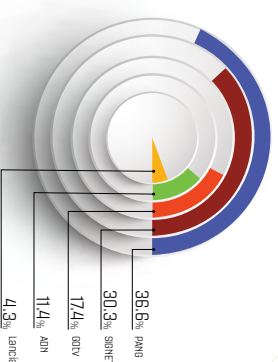
TABLE 2.5: DIGITAL TV FREQUENCY ASSIGNMENTS

Signal Distributions	Assignments
1 Africa Digital Network	38
2 DTV Kenya	58
3 Lancia Digital Broadcasting	41
4 Pan Africa Network Group	422
5 Signal Signal Distributions	101
Total	333

Source: Communications Authority of Kenya



FIGURE 2.5: DIGITAL TV FREQUENCIES



2.1.10 Fm Broadcasting Frequencies
The Authority allocated FM Broadcasting frequencies for 93 Fm transmitter stations, which comprised of 76 commercial Fm transmitter Stations and 17 Community FM transmitter stations. The number of Fm broadcasting frequencies assigned during the last five years is summarised in Table 2.6.

2.1.11 Maritime Mobile Service Identity
The Authority assigned three Maritime Mobile Service Identity to ships and 38 to beacons operated by the Kenya Ports Authority. In addition, the Authority licensed one Maritime Station (ship) to operate radio communication.



TABLE 2.6: FM BROADCASTING FREQUENCIES (2019/14 - 2017/18)

FINANCIAL YEAR	COMMERCIAL FM TRANSMITTER STATIONS	COMMUNITY FM TRANSMITTER STATIONS	TOTAL
2019/14	53	2	55
2014/15	33	5	38
2015/16	46	12	58
2016/17	68	4	70
2017/18	76	17	93

Source: Communications Authority of Kenya

2.2 Management of Numbering Resources

Telecommunication numbering resources are numeric identifiers used to uniquely recognise subscribers on the service providers' networks. The Authority uses a web based number management system for application, assignment and general management of numbering resource.

2.2.1 Assignment of Numbering Resources

The Authority assigns numbering resources for configuration of telecommunication systems to enable seamless interconnectivity amongst telecommunication service providers and provision of end-user services. During the year, the Authority assigned nine mobile National Destination Codes (NDCs) to mobile service providers to facilitate mobile telephony services and Machine-to-Machine (M2M) services. Additionally, 374 Central Office Codes (COCs) were assigned to fixed telephony service providers as compared to 140 in the previous year. This increase was as a result of demand by new ASIPs and growth in the provision of triple-play services.

In addition, the Authority assigned 10,200 Toll-Free Numbers; 2,000 5-Digit Short Codes; one National Signaling Point Code; and four 4-Digit Short Codes to various counties, government ministries, departments and agencies to facilitate e-government services. The Authority also reclaimed one International Signaling Point Code, which was not in use. The resources assigned during the last five years are summarized in Table 2.7



TABLE 2.7: NUMBERING RESOURCES ASSIGNED

Number category	2019/14	2014/15	2015/16	2016/17	2017/18
Mobile NDC *	41	41	11	13	9
Fixed COC **	247	55	23	140	374
Toll Free Numbers	1100	0	10	10,000	10,200
Premium Rate Numbers	0	200	10	1	0
Bulk SMS Short Codes	10,200	9,500	1,000	0	2,000
National Signaling Point Codes	1	1	0	2	1
International Signaling Point Codes	0	0	0	2	1***
Short Codes	41	8	10	3	41
Issuer Identification Number	3	0	0	3	0
Mobile Network Code	3	0	0	2	0
Mobile Number Portability Routing Code	3	0	0	2	0

* One (1) Mobile national destination code (NDC) is equivalent to 1,000,000 mobile telephone subscriber numbers (central office code (COC) is equivalent to 1,000 fixed telephone subscriber numbers).

***Assignment reclaimed

Source: Communications Authority of Kenya

93 41

FM TRANSMITTER STATION
FREQUENCIES

MARITIME
MOBILE SERVICE IDENTITY



TABLE 2.10: REGISTERED DOT KE DOMAINS

SUB-DOMAIN	USE	NUMBER OF DOMAINS					
		2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Aug	Companies	23,370	143,483	53,390	61,953	69,687	
Sept	Government Entities	301	325	368	397	448	
Oct	Non profit & religious organisations	1,193	1,468	1,759	1,947	1,948	
Nov	Institutions of higher education	773	885	791	738	804	
Dec	Lower and middle level institutions	119	175	605	980	1,188	
Jan	Personal websites and E-mail	53	59	92	193	434	
Feb	Personal websites and E-mail	546	565	337	303	372	
March	Mobile content	43	51	46	48	394	
April	Information	94	112	129	147	451	
TOTAL		28,598	147,811	58,095	69,724	75,056	

Source: Communications Authority of Kenya

The dot KE country code top-level domain (ccTLD) is Kenya's unique and authentic identity on the Internet. The Authority has a mandate to promote the usage of dot KE ccTLD towards enhancing security in the cyber space. This is achieved by strengthening the level of data and intellectual property protection, while stimulating the growth of e-services.

The Kenya Network Information Centre (KENIC) is the licensed registry for the dot KE domain namespace. As at 30th June 2018, KENIC had registered a total of 75,096 domain names as shown in the table 2.10:

The Authority also conducted the annual regulatory compliance audit of the Dot KE Registry, KENIC. The findings of the Audit indicated that KENIC was in compliance with its regulatory obligations. In consultation with the industry, the Authority developed a Restricted and Reserved Name List (RPNL) for the Dot KE country code Top-Level Domain (ccTLD) namespace. This is aimed at curbing abusive domain name registrations, which may facilitate brand and identity theft, among other forms of cybercrime.



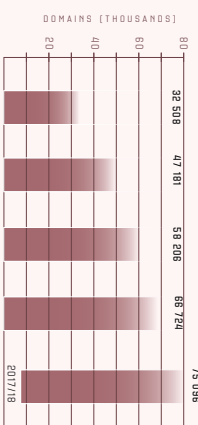
TABLE 2.8: MONTHLY PORTING STATISTICS BY FINANCIAL YEAR

Month	2013/14	2014/15	2015/16	2016/17	2017/18
Jul	71	103	135	152	121
Aug	53	75	121	117	85
Sept	63	765	205	117	97
Oct	20	560	58	118	116
Nov	19	137	95	188	1,242
Dec	81	88	81	153	236
Jan	159	164	160	122	171
Feb	98	201	121	138	153
March	105	264	114	115	160
April	103	207	127	106	250
May	68	487	132	69	184
June	83	220	108	138	111

Source: Communications Authority of Kenya



FIGURE 2.7: GROWTH OF THE DOT KE OVER THE PAST FIVE (5) YEARS



2.2.2 Status of Numbering Resource Utilization
The overall assignment of the National Numbering Resource stood at 270 per cent of the available capacity of 384,084,850. A detailed summary of the assignment is as detailed in table 2.8.

2.2.3 Mobile Number Portability

The Authority facilitated inter-operator signing of the revised mobile number portability (MNP) Service Level Agreement (SLA) amongst the 10 Mobile Service Providers (MNOs and MVNOs). The revision of the SLA was aimed at aligning it to the amended procedures and guidelines for the provision of Mobile Number Portability services. There was a sudden increase in porting in the month of November 2017, which was attributed to post election activities during the months of August to December 2017. The porting statistics for the last five years are as shown in Table 2.9 while Figure 2.6 shows the monthly statistics for 2017/18.

2.2.4 Management of Dot Ke Domain Name



FIGURE 2.6: GRAPH OF MNP PORTING MONTHLY STATISTICS FOR THE FY 2017/18

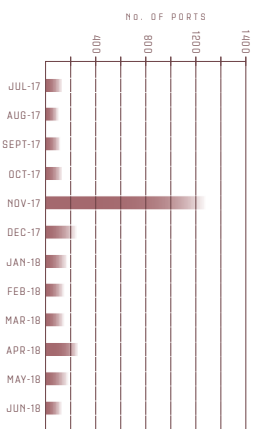


TABLE 2.8: STATUS REPORT ON THE ASSIGNMENT OF TELECOMMUNICATIONS NUMBERING RESOURCE

RESOURCE TYPE	CAPACITY	ASSIGNED RESOURCES	ASSIGNED
Mobile National Destination Codes (MNC)	200 000 000	96 000 000	48.0%
International Signaling Point Codes (ISPC)	16	10	62.5%
5-Digit Short Codes (SC-5)	80 000	51 400	64.3%
4-Digit Short Codes (SC-4)	(SC-4)	30	75%
3-Digit Short Codes (SC-3)	20	10	50.0%
Fixed Numbers (FN)	162 000 000	7 400 000	4.6%
Network Colour Codes (NCC)	8	3	37.5%
Premium Rate Numbers (PRN)	1 000 000	138 000	13.8%
Toll Free Numbers (TFN)	1 000 000	112 000	11.2%
International Mobile Station Identification Codes (IMSI)	100	11	11.0%
National Signaling Point Codes (NSPC)	4 095	448	10.9%
Data Network Identification Codes (DNIC)	10	1	10.0%
Issuer Identification Number (IIN)	100	10	10.0%
Number Portability Routing Codes (NPRC)	100	9	9.0%
TOTAL	384 084 850	103 701 932	27.0 %

Source: Communications Authority of Kenya

PROMOTING COMPETITION

A robust ICT sector that fosters competition, innovation and investments is essential in realizing this agenda by enhancing socio-economic growth and development. The Authority plays an integral role in ensuring that the ICT sector is competitive and innovative towards ensuring market efficiencies for socio-economic welfare. In execution of its mandate and in line with Pillar 4 on Market Development of the Strategic Plan 2013-2018, the Authority licensed new players into the market. In addition, the Authority also approved introduction of new ICT products and services, carried out research, and made other interventions to manage competition.

3.1 Licensing of Communication Services

The Kenya Information and Communications Act, 1998, mandates the Authority to license radio-communications systems, telecommunications, broadcasting, and electronic transactions service providers, postal and courier services.

3.1.1 Telecoms Licensing

In the period under review, the Authority issued 260 Telecom Licenses representing an 11.6 per cent increase compared to the previous year. Table 3.1 provides a summary of the licensing categories and the cumulative number of licenses for the past five (5) financial years.

3.1.2 Type Approval

The Authority received and type-approved 371 models of ICT equipment. There was a marked increase in the number of mobile phones due to manufacturers and vendors introducing new models to meet the growing market demand. Conversely, there was a significant decline in the number of DVD-T2 set-top boxes type-approved due to an increase in the number of Integrated Digital Television model. Further, the Authority issued 23 authorizations for clearance of ICT equipment imported for use in, or in transit through the country.

The Authority continued to collaborate with Kenya Bureau of Standards (KEBS) and the Kenya Revenue Authority (KRA) by providing regular updates on equipment allowed for use in the country. Further, the Authority continued to contribute in ICT standards development through participation in the relevant technical Committees (TCs) of KEBS. The Authority also published "Guidelines on the Minimum Features and Technical Specifications for Mobile Cellular Devices Imported into and Distributed in Kenya." These guidelines are aimed at enhancing the fight against counterfeit handsets and improvement of conformance to ICT Equipment Standards. Table 3.2 summarizes the Type Approval/Accepted equipment for the last five years.



TABLE 3.1: TELECOMMUNICATIONS LICENSES

LICENSE CATEGORY	2013/14	2014/15	2015/16	2016/17	2017/18
Telecommunications	448	542	655	517	535
Conductors					
Technical Personnel	689	714	653	502	558
Submarine cable landing rights	3	3	3	3	3
International gateway systems & services	13	14	13	12	12
Application service providers	133	153	206	207	240
Content service providers	229	251	320	323	354
Network facility providers	4	3	3	3	3
Tier 1					
Network facility providers	19	22	23	23	24
Tier 2					
Network facility providers	15	19	24	25	30
Tier 3					
Business process outsourcing	139	444	50	26	28
Telecommunications vendors	300	353	442	515	552
Public communications access devices	9	14	14	15	15
Out of the subdomain registrars	0	0	48	61	67
Vendor and contractor	649	637	231	132	122
Technical personnel	209	251	230	96	93
Internet service providers	444	518	38	12	12
Value Added Service Providers	30	30	8	4	4
Premium Rate service providers	-	-	24	12	9
Local loop operators	10	10	7	5	5
Landing cable rights	-	-	2	1	1
Internet Exchange Point	1	1	2	1	1
Commercial VAS	1	1	1	0	0
Landing rights authorization for mobile mobile personal communications via satellite	3	3	3	3	3
International gateways and gateway operators	0	0	2	1	1
Over the carrier network operator	2	2	8	3	1
Total	2 815	3 556	3 008	2 502	2 754

Source: Communications Authority of Kenya



TABLE 3.2: TYPE APPROVED/ACCEPTED EQUIPMENT

EQUIPMENT TYPE	2013/14	2014/15	2015/16	2016/17	2017/18
Over routers	2	2	7	15	17
Gateway/Switches/PAKs	2	12	16	30	26
PSN/TP server equipment	1	0	0	3	17
Wireless terminals/system	0	0	0	0	6
Transceiver/VHF/UHF	16	22	18	18	6
Transceiver-HF	0	0	0	1	0
Transceiver-GSM Band (G2)	0	0	0	4	0
Low Power Wireless terminals	203	147	182	63	0
Scalable terminal	0	0	0	1	6
Alarm Transmitter	0	0	0	1	1
Broadcast equipment	17	7	1	2	7
VASIT Equipment (Transceiver, BUC, PA, etc)	2	0	0	0	0
Global System for Mobile Communications (GSM) interfaces and BTS	0	0	0	9	0
VOP Terminal	0	0	0	0	10
Teleton set	0	0	0	0	3
Pagerphone	1	0	0	0	0
GSM Mobile Phones	101	185	161	202	242
Fax Machine	0	0	13	24	8
Modem	0	0	1	3	12
Mobile PB equipment (see 100, 101, 102, 103 and cordless access modules)	56	444	27	23	4
LTE terminals	0	0	5	11	0
Microwave equipment	5	8	2	3	6
Total	408	428	434	441	371

Source: Communications Authority of Kenya



TABLE 3.2: LICENSED POSTAL AND COURIER OPERATIONS

	2016/17	2017/18
Public Postal Operator (PPO)	1	1
National	140	144
International	38	41
Total	178	185

Source: Communications Authority of Kenya



TABLE 3.4: NUMBER OF BROADCASTING LICENSES BY CATEGORY

CATEGORY OF LICENSE	2016/17	2017/18
Commercial FTA TV	34	20
Commercial FTA Radio	1	30
Community FTA TV	2	0
Community FTA Radio	1	1
Internet Protocol Television Broadcasting	2	1
Landing rights	4	0
Subscription Management Services	3	1
Cable Subscription Broadcasting	4	0
Terrestrial Subscription Broadcasting	2	1
Satellite Subscription Broadcasting	1	0
Self-Provisioning Broadcast Signal Distributor	0	1
Total	54	55

Source: Communications Authority of Kenya

3.1.3 Postal Licensing

The Authority issued 26 national and four (4) international Courier licenses. Consequently, the total number of Postal and Courier licenses increased to 210 operators from 186 in the previous year. Table 3.3 shows the number of licensed Postal and Courier operators.

3.1.4 Broadcasting Licensing

The Authority issued 55 broadcasting licenses compared to 54 in the previous year. Table 3.4, shows the number of licenses issued across various broadcasting license categories.



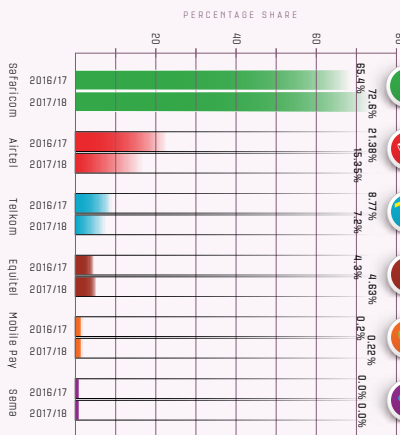
TABLE 3.5: MOBILE TELEPHONY SERVICES (IN MILLIONS) AS AT THE END OF THE FINANCIAL YEAR

MOBILE OPERATOR	2016/17	2017/18
Safaricom P.L.C	21.9	24.1
Airtel Networks Kenya Limited	5.0	7.0
Telkom Kenya Limited	2.8	4.0
Equitel Kenya Limited	-	0.8
Equitel Kenya Limited	-	0.8
Sema Mobile Services	-	-
Mobile Pay Limited	-	-
Total	29.5	35.9

Source: Communications Authority of Kenya



FIGURE 3.1: MOBILE NETWORK SERVICES MARKET SHARE PER SERVICE PROVIDER



3.2 Provision of Services

3.2.1 Mobile Telephony Services

The total number of mobile telephony subscribers grew by 13.2 per cent in the FY 2017/18 in comparison to a 1.2 per cent growth during the previous period. Prepaid mobile telephony subscriptions continue to be preferred to post-paid subscriptions, owing to the perceived flexibility in usage and access to a variety of tariff offerings. Subsequently prepaid subscriptions accounted for 97.39 per cent of the total subscriptions.

Whilst Safaricom had the highest number of subscribers, its total market share by subscriptions reduced from 72.6 per cent recorded in the previous year to 63.4 per cent. This is attributed to the increase in Airtel and Telkom's market shares by subscription of 6.0 per cent and 1.6 per cent respectively. The number of subscribers is summarized in table 3.5 while figure 3.1 shows the mobile network services market share per service provider.

During the year under review, there was a general increase in mobile traffic volume compared to the previous period, as illustrated in Table 3.6.

The number of on-net mobile minutes was about 8 times that of off-net minutes as illustrated in the Figure 3.2.



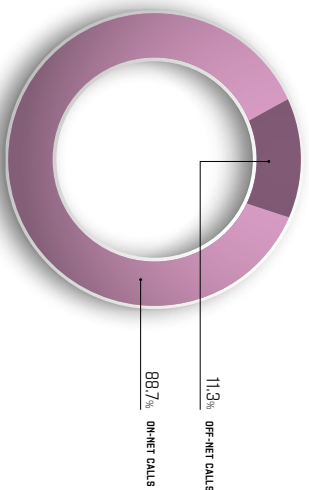
TABLE 3.6: MOBILE TRAFFIC INDICATORS AS AT THE END OF THE FINANCIAL YEAR

MOBILE TRAFFIC	2013/14	2014/15	2015/16	2016/17	2017/18
VOICE TRAFFIC					
On-net calls in minutes	26,427,260,338	29,554,870,078	38,655,058,897	37,775,948,428	44,024,755,888
Off-net calls in minutes	3,988,895,789	4,370,097,507	4,590,889,055	5,598,447,769	4,655,897,391
To fixed	10,324,870	80,985,071	67,027,239	88,822,782	74,500,816
To mobile	20,457,700,792	34,005,812,658	41,683,555,281	42,706,338,586	48,630,819,559
Total Number of Calls Made in Minutes	30,457,700,792	34,005,812,658	41,683,555,281	42,706,338,586	48,630,819,559
International Incoming Calls in minutes	145,875,703	639,576,490	792,488,955	558,488,834	608,004,544
International Outgoing Calls in minutes	117,231,055	477,488,889	485,559,244	482,000,950	424,294,824
SMS Traffic (Number of Messages)	4,484,018,107	27,443,621,730	30,387,848,435	58,638,425,774	66,838,027,385

Source: Communications Authority of Kenya



FIGURE 3.2: SHARE OF LOCAL CALL MINUTES



3.2.2 Mobile Financial Services

The mobile platform offers alternative ways of accessing financial services. These include: payment of bills, purchasing of goods and services, money transfer, saving and borrowing. The ease of accessing financial services over the mobile phone has ensured that a large section of the previously unbanked members of society have an opportunity to access "micro-banking" services. Mobile financial services keep evolving as both telecommunications operators and financial institutions continue to develop new and innovative ways of offering financial solutions. Table 3.7 shows the trend in mobile money subscriptions while Table 3.8 provides a summary of mobile financial services indicators over the last five years.



TABLE 3.7: MOBILE MONEY SUBSCRIPTIONS AS AT THE END OF THE FINANCIAL YEAR

OPERATOR	2013/14	2014/15	2015/16	2016/17	2017/18
Safaricom P.L.C (M-Pesa)	18,778,056	21,388,288	17,820,278	22,820,288	23,946,174
TELEKOM KENYA LIMITED (Orange Money/M-Keshi)	865,483	882,531	193,821	894,485	83,823
Airtel Networks Kenya Limited (Airtel Money)	3,258,754	3,189,812	4,553,889	1,580,845	3,589,465
M-KI-KESHI	1,288,855	1,774,700	1,772,660	1,772,463*	-
Tangaza (Mobile Pay Limited)	502,558	502,558	502,558	87,785	90,442
Equitel (Finserv Ltd)	0	873,849	1,860,547	1,884,838	1,989,009
Total Number of Active Subscribers	27,114,823	27,714,040	24,304,847	28,074,478	29,878,063

Source: Communications Authority of Kenya

* Mobilicity data as at 30th Sept 2016



TABLE 3.8: MOBILE FINANCIAL SERVICES AS AT THE END OF THE FINANCIAL YEAR

SERVICE PROVIDER	2013/14	2014/15	2015/16	2016/17	2017/18
Total Number of Agents	110,036	123,357	168,777	180,657	268,022
Total Number of Transactions (Sending and Withdrawal)	-	-	1,809,050,943	2,419,729,898	-
Total Value of Transactions (Sending and Withdrawal) in Kenya Shillings	-	-	4,824,325,897,397	7,216,119,324,082	-
Total Number of Mobile Payments	-	-	1,107,558,719	1,778,322,975	-
Total Value of Mobile Payments in Kenya Shillings	-	-	2,553,427,837,416	4,503,841,510,285	-

Source: Communications Authority of Kenya

The total number of active subscribers of mobile money financial services increased by 57 per cent as compared to 6.7 per cent in the previous year. In addition, the number of mobile money agents grew by 473 per cent as compared to 13.8 per cent the previous period. Mobile financial services market share per operator for the FY 2017/18 is illustrated in Table 3.9.



TABLE 311: NUMBER OF BROADBAND SUBSCRIPTIONS AS AT THE END OF FINANCIAL YEAR

FINANCIAL YEAR	2013/14	2014/15	2015/16	2016/17	2017/18
Fixed Broadband (DSL, Satellite, Cable, Fibre and Other)	73 404	94 769	107 739	157 896	246 729
Wireless (Wimax)	16 559	17 103	13 368	46 485	62 637
Mobile	2 619 794	5 265 967	10 746 074	16 542 556	20 770 596
Total	3 090 156	5 267 839	10 867 239	15 447 109	20 539 062

Source: Communications Authority of Kenya



TABLE 312: AVAILABLE / UT INTERNATIONAL BANDWIDTH AS AT THE END OF FINANCIAL YEAR

FINANCIAL YEAR	2013/14	2014/15	2015/16	2016/17	2017/18
SEACH Capacity (Gbps)	565.4	770.0	950.0	2,000.00	2,220.0
TEAMS Capacity (Gbps)	119.90		820.0	702.00	702.0
EASST Capacity (Gbps)	623.9	33.1	33.1	63.00	16.3
LDNG Capacity (Gbps)	40.0	39.2	39.2	101.4	199.7
Total Undersea Bandwidth Capacity (Gbps)	648.3	1 668.3	1 730.3	2 905.4	3 272.1
Satellite Bandwidth Capacity (Gbps)	0.21	0.27	0.47	0.47	5.67
Total Available Bandwidth Capacity (Gbps)	648 504.4	1 668.6	1 730.7	2 905.9	3 277.8

Source: Communications Authority of Kenya



TABLE 313: INTERNATIONAL USED BANDWIDTH AS AT THE END OF FINANCIAL YEAR

YEAR	2013/14	2014/15	2015/16	2016/17	2017/18
International Undersea Bandwidth (Gbps)	440.8	768.3	877.3	879.5	926.8
International Satellite Bandwidth (Gbps)	0.19	0.18	0.47	0.27	4.6
Total International Bandwidth (Gbps)	441 006.4	768 484.8	877.8	879.8	931.4

Source: Communications Authority of Kenya



TABLE 310: INTERNET SUBSCRIPTIONS AS AT THE END OF THE FINANCIAL YEAR

SUBSCRIPTIONS	2013/14	2014/15	2015/16	2016/17	2017/18
Mobile data/ Internet subscriptions	13 830 694	19 809 709	26 758 789	29 205 604	40 743 570
Terrestrial wireless subscriptions	16 805	17 721	13 443	47 431	62 037
Satellite data/ Internet subscriptions	568	635	230	693	1153
Fixed Digital Subscriber Line (DSL) or Internet subscriptions	12 129	2 537	3063	2 715	1 264
Fixed fibre optic/ Internet subscriptions	69 373	89 598	27 571	54 700	105 994
Fixed cable (DO) subscriptions	25	25	77 389	99 971	101 638
Other fixed landline subscriptions					7 392
Total Internet subscriptions	14 029 072	19 920 295	28 880 971	29 410 514	41 112 850

Source: Communications Authority of Kenya



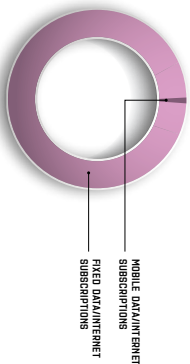
TABLE 3: MOBILE FINANCIAL SERVICES MARKET SHARE PER OPERATOR


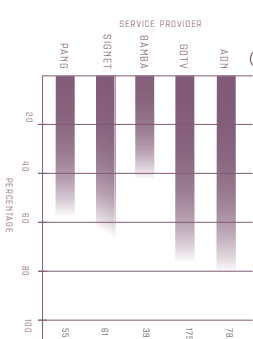
SERVICE PLATFORM	NO. OF SUBSCRIBERS	MARKET SHARE
M-PESA	23 945 074	80.63%
Airtel Money	3 893 415	12.20%
Equitel Money	1 969 003	6.50%
T-Cash (Orange Money)	69 323	0.21%
M-Keshi	-	0.00%
Mobile Pay Ltd (TigoPesa)	50 442	0.30%
Total	29 679 053	100.0%

Source: Communications Authority of Kenya



FIGURE 3.3: PROPORTION OF MOBILE TO FIXED DATA/INTERNET SUBSCRIPTIONS




FIGURE 3.7: DTT PERCENTAGE POPULATION COVERAGE


3.2.8 Broadcasting Services

The Authority is mandated to facilitate the development of the broadcasting services. This includes developing media standards, regulating and monitoring compliance with the set standards.

3.2.8.1 FTA Broadcasting Services

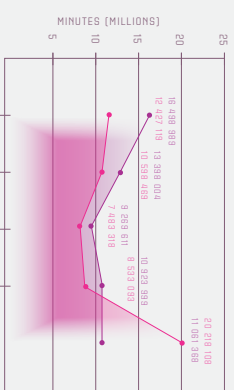
There were 131 Commercial FTA Radio stations and 38 Community FTA Radio stations on air. In addition, there were 66 Commercial FTA TV stations and one Community FTA TV station. This is represented in Figure 3.5.

3.2.8.2 Subscription Broadcasting Services

Terrestrial subscription broadcasting services had the highest subscriber base with 3809244 subscribers. This was followed by Satellite at 895 918 and Cable at 153 482 subscribers. The preference for terrestrial subscription can be attributed to the affordability of bouquets on the platform. Figure 3.6 shows the market share of subscription broadcasting services.

3.2.8.3 Broadcasting Signal Distribution Services – Population Coverage

The Digital Terrestrial Television (DTT) population coverage stood at 86.0 per cent. ADN had the highest DTT population coverage at 78.6 per cent, followed by GOTT TV at 75.4 per cent, SIGNET at 61.0 per cent, PANG at 55.9 per cent and BAMBAA at 39.7 per cent. This is as shown in Figure 3.7.


FIGURE 3.4: INTERNATIONAL INCOMING AND OUTGOING CALLS


- International Incoming Traffic
- International Outgoing Traffic

Source: Communications Authority of Kenya

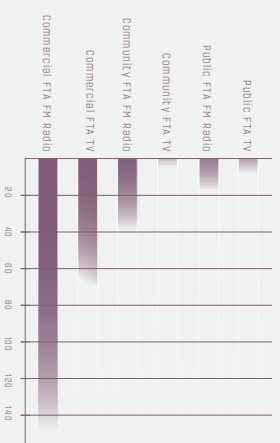

FIGURE 3.5: FY 2017/18 FTA BROADCASTING SERVICES


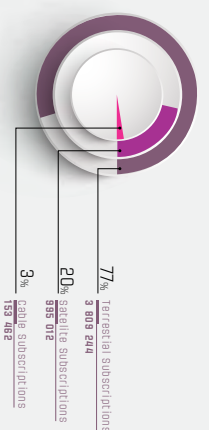
FIGURE 3.6: NO. OF SUBSCRIBERS


TABLE 3.15: POSTAL AND COURIER SERVICES

OPERATOR	2013/14	2014/15	2015/16	2016/17	2017/18
Public Postal Operator	1	1	1	1	1
Total Post Offices	622	623	623	623	623
Departmental Offices	475	477	446	447	447
Solo Post Offices	146	146	146	146	146
Private Letter Boxes	432 000	450 000	450 472	450 472	450 472
Un-lit	375 940	382 500	382 558	373 892	373 892
Letter Posting Boxes	56 060	67 500	67 916	67 580	76 580
Public Courier Positions	1 102	1 100	479	480	480
Automated Public Counters	556	736	472	472	480
Non-Automated Public Counters	546	364	7	7	0
Stamp Vending Machines	4,274	4,274	883	883	883
Stamp Vending Machines	260	280	38	38	38
Private Operator Outlets	707	2 177	976	997	1 027
Total Outlets (Post Offices + Private operators outlets)	1 323	2 740	1 599	1 620	1 650

Source: Communications Authority of Kenya

3.2.5 Fixed Network Voice Services

Fixed voice subscriptions declined by 3.8 per cent on average from 71725 to 68987. Table 3.14 summarizes fixed network growth over the last two years.

The total number of fixed line call minutes to mobile networks declined by 3.8 per cent during the year under review, in comparison to the previous period, largely owing to usage of mobile phones as an alternative to fixed lines.

3.2.6 International Incoming and Outgoing Calls

On the other hand, the number of international calls, both outgoing and incoming increased in the FY 2017/18 by 1.3 per cent and 136.9 per cent respectively, as shown in Figure 3.4.

3.2.7 Postal and Courier Services

As illustrated in Table 3.15, the total number of postal outlets increased marginally by 1.8 per cent during the year under review. This growth was solely because of the 3.0 per cent increase in the number of private operator outlets.


TABLE 3.14: FIXED NETWORK SUBSCRIPTIONS

OPERATOR	2017/18	2016/17
Warren Group Kenya Limited	44 146	44 706
Safaricom PLC	340	751
Telkom Kenya Limited	26 821	23 039
Mobile Telephony Network (MTN) Kenya Limited	488	428
Total Subscriptions	71 725	68 987

Source: Communications Authority of Kenya

3.2.9 Tariffs and Competition

The Authority monitors tariffs and promotions offered by licensees and their overall impact on the level of competition in the ICT sector.

3.2.9.1 Fixed and Mobile Network Services

At the retail level, the Authority approved the launch of an additional 31 retail tariffs, as well as the variation of existing tariffs. Despite the introduction of new bundled tariff plans at different price points, the Pay-as-You-Go (PAYG) rates have remained stable since the implementation of the last phase of the glide-path set out in Interconnection Determination No. 2 of 2010 on termination rates. Table 316 illustrates the average PAYG retail tariffs for fixed and mobile communication services in the FY 2017/18.

At the wholesale level, the Authority continued to enforce implementation of inter-operator tariffs for voice and SMS services (Interconnection Determination No. 2 of 2010). In addition, implementation of regional tariff caps prescribed under the Northern Corridor Integration Projects' 'One Network Area' (ONA) framework has led to reduction of calling rates within the region.

3.2.9.2 Promotions and Special Offers by MNOs

The Authority approved the launch of a total of 63 promotions and special offers. This was a 14.55 per cent increase compared to the previous period. Figure 3.8 illustrates promotion and special offers trends.

Figure 3.9 illustrates the proportions of promotions and special offers.

3.2.9.3 Broadcasting Services

The Authority implemented phase 2 of the broadcast signal distribution tariffs glide-path, as shown in Table 317. Further, the Authority continues to monitor the implementation of the determination No. 2 of 2016 on terrestrial broadcast signal charges, which prescribes price caps on BSD charges.

TABLE 3.16: AVERAGE TARIFFS AS AT THE END OF FINANCIAL YEAR

MOBILE TARIFFS		KSHS./ MINUTE
Retail Mobile Communications		2.67
Average On-net PAYG Rate		3.17
Average Off-net PAYG Rate		1
Average Price per SMS		4
Average Mobile Data Price per MB		6
Retail Fixed Communications*		12
Average Fixed-Mobile		

*Based on TKL household non-bundle rate
Source: Communications Authority of Kenya

FIGURE 3.8: NUMBER OF PROMOTIONS AND SPECIAL OFFERS

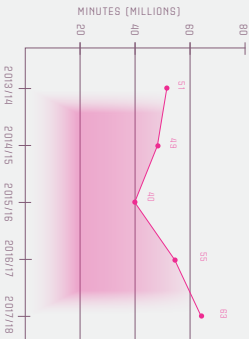
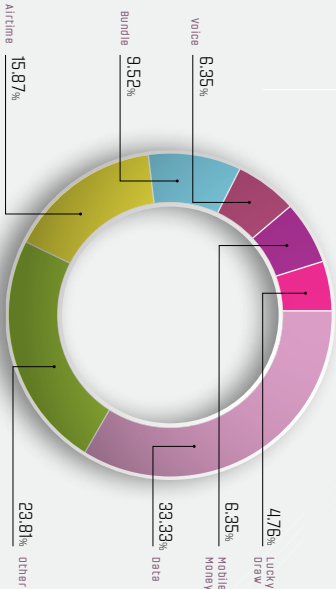


TABLE 3.17: BROADCAST SIGNAL DISTRIBUTION CHARGES IN KES PER SITE PER MB/TS

		KES PER SITE MB/TS PER MONTH		
BSD	Phase 1-2016	Phase 2-2017	Phase 3-2018	
	National	89,545	91,753	59,481
Other Cities/Towns	37,281	38,306	39,074	
	Rural	32,960	33,759	34,352
Simplified up-linking	National	224,005	234,319	224,594
	Rural	659	697	723
Simplified reception	National	895	872	904
	Rural	855	872	904
Local Reception (per Channel)	Rural	1,538	1,593	1,597

Source: Communications Authority of Kenya

FIGURE 3.9: PROPORTIONS OF PROMOTIONS AND SPECIAL OFFERS



4 ENSURING COMPLIANCE

In fulfilment of its mandate of ensuring provision of quality ICT services, the Authority monitors compliance with regard to statutory provisions and license conditions. In this regard, the Authority undertakes on-site inspections and monitoring, certification of network installations and enforcement activities. These activities are aimed at verifying compliance with license conditions and quality of service thresholds, assessing conformance with installation standards, and ensuring the integrity of public communications infrastructure.

The implementation of these activities is anchored on Pillar 3 of the Authorities Strategic Plan 2013-18 which is aimed at facilitating infrastructure and service development.

4.1 Inspections and Monitoring

The Authority conducted inspection of licensee operations and facilities to determine the level of compliance with license conditions. These inspections were conducted across the country.

4.1.1 Telecommunications Licensee

The Authority increased its surveillance of telecommunication licensees by 14 per cent from the previous year, conducting 130 inspections of a sample of its telecommunication licensees. This is detailed in Table 4.1.

4.1.3 Radio-Communications

The Authority conducted on-site inspections at 552 radio transmitter stations, which comprised of 300 Fixed Point-to-Point links, 104 Land Mobile Networks and 110 broadcast radio transmitter stations and 38 Digital TV transmitter stations across the country, as summarized in table 4.2. In addition, the Authority carried out joint cross-border co-ordination inspections at six border points namely: Sio Port, Busia, Malaba, Suan, Lwakhakha and Namanaga.

4.1.2 Network Installations

The Authority inspected seven ICT installations to determine compliance with installation standards. Figure 4.1 shows a comparison of compliance levels for the last five years.



TABLE 4.1: SUMMARY OF TELECOMMUNICATION LICENSEE INSPECTIONS

License Category	2013/14					INSPECTED					COMPLIANT				
	2013/14	2014/15	2015/16	2016/17	2017/18	2013/14	2014/15	2015/16	2016/17	2017/18	2013/14	2014/15	2015/16	2016/17	2017/18
Application Service Provider	5	39	65	46	23	5	35	55	31	14	10				
Network Facilities Provider	7	25	46	45	30	6	22	31	23	9					
Business Process Outsourcing	0	1	1	3	0	0	1	0	1	0					
International System 8 Services	6	13	10	1	2	5	12	9	1	2					
Public Data Network Operator	0	2	0	0	0	0	1	0	0	0					
Internet Service Provider	2	3	1	1	0	1	0	0	0	0					
Local Loop Operator	0	0	0	2	0	0	0	0	0	0					
Telecommunications Contractor	2	2	5	2	7	2	2	4	2	3					
Premium Rate Services	0	1	0	0	1	0	1	0	0	0					
Private Masts	0	0	1	1	0	0	0	0	0	0					
Key domain	0	0	0	2	1	0	0	0	0	2					
Cable/telemetry vendors	10	0	0	1	22	7	0	0	1	2					
General purpose equipment vendors, GSM card distributors, cybercafes and mobile money shops	18	8	0	0	27	10	8	0	0	8					
Total	57	108	146	114	130	42	94	53	48	40					

Source: Communications Authority of Kenya



FIGURE 4.1: COMPLIANCE LEVEL

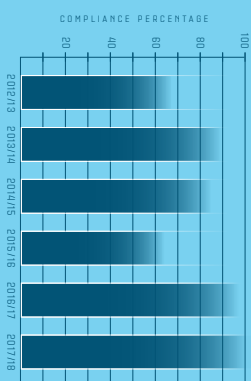


TABLE 4.2: NUMBER OF ON-SITE INSPECTIONS CONDUCTED FOR THE LAST FIVE YEARS

SERVICE YEAR	2013/14	2014/15	2015/16	2016/17	2017/18
Land Mobile Networks	108	75	11	34	104
Broadcast Transmitters (radio)	58	46	21	231	110
Broadcast Transmitters (TV)	-	-	-	54	38
Fixed Networks	229	397	345	300	
Total	495	517	429	664	552

Source: Communications Authority of Kenya

4.1.3.1 Land Mobile Radio Stations

Land Mobile services comprise radio communication in the HF, VHF and UHF frequency bands. In inspecting the Land Mobile Networks, the following parameters were considered: Transmitt Frequency; Network Configuration; and adherence to the Authority's directives. The inspection findings showed an improved compliance level of 60.6 per cent compared to 58.9 per cent in the previous year.

4.1.3.2 Broadcast Stations (FM Radio and Digital TV)

Broadcasting services comprise sound broadcasting in the FM frequency band and Digital TV. In the broadcasting services, the following parameters were considered during inspection: Transmitt Frequency; Installation of Band Pass filter (for FM stations); Equipment Type Approval; Effective Radiated Power; Installation Site (whether on authorized site); and adherence to the Authority's directives.

Arising from the findings, the Sound Broadcast stations (FM) compliance level was 77.8 per cent compared to 78.2 per cent in the previous year. On the other hand, the compliance level for Digital TV broadcasting fell to 74.5 per cent from 90.7 per cent in the previous year.

4.1.3.3 Fixed Radio Communication Stations

Fixed services comprise fixed radio links that are mainly used by telecom operators for backhaul or point-to-point purposes. The main areas of focus for

the inspection were: Transmitt and receive frequencies; Transmitt and receive bandwidth; Installation Site (whether on authorized site); and adherence to the Authority's directives. The compliance level with respect to Fixed links dropped to 86.8 per cent from 96.0 per cent the previous year.

4.1.3.4 Radio Network Compliance Level

The overall compliance level was 79.2 per cent compared to 88.0 per cent the previous year. This is as shown in Table 4.3

Table 4.3

4.1.4 Radio Monitoring and Frequency Interference Resolution

The Authority has in place a state of the art Spectrum Monitoring and Management System (SMMS) to monitor the utilization of frequencies. The system is also used to monitor compliance to frequency assignment conditions. The SMMS comprises of fixed and mobile radio monitoring stations. The fixed monitoring stations are located in Nairobi, Mombasa, Kisumu, Nakuru, Garissa, Kitale, and Eldoret. In addition to the SMMS, the Authority has portable monitoring equipment.

The Authority conducts technical analysis of frequencies before assignment, to resolve harmful frequency interference, if any. This is to ensure that users of assigned spectrum do not experience interruption of communication while using the assigned spectrum.



TABLE 4.3: PERCENTAGE COMPLIANCE LEVEL

INSPECTION AREA	NUMBER OF ON-SITE INSPECTIONS (I)	COMPLIANCE LEVEL (%) (C)
Broadcast (FM)	10	77.8
Broadcast (TV)	38	74.5
Land Mobile	104	60.6
Fixed	300	86.8

Source: Communications Authority of Kenya



TABLE 4.4: NUMBER OF FREQUENCY MONITORING REQUESTS AS AT THE END OF THE FINANCIAL YEAR

YEAR	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14
VHF/UHF	9	13	35	32	10		
HF	-	2	2	2	5		
Broadcast (Surveillance)	28	62	7	11	7		
Total	35	77	54	45	22		

Source: Communications Authority of Kenya



TABLE 4.5: NUMBER OF FREQUENCY INTERFERENCE CASES AS AT THE END OF THE FINANCIAL YEAR

YEAR	Total	Received	Total	Received	Total	Received	Total	Received	Total	Received
Frequency Band/Service	17	15	13	10	67	25	21	19	47	36
VHF, UHF and SHF	-	-	-	-	-	-	3	0	5	3
HF	5	5	2	2	7	5	8	8	2	2
Broadcasting	22	20	15	12	34	30	32	27	54	41
Total										

Source: Communications Authority of Kenya

4.1.4.1 Frequency Monitoring

The Authority continually conducts FM and TV broadcast monitoring which is in line with its mandate of ensuring lawful and efficient usage of scarce spectrum resource. In addition, the Authority receives requests for radio monitoring from various agencies before assignment. The Authority conducted radio monitoring arising from 22 such requests as indicated in Table 4.4.

4.1.4.2 Interference Resolution

A total of 54 cases of interference were handled in the year, out of which 36 were in the 700-900MHz and 1900-2700 MHz UHF bands. The interference arose from unauthorised deployment of GSM repeaters in commercial and residential premises in Nairobi and its environs. There were 41 cases resolved translating to an overall percentage of 75.9 as compared to 84.4 in the previous year as summarized in the Table 4.5.

4.1.5 Postal and Courier Licensees

During the year, the Authority inspected 341 postal/courier outlets compared to 246 the previous year. This represented an increase of 38.6 percent. The inspections covered 172 Postal Corporation of Kenya (PCK) outlets and 169 courier outlets. These inspections established that 124 outlets were compliant indicating a compliance level of 36.4 per cent.

4.1.5.1 Monitoring Quality of Postal Services

The Authority uses an automated mail quality of service measurement system in select post offices across the country. During the year, 543 test mail articles were posted across the country. The average mail delivery time was found to be 13 days, which is an improvement from the previous years 198 days.



TABLE 4.6: BROADCASTING CONTENT MONITORING

STANDARDS COMPLIANCE	QUARTER 1 COMPLIANCE	QUARTER 2 COMPLIANCE	QUARTER 3 COMPLIANCE	QUARTER 4 COMPLIANCE
Local content quota requirement of 40%	82.7%	89%	75%	83.3%
PWDS sign language insert requirement	92%	92%	98%	92%
Advertisement (maximum limit of 10 minutes in every 30 minutes of TV programming)	100%	100%	100%	100%
Advertisements (40% local)	100%	100%	100%	100%
Children's programs requirement of at least 5hrs per week	78%	89%	12%	12.5%
Appropriate content requirement during the watershed period	98%	99%	94%	100%

Source: Communications Authority of Kenya



TABLE 4.7: COMPLIANCE WITH 40 PER CENT LOCAL CONTENT QUOTA

40% LOCAL CONTENT QUOTA REQUIREMENT	QUARTER 1 COMPLIANCE	QUARTER 2 COMPLIANCE	QUARTER 3 COMPLIANCE	QUARTER 4 COMPLIANCE
FY 2016/17	68.7	64.6	56.3	59
FY 2017/18	82.4	89	75	83.3

Source: Communications Authority of Kenya

40% LOCAL CONTENT



FIGURE 4.2: LOCAL CONTENT QUOTA COMPLIANCE

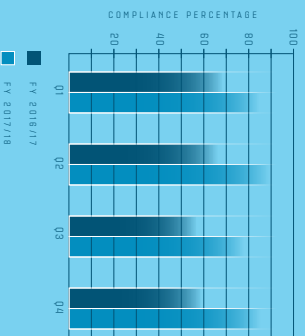


TABLE 4.8: LOCAL CONTENT BROADCASTER COMPARISON

LOCAL CONTENT (PER QUARTER)	NUMBER OF BROADCASTERS (Q1 QUARTER 2017/2018)	NUMBER OF BROADCASTERS (Q2 QUARTER 2017/2018)	NUMBER OF BROADCASTERS (Q3 QUARTER 2017/2018)	NUMBER OF BROADCASTERS (Q4 QUARTER 2017/2018)
≥ 40	32	42	38	39
30 to < 40	8	4	5	3
20 to < 30	4	2	5	4
10 to < 20	3	1	1	0
< 10	1	2	1	2

Source: Communications Authority of Kenya

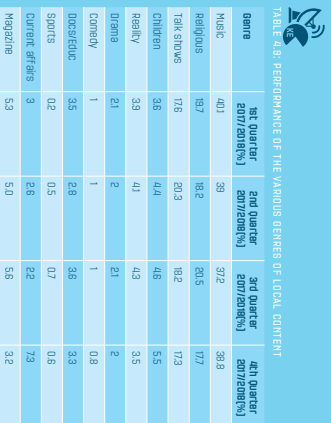
4.1.6 Broadcasting

Content Monitoring

During the year under review, the Authority monitored Free-to-Air (FTA) TV stations for compliance with the following requirements: local content quota requirement of 40 per cent; Persons living with Disabilities (PWDs) sign language insert; advertisements requirements of 10 minutes in every 30 minutes of programming; 40 per cent local advertising footage; at least 5hrs per week of children's programs; and appropriate content during the watershed period. On accessibility to broadcasting services by PWDs, 92 per cent of FTA TV stations that air News as part of their programming, complied with this requirement.

4.1.6.1 Local Content Quota Compliance

There was an improvement in compliance level by FTA TV broadcasters in regard to the 40 per cent local content quota requirement, with 83.3 per cent complying as compared to 65 per cent in the previous year. This was attributed to regulatory interventions by the Authority. Table 4.7, 4.8 and Figure 4.2 and shows compliance with 40 per cent local content quota.



Source: Communications Authority of Kenya



FIGURE 4.3: PERFORMANCE OF THE VARIOUS GENRES OF LOCAL CONTENT



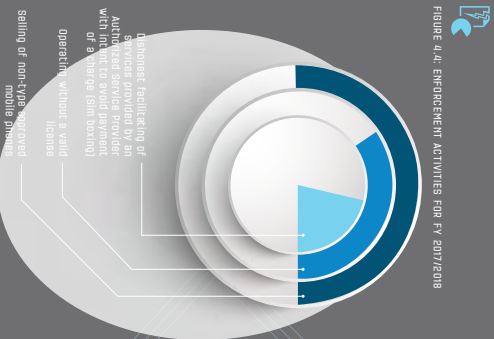
4.1.7 Evaluation of Environmental Impact Assessment (EIA) Reports

The Authority continued its collaboration with National Environmental Management Authority (NEMA) on ICT related environmental matters. In this regard, the Authority provided technical advice on eight EIA reports as requested by NEMA.

4.1.8 Enforcement Activities

During the year, the Authority confiscated 28 GSM radio repeaters from residential and commercial premises in the course of resolving interference in the GSM band. The Authority also aided law enforcement activities by providing necessary recordings from the broadcast logger.

During the year, 15 cases that were in breach of the relevant statutory provisions were prosecuted as shown in the Figure 4.4.



Cybersecurity is the collection of tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance and technologies that can be used to protect the global and national cyber environment, as well as organization and user assets. Cyber-crime on the other hand refers to criminal activity that is conducted via the internet and computers. This includes: online impersonation, propagation of false news online, mobile money fraud, creation and distribution of malware across networks, posting of obscene content online, and disruption of a country's national critical infrastructure, amongst other activities.

In order to mitigate the negative effects of cyber-crime activities in Kenya, and in line with Kenya's ICT Sector Policy, the Kenya Information and Communications Act of 1998 and the National Cybersecurity Strategy, the Government of Kenya, through the Authority, established the Kenya Computer Incident Response Team – Coordination Centre (National KE-CIRT/CC) as the Kenya's trusted point of contact on cybersecurity matters. This is also in line with Pillar 1 of the Authority's Strategic Plan 2013-18, which is on enabling environment and Pillar 3 on infrastructure and service development.

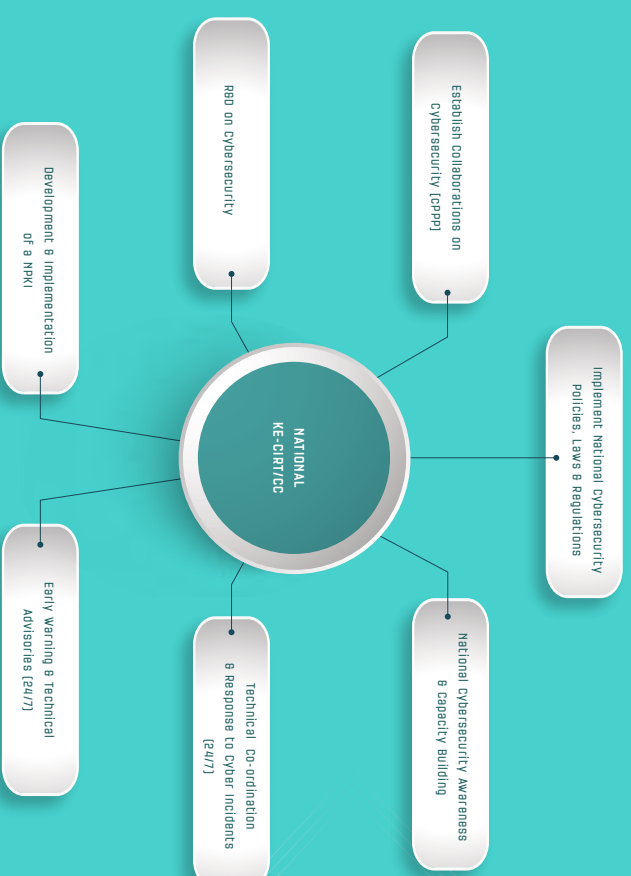
The National KE-CIRT/CC is a multi-agency function of the government and domiciled at the Communications Authority of Kenya. It is served by technical staff both from the Communications Authority and law enforcement agencies. This multi-agency approach is aimed at expediting the response to and resolution of cyber-criminal activity where the roles, strengths and synergies of the various government agencies leads to enhanced efficiencies and effectiveness.

The functions of the National KE-CIRT/CC, are summarized in Figure 5.1.

Further, the Computer Misuse and Cybercrimes Act of 2018 was enacted in May 2018. This Act aims to provide for offences relating to computer systems; to enable timely and effective detection, prohibition, prevention, response, investigation and prosecution of computer and cyber crimes; to facilitate international cooperation dealing with computer and cybercrime matters; and for connected services.



FIGURE 5.1: FUNCTIONS OF THE NATIONAL KE-CIRT/CC



The Authority also issued 58 cyber security best practice guides.⁵

The Authority partnered with the Kenya School of Government and the ICT Authority to develop a curriculum on cybersecurity targeting middle- and senior-level information technology professionals in the national government, county governments and private sector.

In collaboration with key stakeholders, the Authority developed a General Information Security Best Practice Guide.⁶ The Guide is meant to improve Kenya's cyber security posture especially among SMEs, the government, private sector players and the public.

5.3 Electronic Transactions Services

The Authority oversees the management of the National Public Key Infrastructure (NPKI). The NPKI creates a framework for protecting communications and stored information from unauthorized access and disclosure by addressing the fundamentals of cyber security - confidentiality, integrity, authentication and non-repudiation. During the year the Authority licensed one Electronic Certification Service Provider (E-CSP) to offer digital certification services.

Digital certification services have continued to spur electronic services within government. These include submission of tax returns, company registration, renewal of driver's licences, order tracking for the issuance of passports, IDs, job applications, and enhance the security of machine-to machine communication.

5.4 Public Awareness Initiatives

The National KE-CIRT/CC participated in awareness initiatives including the Authority's Annual ICT Week, the Annual ISACA-Kenya Conference and the Annual Africanation Cybersecurity Conference. The Authority further published a feature in the Business Daily newspaper on 'Building a National Culture of Cybersecurity to Enhance Kenya's Resilience to Cyber Insecurity'.

The Authority also participated in the annual conference of the Forum of Incident Response and Security Teams (FIRST). Others included the hosting and participation in the global Safer Internet day and also participated in two (2) County ICT Forums (Kilao Kikuu) and the Nairobi International Trade Fair.

5. <http://www.ke-cirgokindex.php?national-ke-circ-security-494>
6. <http://www.ke-cirgokindex.php?2018/General-Information-Security-Best-Practice-Guide-for-kenya.pdf>

5.1 Cyber Threat Landscape

5.1.1 Cyber Threats Detected

Cyber attacks can be targeted at individuals, private organizations or even governments across the globe. During the year, the National KE-CIRT/CC detected over 23.8 million cyber threats compared to 77 million in the previous year. The increase is attributed to the deployment of enhanced detection systems. The cyber threats varied from: Denial of Service (DoS) including botnet and brute-force attacks that lead to denial of computer services and illegal access to computer systems; online impersonation via social media accounts and domain names; web application attacks including website defacement; malware including phishing attacks; online abuse including online fraud, hate speech, incitement to violence and fake news; and systems misconfiguration. Systems misconfiguration was included as a new category of cyber attack vector. The National KE-CIRT/CC subsequently issued advisories to the targeted organizations.

Table 5.1 and Figure 5.2 shows an overview of the distribution of cyber threats detected during the year in comparison to the previous year.

5.1.2 Cyber Threats Advisories

During the year, the National KE-CIRT/CC detected and analysed 23,815,972 threats out of which 7180 were validated and escalated. This was a significant increase from the 225 escalated in the previous year. The increase in the number of escalated cyber threats was due to enhanced capabilities of the National KE-CIRT/CC, and increased collaboration through new partnerships with other CIRTs globally.

TABLE 5.1: CYBER THREATS DETECTED

NO.	CYBER ATTACK VECTOR	2016/2017	2017/2018
1.	Malware attacks	4146,455	16,305,547
2.	Web application attacks	2,656,675	3,743,558
3.	Botnet/DoS	592,327	3,758,394
4.	System Misconfiguration	-	6,158
5.	Online abuse	15	2,287
6.	Online impersonation	46	388
Total Cyber Threats		7,765,468	23,815,972

SOURCE: Communications Authority of Kenya

FIGURE 5.2: CYBER THREATS DETECTED

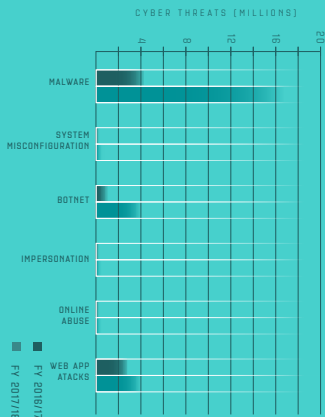


TABLE 5.2: AN OVERVIEW OF THE CYBER THREATS VALIDATED AND ESCALATED

NO.	CYBER ATTACK VECTOR	2016/2017	2017/2018
1.	Malware	94	1,926
2.	System Misconfiguration	-	1,681
3.	Botnet/DoS	56	291
4.	Online impersonation	46	244
5.	Online abuse	15	2,787
6.	Web Application Attacks	14	148
Total		255	7,803

SOURCE: Communications Authority of Kenya

5.2 Collaboration

The National KE-CIRT/CC continued to enhance its trust network at the national, regional and international levels. At the international level, the Authority established new partnerships with 45 national CIRTs/CIIRs, various Domain Registrars and the Commonwealth Cybercrime Initiative.

At the regional level, the National KE-CIRT/CC continued to collaborate with regional actors through participation in the East Africa Communications Organization (EACO) Working Group on Cyber Security and enhanced engagement with the African Network Information Centre (AFRINIC), especially with regards to the accuracy of the IP Number Resource WHOIS Database. At the national level, the National KE-CIRT/CC continued to collaborate with its various stakeholders across the public and private sector, and non-governmental actors.

In addition, the National KE-CIRT/CC continued to collaborate with its existing global cybersecurity partners including the International Telecommunication Union (ITU), the African Union (AU), the Forum for Incident Response and Security Teams (FIRST), ISACA-Kenya, the Internet Corporation for Assigned Names and Numbers (ICANN), Facebook, Twitter, Google, GoDaddy, the global 24/7 Cybercrime Network and the United States of America.

The Authority convened quarterly meetings of the National KE-CIRT/CC Cybersecurity Committee, which brought together players in government, telecommunication, financial sector, public utility, academia and professional associations.

Further the Authority organized capacity building on managing CIRTs, ethical hacking and penetration testing.

EMPOWERING AND PROTECTING THE CONSUMER

The Authority is mandated by KICA to protect ICT consumers by undertaking various consumer regulatory interventions. These include: consumer education and empowerment, consumer research and surveys; improved service delivery; and handling of consumer complaints and enquiries. The interventions are aimed at safeguarding consumer interests and equipping them with relevant ICT information, skills and knowledge to enable them make informed decisions.

The implementation of these activities was in line with pillar 1 of the Authority's Strategic Plan for the period 2013-18 that aimed at creating an enabling environment through promotion of consumer empowerment and public awareness.

6.1 Consumer Education and Information

In its effort to empower consumers, the Authority availed consumer advisory information targeting users of mobile, internet and postal and courier services. In addition, the Authority availed information on e-waste and guidelines for Child Online Protection (COP) Programme. This information was disseminated through various platforms including County ICT Consumer Forums (dubbed Kilao Kikuu), that were held in Baringo and Nyeri. These forums are avenues for consumers to directly interact with the Authority as well as communicate with service providers, the County Governments and Consumer Organizations on pertinent ICT issues. Since the inception of Kilao Kikuu in 2015, the Authority has cumulatively held 16 County ICT Consumer forums. In total, 616,339 consumer education materials were distributed during the year as compared to 382,315 materials during the previous year.

CONSUMER AND CUSTOMER NEEDS: The Authority utilized the 43rd Kenya Secondary School Heads Association (KESSHA) Conference, the 13th Kenya Primary School Head Teachers Association (KEPSHA) Annual Delegates Conference, the 5th Annual Children's Government Congress and other forums to create awareness on COP.

6.1.1 Consumer Trends and Behavior Survey

The Authority undertook a consumer trends and behaviour survey, which focused on consumer behaviour with regard to purchase and usage of ICT services. Based on the survey findings, the following issues, among others, were identified by consumers as areas of concern:

- Inappropriate content aired on TV and radio
- High cost of ICT products
- Increased Cyber-crime
- Propagation of hate speech
- Counterfeit ICT products

6.1.2 Consumer Rights

The survey also revealed the following consumer behaviors: word-of-mouth communication amongst friends, family and colleagues is important when making purchase decisions; consumers were aware of the security risks that result from sharing personal ICT devices but choose to ignore the same; the main reasons for switching mobile service providers were cost, promotions and special offers, network coverage and service quality; consumers appreciate the need for SIM card registration in order to curb crimes; and that consumers are now more concerned about the availability of mobile money transfer agents as opposed to being on the same mobile network with their family members and friends.

6.1.3 Customer Satisfaction

The Authority undertook an annual Customer Satisfaction survey of its internal and external customers. This was aimed at establishing the level of satisfaction of its customers and informed intervention mechanisms to improve service delivery. The overall satisfaction index went up to 76.4 per cent from 73.8 per cent in the previous financial year.

6.1.4 Consumer Protection

The Authority has put in place mechanisms aimed at safeguarding consumers of ICT services. These include the COP initiative and handling of consumer complaints and enquiries.

6.1.4.1 Child Online Protection

The Authority, in collaboration with ITU held a stakeholders workshop to deliberate on the National Child Online Protection Framework. The key thematic areas in the framework, were: public education and awareness activities; technical tools for a safer internet experience; comprehensive policy and legislative framework; training and capacity building; and reporting mechanism and support activities. The deliberations concluded that there is need to develop a country strategy aimed at addressing child online protection. In this regard, the Authority entered into a co-operation agreement with the ITU to develop a Kenya National Strategy for the protection of children online.

6.1.4.2 Consumer Complaints and Enquiries

The Authority continued to address complaints and enquiries from the public on various ICT issues.

6.1.4.3 Complaints

The Authority received 392 complaints through the official complaint-handling platform,⁷ out of which 244 were resolved. This translated to a resolution rate of 62 per cent. The major categories of complaints received and their proportionate shares are as highlighted in Figure 6.1:

6.1.4.4 Enquiries

The Constitution and Access to Information Act 2016 provides the right to access to information to members of the public. In this regard, the Authority is required to avail and disclose information upon request.

This is done through various platforms, mainly through the website and social media platforms as well as the Authority's official email.⁸

The bulk of the enquiries were general in nature seeking information on the Authority's mandate on various aspects of the industry. The Authority received and responded to 821 enquiries. The proportionate representation of the enquiries is tabulated in the Table 6.1 and the Figure 6.2 pie chart.



FIGURE 6.1: PROPORTIONATE REPRESENTATION OF ENQUIRIES RECEIVED

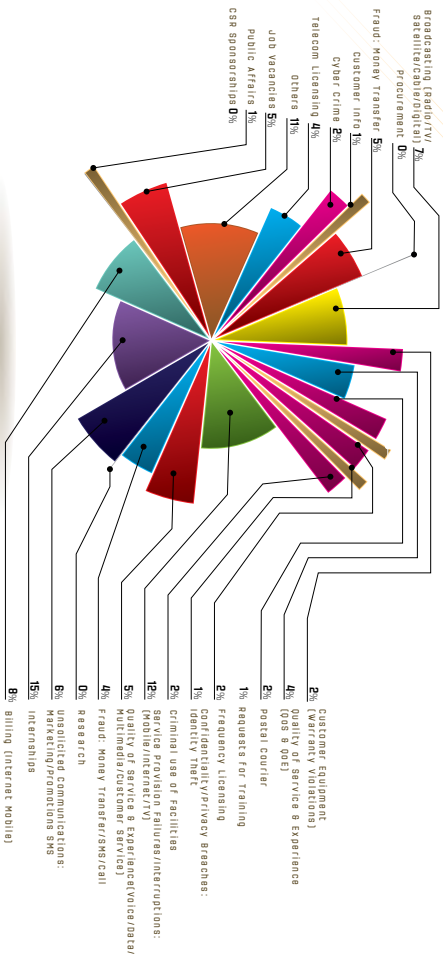


FIGURE 6.2: NUMBER OF CONSUMER COMPLAINTS

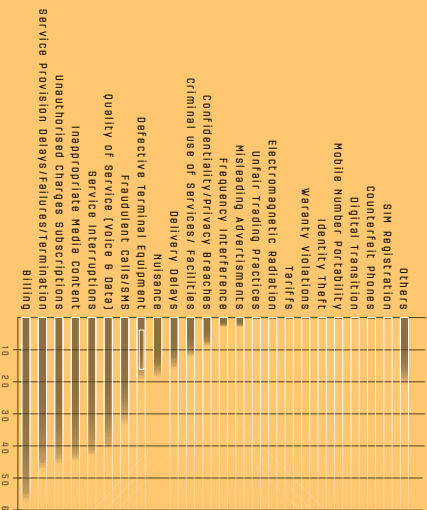


TABLE 6.1: ENQUIRIES

SERVICE	NUMBER
CSP sponsorships	3
Research	3
Broadcasting (radio/TV/satellite/cable/digital)	60
Frequency Licensing	14
Procurement	2
Public Affairs	8
Telecom Licensing	39
Postal Courier	21
Criminal Use of Facilities	17
Customer Information	7
Cyber Crime	15
Fraud (Money Transfer/SMS/Call)	29
Service Provision Failures/Interruptions (Mobile/Internet/TV)	95
Quality of Service & Experience (Voice/Data/Multimedia/Customar Services)	44
Unsubscribed Communications: Marketing/Promotions SMS Interactions	49
Fraud: Money Transfer	44
Billing (Internet/Mobile)	121
Requests for Training	64
Job Vacancies	5
Others	49
Quality of Service & Experience (QoS & QoE)	30
Confidentiality/Privacy Breaches: Identity Theft	20
Total	821

CAPACITY BUILDING, IMPROVEMENT OF SYSTEMS AND WORKING ENVIRONMENT

Capacity building, modernization of systems and improvement of internal processes are key performance drivers in an organization and play a pertinent role in improving service delivery. In this regard, the Authority undertook various initiatives to develop its human capital: improve the working environment; automate internal processes; improve quality management systems; and enhance communication and effective feedback among its staff. This is in line with Pillar 2 of the Strategic Plan 2013-2018 on Institutional Capacity.

7.1 Human Capital

The Authority is committed to ensuring there is adequate human capacity to deliver on its strategy and mandate. During the year under review the Authority's staff compliment stood at 276, with a female to male ratio of 45:55 compared to 46:54 in the previous year.

7.1.1 Organizational Learning

The Authority takes cognizance of the importance of continuous development of its staff capacity to reflect the competence and flexibility required to regulate the dynamic ICT sector. In this regard, the Authority trained its staff in the following areas: policy and regulation; professional development; management skills; service delivery and ICT technical skills. In addition, the Authority also sponsored 7 staff (5 female, 2 male) for postgraduate masters programmes.

The Authority also partnered with international organizations for knowledge and skills transfer through various programmes which included: the Swedish Programme for ICT in Developing Regions (SPIDER) on ICT Policy and Practice with funding from the Swedish International Development Agency (SIDA) where staff were trained on Spectrum Trading and Telecommunications Compliance Metrics; training on Cyber Security at the George Marshall European Centre for Security Studies in Germany with sponsorship from the Government of USA; training on Frequency Spectrum Management sponsored by the National Telecommunications and Information Administration (NTIA) of the USA; training on introduction of new technological and business transformations for efficiency and enhancement of regulatory compliance, sponsored by the United States Telecommunications Training Institute (USTTI); and Professional attachment of staff to the Commonwealth Telecommunications Organization (CTO) through the Commonwealth Scholarship Fund, for hands-on-work experience and learning.

7.1.2 Promoting Capacity Building in The Industry

In an effort to build capacity for the industry, the Authority, in liaison with the Government of USA, facilitated training of professionals in management of CIRTs. Further the Authority partnered with AFRALTI to host two workshops on ethical hacking and cyber security analysis. In addition, the Authority continued its collaboration with ITU and facilitated training of law enforcement and judicial officers on ICT Legislation and Regulation.

7.1.3 Knowledge Transfer Between Industry and Academia

As a knowledge transfer link between the industry and academia, the Authority provided attachment/internships opportunities for 125 students (61 male and 64 female) from various colleges and universities. The Authority also hosted students from various learning institutions on study tours.

7.1.4 Knowledge Management

Knowledge plays a central role in wealth creation, social welfare and international competitiveness. During the year under review, the Authority developed a Knowledge Management policy, which provides guidance in identifying its knowledge assets and strategies for capturing, storing and sharing knowledge. The Authority also identified and documented data needs and data gaps, and built staff capacity through trainings in Knowledge Management and Data Analytics.

7.2 Working Environment

The Authority provides a conducive working environment to ensure a healthy, efficient and highly productive workforce.

7.2.1 Occupational Health and Safety

In line with the Authority's Health, Safety and Environment (HSE) policy, various initiatives to ensure a healthy, safe and conducive working environment were undertaken. These initiatives involved enhancing facilities at the Gymnasium, installation of a modern physical access control system, fire drills, HSE audits, and staff sensitization/training on emergency preparedness.

7.2.2 Environmental Sustainability

The Authority developed an Environmental Sustainability policy in an effort to promote sustainable use of ICTs, in line with the best environmental practices and EMCA 1992. The Authority collaborated with NEMA, EACO and other relevant partners towards promotion of Green ICTs. This involved: pollution control; solid waste management; Climate Change adaptation mitigation initiatives; and ecological enhancement. The Authority complied with the Environmental Impact Assessment Regulations by type approving ICT equipment and facilities. The Authority also participated in the 2018 World Environment Day and sensitized the public on e-waste management. Environmental sustainability audit carried out by NEMA to assess the Authority's level of compliance with environmental management found CA to be compliant.

7.2.3 Gender and Disability Mainstreaming

The Authority continued to implement its disability mainstreaming policy and implemented recommendations of the disability accessibility audit geared towards making the authority more accessible to PWDs. The recommendations included creation of a ramp at the gate entrance and lowering of the soap dispensers and doorknobs at the PWD washrooms. The Authority also renewed the license for the Job Access With Speech (JAWS) screen reading system for the visually impaired. In addition, the PWDs physical accessibility facilities continued to be maintained and Staff sensitized on disability etiquette. In its endeavor to mainstreaming and ensure gender parity in the workplace, the Gender and Disability Committee was trained and staff sensitized on gender mainstreaming.

During the year under review, the Authority commemorated the Global Celestial Palsy Awareness Month in March 2018 by participating in a documentary that was aired in the media.

7.2.4 Campaign Against HIV/Aids` and Prevention Of Drugs & Substance Abuse

The Authority continued to support the Government's strategies in the fight against HIV/AIDS under the Maisha 2 Framework from National AIDS Control Council (NACC). In this regard, the Authority conducted HIV/AIDS behavior change seminar for staff which included an on-site Voluntary Counseling & Testing (VCT) services; sensitized staff on prevention of drugs and substance abuse; distributed Information Education Communication (IEC) materials to the public; held two outreach programmes focusing on HIV testing, nutrition and wellness checks in partnership with Ministry of Health (MoH) during its ICT county forums.

7.2.5 Culture Change

Employees were trained on culture change as part of the transition towards implementation of the Enterprise Resource Planning (ERP) system that is expected to enhance productivity. To further enhance synergy and cohesion, the Authority held team building for its employees and Board.

7.3 National Cohesion and National Values

In order to promote cohesion, national values and principles of governance, as stipulated in the Constitution of Kenya (2010), the Authority undertook the following activities among others: celebrated patriotic days on quarterly basis, implemented the social media monitoring system; strengthened inter and intra government relations through the regional offices; participated in the inter-agency committee of NCIC; and developed a collaborative framework on prevention of hate speech.

7.4 Automation of the Authority's Processes

The Authority, in its Strategic Plan 2013-2018, committed to building its institutional capacity by modernizing internal systems and processes with a view to ensuring accountability, performance improvement, efficient service delivery and compliance with statutory requirements. In so doing, the Authority embarked on a Business Process Re-engineering Programme (BPPA) that sought to re-engineer and automation of processes at the Authority. The Programme is geared towards achieving improving service quality through customer centric processes. During the year, the Authority under the BPPA Programme, started the implementation of an Enterprise Resource Planning (ERP) system to automate processes in three functions namely: Human Capital and Administration; Procurement; and Finance and Accounts. In addition, the Authority installed videoconference and Tele-Conference facilities at its headquarters and regional offices to facilitate online meetings.

CORPORATE COMMUNICATION AND INTERNATIONAL LIAISON

The Authority is the designated government representative to regional and international ICT inter-governmental bodies. In fulfilment of this obligation, the Authority engaged various stakeholders on industry matters, participated in various local, regional and international fora, carried out public awareness campaigns and undertook a number of Corporate Social Responsibility (CSR) initiatives.

8.1 Engaging Stakeholders and Local Communities

During the year under review, the Authority continued to engage stakeholders in the ICT sector as well as local communities on various activities. In order to ensure that the Authority consistently maintains good relationships with stakeholders, a stakeholder engagement framework was developed as a guiding blueprint.



CA Director General Mr. Francis Wanjau cuts a ribbon to unveil two classrooms constructed by the Authority at Megwara Primary School in Kiljido County.

8.1.1 Corporate Social Responsibility

In executing its mandate, the Authority is committed to contributing to the socio-economic well-being of society through its Corporate Social Responsibility and Sponsorship programmes.

Some of the activities carried out in the year under the CSR banner include the provision of equipment in a computer laboratory at Endarasha Boys' High School, rehabilitation of the school facilities at Friends Boys' High School Namwele and construction of two classrooms at Megwara Primary School.

To support the less fortunate in the society, the Authority donated foodstuff and other basic necessities to: Tumshangiliit Mico wa Afrika in Nairobi; Little Rock Children's home in Nairobi; Kimbilio Hospice in Uasin Gishu; and Waa Children's Home in Mombasa County. In addition, the Authority supported the Mater Heart Run, an initiative geared at assisting children with heart ailments. Further, the Authority continued its sponsorship of Talanta Football Club and the Sports Man of the Year Awards (SOYA) programmes.

8.1.1.2 Kuza Awards

During the year, the Authority held the second edition of the CA Kuza Broadcasting Awards. This is an initiative to recognize and fetter broadcasters who demonstrate excellence in their broadcasts in line with regulatory requirements. The objectives of the Awards are to:

celebrate excellence in Kenyan broadcasting; reward responsible and responsive broadcasting; enable consumer participation in the broadcasting regulatory process; and encourage the use of the broadcasting platform for socio-economic development. The Authority maintained the three categories of awards namely: Regulatory Compliance Awards, Collaborative Awards, and People's Choice Award.

8.1.2 Public and Stakeholder Consultations

As the regulator of the ICT Sector, the Authority is expected to involve stakeholders on any policy issues from time to time. The input from stakeholders is key in ensuring that decisions taken by the Authority not only reflect the realities of the industry but are also responsive to the needs of stakeholders and the public. The stakeholder engagements include meetings, forums, workshops and online correspondences.

During the year under review, the Authority held key stakeholder engagements on various policy issues including: Telecommunications Market Competition Study; media coverage during the 2017 elections; enhancement of accessibility to broadcasting services by Persons with Disabilities (PWDs); an annual stakeholder forum convened by the Authority. The ICT Week theme in the year was "Use of Emerging Technologies in Driving the Big 4 Agenda for Kenya".



8.1.3 Exhibitions and Promotional Activities

In an effort to increase visibility, the Authority participated in local, regional and international exhibitions. The local exhibition included the Agriculture Society of Kenya shows (ASK) in Kisumu, Mombasa and Nairobi where the Authority supported innovators to showcase the link between ICT and agriculture. The Authority was awarded in various categories during the exhibitions.

In a bid to further enhance its visibility, the Authority sponsored the following activities: Law Society Annual Conference; East Africa Digital Farmers Conference & Exhibition; Connected Kenya Summit; Media Council of Kenya's Annual Journalism Excellence Awards (AJEA); Kalasha International Awards; Annual PR Summit and Gala. The Authority also sponsored the Western Kenya Creative Camp and golf tournaments in Nairobi, Kisumu and Nyeri.

Other visibility activities included advertisements in the mainstream media, with the purpose of creating awareness on the mandate of the Authority. In line with this objective, the Authority partnered with Kweze Sports TV and NTV to broadcast CA advertisements and carry out road shows during the FIFA World Cup in order to take advantage of the wide audience opportunity.

8.2 International Relations and Liaison

As the country's designated representative in regional and international ICT matters, the Authority maintained membership in key/CT organisations and participated in activities organised by these organizations. Active participation in these activities ensures that Kenya keeps abreast with the current ICT trends, regulatory best practice and policy decisions.

8.2.1 Regional and International Meetings and Conferences

During the year under review, the Authority launched the campaigns for Kenya's candidature for the post of Secretary General of the African Telecommunications Union (ATU) for a four-year term. The Authority also launched campaigns for Kenya's re-election to serve in the Council of the International Telecommunication Union (ITU) for another four-year term.

The Authority in liaison with other Government agencies, coordinated the development and presentation of national positions to treaty making meetings and other forums organized by affiliated regional and international ICT organizations. The most notable forums were: the ITU World Telecommunication Development Conference (WTDC-17), the Joint UPU Postal Operations Council and Council of Administration Sessions; ITU Council; the 37th Administrative Council of the Pan African Postal Union (PAPU); and the ATU Administrative Council Session.

The Authority also participated in meetings and conferences organized by various international and regional ICT organizations. These included: ITU, ATU, UPU, PAPU, CTO, ICANN, EACO, AFRALIT, Association of Regulators of Information and Communications for Eastern and Southern Africa (ARICEA), Internet Governance Forum (IGF) and Smart Africa.

The Authority, in collaboration with the affiliated international ICT bodies, hosted international meetings including the Special AFRALIT Governing Council meeting, EACO Executive Committee meetings, 3rd Annual Sub-Saharan Spectrum Management Conference, CTO Stakeholder Consultation on the findings of the study of OTTs, and the 22nd EACO Assemblies.

8.2.2 Benchmarking

The Authority hosted several delegations from other African regulatory agencies on benchmarking missions. Some of the delegations hosted by the Authority included: Independent Communications Authority of South Africa (ICASA); Uganda Communications Commission (UCC) and Zambia Information Communications Technology Authority (ZICTA).

8.2.3 Membership To Regional and International Organizations

As the designated representative of the Kenyan Government on ICT matters, the Authority subscribes to various regional and international ICT organizations. These organizations include ITU, ATU, UPU, PAPU, CTO, EACO, AFRALIT, ARICEA and Smart Africa.

9 PROCUREMENT AND FINANCIAL STATEMENTS

9.1 Procurement and Disposal

The Authority adhered to the principles of transparency, accountability, openness and value for money in its procurement processes, as provided for in the Constitution of Kenya 2010, the Public Procurement and Asset Disposal Act, 2015, Regulations and the Authority's Procurement Policy manual.

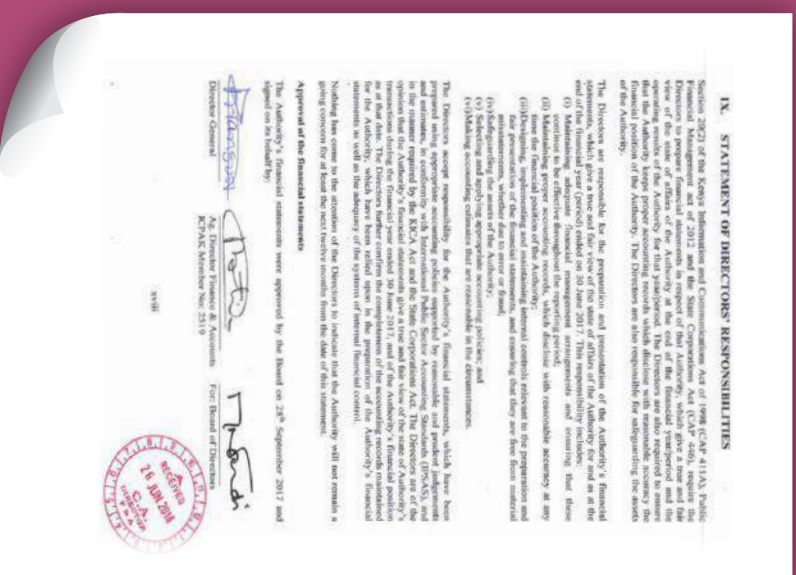
The Authority's procurement budget was KES 1,309,883,107.00, out of which KES 1,021,551,501.53, was utilized. In compliance with the Access to Government Procurement Opportunities (AGPO), the Authority awarded KES 207,671,467.71 against a target of KES 190,740,940.10.

TABLE 9.1: TOP-10 TENDERS AWARDED IN FY 2017/18 (BY VALUE)

NO.	ITEM DESCRIPTION	FIRM AWARDED THE TENDER	TENDER AMOUNT
1.	Tender for design, supply, testing and commissioning of additional new quality of service monitoring system (2)	Broadband Communications	EURD 725,180.81
2.	Tender for supply, delivery, installation, configuration and maintenance of IT security solution	Trans Business Machines Ltd	USD 79,880.34
3.	Tender for supply, delivery and maintenance of IT related hardware - servers and storage	Next Technologies Ltd	KES 66,165,749.15
4.	Retention of installation, configuration, commissioning and maintenance of internet connectivity and related services at CA, District and Four Regional Offices	Externet Communications	KES 64,144,520
5.	Supply, installation and configuration of a high availability enterprise class storage	Symphony Ltd	KES 42,702,239.00
6.	Tender for upgrade of email messaging system	Next Technologies Ltd	KES 39,754,685.89
7.	Procurement of digital forensic tools for the national cyber security centre	MPi Technology Solution	USD 368,870.66
8.	Supply, delivery, installation and maintenance of air AWR at CA Centre	MPi Technology Solution Ltd	KES 30,709,484.40
9.	Provision of security services 2018-2021	MPi Security Services	KES 25,082,400
10.	Provision of creative concept, branding, fabrication and event management services to the Authority during the Annual Report and Postmortem KES show	Transbird Media Group	KES 25,482,388

9.2 Financial Statements

The following is a summary of the Authority's financial statements as at 30th June 2017.



3.67 BILLION

FY 2016/2017

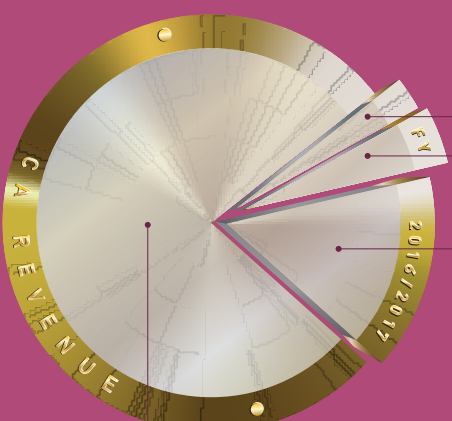
TOTAL EXPENDITURE



TABLE 9.2: STATEMENT OF FINANCIAL PERFORMANCE

STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED 30 JUNE 2017			
	2017 Ksh'000 '000	2016 Ksh'000 '000	
REVENUE FROM NON-EXCHANGE TRANSACTIONS			
Licence fees	7 361 163	6 613 333	
Revenue from exchange transactions			
Finance income	1 110 283	1 000 564	
Other income	385 271	158 393	
	1 495 554	1 209 283	
Total revenue	8 786 713	7 823 286	
EXPENSES			
Employee costs	1 183 384	1 173 479	
Director emoluments	47 211	52 283	
Duplication and amortization expenses	362 618	305 966	
Repairs and maintenance	105 492	99 838	
General expenses	1 981 111	1 982 904	
Total Expenses	3 667 707	3 514 250	
Other gains/losses			
Gain on sale of assets	1 194	774	
Gain on foreign exchange transactions	35 818	(46)	
Impairment loss	-	(38 227)	
Surplus	5 165 778	4 243 288	
Corporation tax 30%	-	-	
Dividend/retention surplus	4 188 475	2 888 586	
Surplus for the period	595 603	1 494 742	

FIGURE 9.1: SOURCES OF REVENUE



8.78 BILLION

FY 2016/2017

TOTAL REVENUE

9.2.1 Revenue

Table 9.2 shows the Statement of Financial Performance for the year ended 30 June 2017.

9.2.1.1 Sources of Revenue

In the FY 2016/17 the Authority earned a total of KES 8.78 billion against a budget of KES 7.82 billion. The sources of the revenue were: Annual frequency license fees, annual operating license fees, cash investments and fixed deposits, and other incomes such as application fees, type approval fees, rent and penalties.

9.2.2 Expenditure

During the FY 2016/17, the operating costs for the Authority increased by 3.5 per cent from KES 3.54 in FY 2015/16 to KES 3.67 billion. The marginal increase is attributed to the upgrade of the regulatory tools owing to the expanded mandate.

9.2.3 Surplus

The net surplus for the FY 2016/17 was KES 966 million compared to KES 1.41 Billion for the FY 2015/16. The Authority remitted KES 4.209 Billion to the National Treasury as the 90% surplus. In addition the Authority transmitted KES 2.5 billion, being the 40% frequency fees paid by one of the MNOs.

9.2.4 Audit of Financial Statements

During the FY 2017/18 the Authority's financial statements for the FY 2016/17 were audited by the Kenya National Audit Office.

9.2.4.1 Assets

The total assets of the Authority stood at KES 17.39 Billion as compared to KES 15.27 Billion in the FY 2015/16. These assets comprised: property plant and equipment valued at KES 2.59 Billion, intangible assets KES 730 million, cash and cash equivalents KES 12.39 Billion and Receivables of KES 1.67 Billion.

9.2.4.2 Liabilities

The total liabilities during the FY 2016/17 were KES 4.66 Billion which comprised of: provision of surplus remittance to treasury of KES 4.188 Billion, trade and other payables of KES 456 million and payments received in advance of KES 19 million.

NOTES

[illegible]

11.8
FY 2016
BILLION

TOTAL NET ASSETS & LIABILITIES

12.7 FY 2017
BILLION

TOTAL NET ASSETS & LIABILITIES

NOTES

[illegible][illegible]

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The Authority's website,
<http://www.ca.gov/ke>

The Authority's National KE-CIRC website,
<http://www.ke-circ.gov/ke>

visit the Authority's
National KE-CIRT/CC,
located at the CA Centre
along Wariyaki Way

Send an email to: incidents@ke-cirt.go.ke
via a letter addressed to:
The Director General
Communications Authority of Kenya (CA)

HEAD OFFICE	CA, WESTERN REGION OFFICE	CA, CENTRAL REGION OFFICE	CENTRAL REGION OFFICE	MIAMI REGION OFFICE
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CA is ISO 9001:2008 and ISO 27001:2013 certified

