



KISII COUNTY GOVERNMENT

INFORMATION & COMMUNICATION TECHNOLOGY
(ICT) POLICY

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FOREWORD

<< to be drafted by the CEC in charge of ICT>>

1 VISION AND MISSION STATEMENTS

1.1 Vision

Access to quality ICT services in the county

1.2 Mission

To harness ICT for effective and efficient public service delivery to residents of Kisii County

2 PREAMBLE

The existing Kisii County ICT policy was developed in the year 2014. Over the years the ICT sector has changed with marked technological growth and advancements. There have also been changes to legal frameworks at the national level which have influenced on the operations of the sector at the County levels. The sector has also witnessed emerging issues like cyber-security, IT enabled services, Quality of Services (QoS) demands, Internet of Things (IoT), among others.

This policy is aimed at addressing these potential gaps in the previous policy document so as to provide the citizenry with the much-needed services. The Policy has been developed through an all-inclusive, participative and consultative process. The guiding principles adopted in this policy are reflective of the vision and mission statements for the County Government of Kisii. These guiding principles include; Data protection, Privacy and Security; ICT as tool for social-economic development of the County; ICT as an integral driver for Research and Innovation in the County; enhanced services delivery using ICT enabled platforms; promotion of Sustainable social-economic development by leveraging on ICT; adoption of open standards for enhanced open governance and ICT for value creation.

Based on these principles, the ICT Policy aims at providing a roadmap for the alignment of programs and projects towards the realization of broad social-economic development in Kisii County. It states broad parameters upon which ICT standards and procedures will be derived from.

The general policy objectives are to: (1) Create ICT infrastructural conditions that will act as a bridge between the residents and the County Government, (2) Provide an ICT framework that will promote creativity and use of ICT platforms as developmental tool by all the residents of Kisii County, (3) Accelerate investment in human resource development and capacity building in ICT, (4) Promote Research and Innovation as integral in the provisioning of services and product differentiation through local value creation and fostering start-up ecosystem that are scalable, (5) Use of ICT as a tool to position and empower the residents of Kisii County to take advantage of emerging trends in sectors like education, agriculture, manufacturing, tourism and health, and (6) Adopt technology neutral approach in the deployment and regulation of ICT systems and services to promote equity and competition for a prosperous, free, open and stable county.

These objectives will be actualized through the following five focus areas: **ICT infrastructure**

and Accessibility: working with the National Government the CGK will ensure every resident can access a reliable Internet; **Public Service Delivery and Information Access:** most County Government services are offered online, this calls for a reliable online access platforms and adoption of effective ICT technologies to delivery services and information at the most convenient manner to the residents of Kisii County; **Research and Innovation:** the County Government will craft guidelines to promote innovation and to promote value creations; **Data Protection and Cyber Security:** it institute measures aimed at the protection of the user data and ensuring no security breaches are committed; **ICT Skills Development:** the level of utilizations of ICT technologies is dependent on the skills level of its users and therefore development of the capacities of the staff and residents of the County will be key in the realization of the potentials presented by ICT.

Besides, the CGK working in a collaborative manner with the National government will play a significant role in the provision of necessary infrastructure to support its implementation. Furthermore, an establishment of a Monitoring and Control framework within the ICT department will be critical to track on the implementation of this policy.

3 INTRODUCTION

3.1 Background

This policy is a successor for the 2014 policy document. It provides high-level statements on how to integrate ICT in the day-to-day operations of the CGK.

The adoption of ICT has been part of the journey walked by the County Government of Kisii. The underlying desire has been to enhance delivery of government services and programs. This is also in line with the National Government long-term development blueprint as detailed in Kenya Vision 2030 aimed at creating a globally competitive and prosperous nation, transforming Kenya into an industrialized, middle-income country and providing a high quality of life to all its citizens by 2030 in a clean and secure environment. It is also noted that by 2018, ICT sector contributed 12.9% to the National GDP (Kenya National Economic Survey Report, 2019). It is for these reasons that the CGK has recognized ICT to be an enabler to the realization of her development agenda.

Moreover, ICT continue to play a critical role in the Innovation Economy in which new knowledge is central in boosting wealth creation, social welfare and international competitiveness. This can be done through the following ways: - economic and institutional regime that utilizes existing knowledge; creation of new knowledge and entrepreneurship; educated and skilled population; dynamic information and communication infrastructure that facilitate processing and dissemination of information; and effective Research and innovation system.

Mobile technologies have provided innovative means of service provisioning. This is supported by the rapid penetration of mobile phone access, which has resulted in considerable improvements in the lives of the poor and reduction of digital divide. All evidence suggests that this trend is going to continue as the availability expands and the cost of access continues to decline.

This policy document therefore provides a roadmap to guide the county government in the implementation of its programs. Further, it offers recommendations towards the realization of the objectives of the County Government and foundation upon which necessary standards and regulations for the realization of full benefits of ICT can be formulated from.

3.2 Rationale for Policy Review

The legal frameworks, technological changes and developments since 2014 have necessitated the review of the policy. The review therefore provides a mechanism of keeping pace with development of emerging technologies like IoT and AI. Other notable changes in the legal and regulatory framework that calls for the review of the policy is on Data Protection and Privacy. There have also been technological developments that have resulted to emergence of issues like cyber security, demand for quality services among others.

3.3 Guiding Principles Adopted in the Development of this Policy

The development of this policy was guided by the following principles:

3.3.1 Sustainable Social-economic development

CGK considers ICT as a tool for social-economic development. It is therefore central to the realization of her social-economic agenda. The County has also recognized ICT to be a catalyst for blue-economy which is key for the social-economic development of the County. The County will leverage on ICT to bridge the digital divide and to develop human capacity to create a robust knowledge-based economy; enhance promoting sustainable development in the County.

3.3.2 Data protection, Privacy and Security

Considering the emerging issues around cyber security, data protection, privacy and security of data and information shall be supreme in the deployment of information and communications technologies in the County. Additionally, the CGK shall ensure implementation of the Data Protection Act for the benefit of its residents.

3.3.3 Research and Innovation for value creation

Research and Innovation supported by ICT shall be an integral resource for the County to promote job creations through innovative products and value addition across the production chain of the County economy.

3.4 Enhanced services delivery using ICT enabled platforms

Working with the National Government, Ubiquitous Access will accelerate the provision of services through access to reliable, affordable and high-speed broadband connectivity.

3.4.1 Open standards for enhanced open governance

CGK shall ensure standardization of ICT products and services for quality assurance and adherence to the National and International standards. The County shall also adopt technologies to extent wherever possible are based on open access principles to ensure maximized, efficient and fully leveraged use of available infrastructure and services. To improve on accountability, efficiency and service delivery, the CGK shall use ICT to promote open governance.

4 SITUATIONAL ANALYSIS

4.1 Current situation

It is observed that most services in CGK could be offered using ICT mediated platforms like Internet technology. Some of these services include: Financial services (e.g. Revenue collection, bursary allocation), Health services, Procurement services, Agriculture Extension services, Human Resources and Placement services (e.g. management of recruitment process), Social services (e.g. issuance of certificates to self-help groups, public participation and engagement) among other services. Key in achieving this is adoption of ICT in the execution of government functions.

It is noted that the adoption of ICT in the CGK department is marked with varied successes. In general, all departments have adopted ICT though at low levels. The departments that have adopted ICT in their operations include: Finance and Economic Planning; Administration; Cooperate Responsibility and Stakeholder Management; Energy; Environment; Water and Natural Resources; County Health Services; Education; Labour and Manpower Development; Roads, Public Works, Transport and Housing; Lands, Physical Planning and Urban Development; Culture, Youth, Sports and Social Services; Agriculture, Livestock, Fisheries and Cooperative Development; Trade and Industry and Public Services Board.

4.2 Regulatory Background

The Constitution of Kenya, 2010, the Kenya Communications Act (No. 2 of 1998) and as amended by the Kenya Communications (Amendment) Act, 2009, and the Kenya Information and Communications (Amendment Act) 2013 provide the main framework for regulating the communications sector in Kenya. Other statutes include the Media Act, 2013 and the Kenya Information and Communications Technology (ICTA) Order 2013; Data protection Act of 2018, among others.

4.3 Operational Environment

Kenya is one of Africa's fastest growing ICT markets where ICTs have increased productivity in all spheres of production process and enabled expansion of skills, contributing to improved standards of living for Kenyans. The cascading effect of the ICT at the National level is felt at the County levels. The Economic Survey 2018 report provides an overview of the ICT sector performance and development trends which documents significant contribution of ICT into the economy.

Some of the key ICT operational performance indicators at the County include:

- 1 Overlay of Fibre Optic cables at the County and sub-county to the National Optic Fibre Broadband Infrastructure (NOFBI).
- 2 A large percentage of the County residents have access to 2G, 3G and 4G mobile

network coverage and over 89% of the population has access to a mobile phone.

- 3 All County government departments are served by the “. co.ke” internet domain.
- 4 Fixed Telephone connection in Kisii County is limited to the urban centers and limited to a very few population. Moreover, it is in a decline from cable to cellular though there are a few subscribers of Code Division Multiple Access (CDMA) network
- 5 Cost of both domestic and international traffics have continued to drop and therefore there is increased messages services and call traffics within the County
- 6 Most of the licensed Internet Service Provides (ISPs) are operating with Kisii County. Some of the ISPs operating in the county include; Safaricom, Airtel and Telekom Kenya among others
- 7 There is a demand for high bandwidth capacity in the County
- 8 The County is fairly well covered by a number of Frequency Modulation (FM) for radio and Media Frequencies for Television frequencies. The Digital Terrestrial Televisions (STBs) subscription in the County is also high
- 9 The county is served by the main print media through the Newspaper Circulation and online Newspaper Readership

4.4 Technology Trends Shaping ICT landscape in Kisii County

- 4.4.1 **Wireless Technology:** World over, networks are transitioning to wireless technology. Notable developments in wireless technology include NBase-T, Terahertz wireless, 5G and other high-speed communication developments. The Kisii County Government must prepare for these new realities.
- 4.4.2 **Ubiquitous Technologies:** With enhanced Internet penetration and access, most services are now accessible via the mobile devices like mobile phones. There is a projected increase in service provision via such technologies in the County.
- 4.4.3 **Nanotechnology and Pervasive Instrumentation:** With advancement in technology, most devices are becoming smaller in size and more of these devices are now network enabled. This has lead to growth of Internet of Things (IoT), more recently, the Internet of Everything (IoE). This has promoted the ability to remotely effect physical change. Which implies, you can now remotely change processes and states without having to physically be present, but it also means you can do damage, destroy facilities and injure people remotely.
- 4.4.4 **Big Data and Artificial Intelligence:** Most of the devices in use these days emit data. In aggregate these data are produced in large volume and speed. Management of these large data sets in terms of storage and processing can be a challenging task. It also presents opportunities in making data-driven decisions. The growth of Artificial Intelligence has become handy in processing such data sets to make meaning out of it for accurate decision-making.

- 4.4.5 **Block-chain Technology and Digital Currency:** Block-Chain technology is described to be a peer- to-peer distributed digital ledger that provides an immutable time-sequenced record of all transactions. It has been used to track digital assets; assets whose ownership can be verified digitally such as land, equities, shares and derivatives, votes and currency. The County Government of Kisii may adopt this technology in enhancing transactional activities of the County.
- 4.4.6 **Adaptive Security Framework:** Emergence of cyber security threats coupled with the complexities of digital business and the algorithmic economy requires institutions to deploy human and technological measures to protect themselves. Since cyber security issues are highly dynamic, there is need to adequately develop adaptive human capacities and technologies so as to stay ahead of the threat. Better still disaster recovery and business continuity measures must be put in place.

4.5 Economics and Human Capacity in ICT

The main economic activities of the County include Agriculture, Trade, Aqua-agriculture, Mining, Tourism and Manufacturing. The integration of ICT in these sectors is limited by levels of proficiency in ICT within the County considered to be basic to intermediate.

4.6 ICT Challenges in the County

To achieve the desired goals the following challenges are addressed in this policy:

1. A wide digital divide between rural and urban areas
2. Limited accessibility, low bandwidth and reliable ICT infrastructure to very remote areas
3. Low levels of adoption and utilization of ICT services hence slowing speed of services delivery
4. Lack of skills on how to harness ICT for efficient and effective government services delivery, economic growth and job creation for the youth
5. Inadequate policies and legal frameworks on the adoption and utilization of ICT
6. Limited County-wide ICT awareness that hinders cultural and attitudinal change
7. High cost and unreliability of ICT infrastructures
8. Lack of standardization of components and systems being procured and applied across the County Government departments
9. Low level of ICT services in unserved and underserved areas and for persons with disabilities
10. Inadequate competent and skilled human capacity on ICTs skills
11. Cyber-crimes and Cybercrime vulnerabilities
12. Negative public views on online services delivery
13. Inadequate awareness

5 POLICY FOCUS AREAS

This ICT Policy outlines the policies of the CGK in relation to the design, acquisition/development, deployment, operation and support. It mirrors the current and future position of the County Government based on the current and emerging technological trends.

5.1 ICT infrastructure and Accessibility

5.1.1 Background

The CGK aims at providing a robust ICT infrastructure that is accessible in partnership with the National Government. Moreover, ICT infrastructure is the core and foundation of an integrated ICT eco-system without which all other components cannot exist. This policy therefore provides a means on how the County's ICT infrastructure is to be developed and managed for effective services provision.

The County recognizes with increased uptake of Internet based and other ICT related services, requires appropriate infrastructure to enable social and economic growth. Thus a reliable ICT infrastructure that is accessible to a fast majority will be critical in her service delivery goals.

5.1.2 Deployment of ICT Infrastructure

Aware of the challenge of deploying ICT infrastructure to underserved and unserved areas, the CGK will work with the National Government to create an enabling environment that will promote investment and accelerate rollout of ICT service in the entire County. The CGK will give incentives that will encourage the deployment of infrastructures to these areas within the County. Specifically, local-based service provider will be encouraged through incentive to offer solutions on the last mile connectivity.

5.1.3 Open Access Rules

To foster competition, universal access to services and affordable quality services, the CGK will promote open access to infrastructure rolled out through public investment. The CGK will adopt the best practices that are predictable and technology neutral premised on open access principles. The CGK will develop clear and uniform access rules that are enforceable. Specifically, the rules should provide a balance on the open access rules verses the return on investment by those investing in the last miles.

5.1.4 ICT Accessibility by Persons with Disabilities

Kenya as a signatory to the United Nations Convention on the Rights of Persons with Disabilities (PWDs), as adopted by the UN General Assembly on 13 Dec 2006 endeavors to institute policies and measures aimed at providing access to technology and information to person with disabilities. The CGK will therefore put in place ICT policies that promote the

rights of persons with disabilities. The focus of this policy is to provide a foundation upon which accessible ICT environment can be developed in the County to enable by persons with disabilities exercise their rights.

5.1.5 ICT Infrastructure and Access Policy

- (a) The CGK will develop a County Integrated Infrastructure Master Plan. This integrated master plan will be designed to facilitate rational, cost-effective, sustainable and easily maintained ICT infrastructure by multiple stakeholders.
- (b) The CGK will develop a publicly accessible registry of the ICT infrastructure and resources of the County, operators, utility companies and infrastructure building companies to which reference may be made to prevent unnecessary duplication and wastage of scarce ICT resources.
- (c) The CGK will strictly prepare and enforce ICT quality of service regulations to ensure reliability and availability of services
- (d) CGK shall promote systematic and comprehensive expansion of ICT infrastructure and services with special attention to rural areas to ensure residents have equitable access to publically owned infrastructure in a cost effective manner.
- (e) CGK will work with the National Government to ensure provision of high-speed affordable connectivity to all its residents in all places. CGK shall encourage private investors to invest in infrastructures by tapping into the publicly owned infrastructure to facilitate commercial last mile service provision.
- (f) The CGK will develop and adopt Enterprise Architecture to govern the implementation and deployment of infrastructure, hardware, software, systems and services across the public sector in a coherent, cost- effective and sustainable manner.
- (g) The CGK shall enter into agreements for economic bulk purchase of software licenses and standard ICT equipment in order to ensure efficient use of funds and limited resources. All County Departments shall acquire such licenses and equipment, as they need, at the reduced government negotiated prices and as approved by the County Public Procurement Office.
- (h) The CGK shall develop business models that shall promote development and sharing of infrastructure and services in under-served and unserved areas. The model shall clearly indicate the incentives, or mechanism for sourcing for funding on such terms and in such manner as will best achieve ubiquitous broadband access. Thus the CGK shall work to promote investment in ICT infrastructure and access by creating an enabling and supportive environment.
- (i) CGK shall harmonize the way-leave guidelines and charges that protect the ICT infrastructure, optimise usage, protect the environment and roads, and prevent

multiple charges. This should aim at encouraging and promoting the sharing of public and private ICT, utility, rights of way to ensure resiliency and redundancy in order to support disaster recovery plans.

- (j) To avoid damaging of pre-existing, where possible the CGK shall promote as a first option infrastructure sharing on new builds as a pre-requisite condition for licensing. A mechanism for cost-sharing and concession to the primary developer shall be developed to ensure equitable access to services.
- (k) Due to changing technologies and costs, CGK shall facilitate the ubiquitous deployment of new-generation high-speed wireless broadband connectivity infrastructure. This will reduce the in-building deployment costs, improve the cost effectiveness of broadband delivery and access, and provide effective, reliable, secure Internet infrastructure. Therefore, the CGK will adopt the wireless-first approach
- (l) Ensure that ICT services and emergency communications made available to the public are provided in alternative accessible formats for persons with disabilities (PWD)
- (m) Review existing legislation and regulations to promote ICT accessibility for PWDs in consultation with organisations representing PWDs among others
- (n) Require both public and private entities rendering services to the public to provide information and services in accessible and usable formats for persons with disabilities
- (o) Ensure that CGK websites comply with international web accessibility standards and are accessible for persons with disabilities

5.2 Public Service Delivery and Information Access

5.2.1 Background

With most of the county government services offered online (often referred to as e-service), there is a call for a reliable online access platforms and adoption of effective ICT technologies to delivery services and information at the most convenient manner to the residents of CGK.

5.2.2 E-Services

The success of e-services by the CGK is dependent on:

- 1 The residents appreciating and being encouraged to use online public services
- 2 Ensuring e-services are affordable and safe to use and the users
- 3 The e-services are efficient and effective-reliable all the time
- 4 Effective automation of the citizen-facing government functions
- 5 Reliable ICT infrastructure that will support the e-services

The CGK considers the following e-services to be key:

5.2.2.1 E-Health Services

Use of ICT in the promotion of health services delivery reinforces fundamental human rights by improving equity of access to healthcare and quality of life. The CGK will promote use of ICT in health delivery by:

- (a) Providing an efficient and cost effective means for distributing health information to the public
- (b) Building a health network that enables institutions and individuals to exchange electronic records, share information and deliver quality services in both urban and rural areas
- (c) Improving the performance of healthcare facilities through the deployment of Health Management Systems
- (d) Use Electronic Records Management Systems to ensure an efficient and standardized process for recording patient information
- (e) Improving accessibility to medical research, information sharing and training through online educational programs and applications
- (f) Providing ICT facilities in all County and sub-county health facilities for administration and management of health processes
- (g) Setting standards and norms for IT use in the healthcare system
- (h) Developing a central database on disease and treatment to be used as a shared resource tool by medical personnel in various parts of the County to enhance prompt curative services and better public health management.

5.2.2.2 E-Agriculture

Agriculture is an important contributor to the economy of CGK. It is generally the main stay for the rural people in CGK. To promote its growth the CGK will:

- (a) Encourage and promote local mobile applications targeting farmers in the County
- (b) Build ICT capacity in farmers, farmer organizations and groups
- (c) Promote the use of use of ICT in the provision of agricultural extension and advisory services so as to be able to share information, empower rural communities and enhance food security
- (d) Support ICT infrastructure deployment across the County by mobile operators to enable access to agriculture mobile applications mostly using mobile phones

5.2.2.3 E-commerce/E-trade

In recognition of the important role e-commerce play in economic development, its use shall be promoted in trade and investments as a means of integrating CGK into the National and global economy. The CGK shall promote policies aimed at making e-commerce easy and

dependable to its residents.

5.2.2.4 E-Government

E-Government aims at ensuring the government delivers services in the most effective way. It therefore makes the government to be result-oriented, efficient and citizen-centered. CGK e-Government policies will focus on redefining the relationship between Government and its residents with the objective of empowering them through increased and better access to government services so as to:

- (a) Reduce transaction costs for the CGK, citizens and the private sector through the provision of services electronically
- (b) Provide for access to information held by CGK in a secure and reliable manner
- (c) Ensure automation of CGK services up to the sub-counties levels

5.2.2.5 E-Learning

The demand for e-Learning or integration of e-Learning platforms into the education sector is gaining momentum and it continues to play a central role in expanding education sector. Moreover, it provides a mechanism of providing access to education to persons who may not be able to access it due to varied reasons. The CGK recognize this new approach to education and will promote initiatives aimed at enhancing its growth. Through the e-learning policies, CGK will encourage the development of capacities and support needed to ensure its success. Specifically, the County will work with development partners to develop reliable networks that can support e-Learning.

5.2.3 Public Service Delivery and Information Access policy

- (a) To ensure coordinated service delivery, CGK shall provide a categorization of services to be offered as e-services based on both infrastructural capacities, user capacities, systems, data & Information sensitivity and government operational impact
- (b) CGK shall encourage ICT infrastructure deployment across the County by leveraging on wireless broadband technologies to facilitate e-services
- (c) The CGK shall endeavor to provide free public Wi-Fi Internet access built around digital primary, secondary schools, Community Innovation Hubs and public spaces to provide a near reach access to e-services by its residents
- (d) CGK shall develop a matrix detailing the functionalities of the e-services platforms based on the user capabilities in the County to enhance uptake of its services- Painless service provision
- (e) The CGK shall provide standards detailing Quality of Service (QoS) to its residents to ensure effective government service delivery
- (f) CGK shall develop online service delivery protocol and procedures
- (g) CGK shall develop an e-service and information access manuals/guidelines publically

accessible to its residents

5.3 Research & Innovation

5.3.1 Background

Kenya's Vision 2030 recognizes the role Research and Development (R&D) and Innovation play in accelerating economic development. R&D is one of the foundations for socio-economic transformation in the Kenya Vision 2030. And being cognizant of the fact that technology is changing rapid, the CGK is committed to investing in Research and Innovation so as to keep pace with the changes. This policy will therefore promote the creation and maintenance of an ecosystem of world-class Research, and Innovation in services delivery.

5.3.2 Research and Innovation

This policy provides a mechanism of integrating research and innovation into the service delivery and value creation at the local levels. It promotes the adoption of the concept of Knowledge Triage (KT) which advocates for working together of the Research & Innovation community, Educators (Educational institutions) and Innovation Centers to achieve intended outcomes. Modern business entities and government have embraced Research and Innovation to improve their performances. It is for this reason CGK considers Research and Innovation as a driver toward the realization of its goals.

5.3.3 Research and Innovation Policy

- (a) CGK will mainstream the application of science, technology and innovation in all sectors and government processes to ensure that its residents benefit from Science, Technology and Innovation (ST & I) investments
- (b) The CGK shall create incentives, provide funding support for Research and Innovation, recognize and reward outstanding contributions through innovation in the service delivery
- (c) CGK will develop guidelines and standards to promote local content and applications development to promote value creations
- (d) CGK shall promote science, technology and innovation through annual research and innovation challenges, workshops and symposiums in partnership with National Government Agencies like ICTA, universities and private sector players
- (e) CGK shall create a body to identify local innovation, guide in development/packaging and marketing of local products for purpose of creating jobs for the youth
- (f) Develop a framework to guide on the research and adoption of any new technologies by the CGK for the common good of her residents
- (g) Support the development of e-commerce by enhancing existing legislation to support e- business like m-commerce
- (h) Support promotional campaigns to raise public awareness on the potential

opportunities presented by e-commerce

5.4 Data Protection, Consumer Rights and Cyber Security

5.4.1 Background

With increased adoption of technology to deliver services online, comes myriad of security and privacy challenges. Cyber security spans a wide range of technologies, systems, and users and it is now a national and global priority that requires integrated and comprehensive strategies to tackle it. Governments and institutions must now design and deploy infrastructures that provide some deterrent mechanism. Internal standards and procedures must also provide means of mitigating potential online security challenges.

Globalization and the pervasiveness of the Internet have also given rise to new types of needs, rights and vulnerabilities. Cyber- criminals around the world are constantly seeking loopholes through which to perform illegal or illicit businesses. CGK must be aware of this and must put in place measures to counter these challenges.

5.4.2 Data Protection

With most services being delivered online, protection of personal and transactional data is key. The CGK will endeavor to adopt and implement fully the Data Protection Act that ensures the protection of the confidentiality and integrity of citizens' information. The Act provides for collection, use, retention, security and disclosure of such information, including disclosure to law enforcement agencies.

5.4.3 Cyber Security

Cyber security is both international and local in nature and will require multi-agency approach to tackle it. CGK must work closely with the National Government to develop a counter measure strategies. CGK must also develop measures and standards that are reflective of their local realities in order to protect its residents.

5.4.4 Consumer Protection

The CGK working in collaboration with the National Government will facilitate the protection of residents at all levels through the development of relevant legislation and policies. In addition, a series of standards will be prioritized to establish self-adaptive regulatory mechanisms in order to build a secure and reliable ICT-ecosystem in Kisii County.

5.4.5 Data Protection and Cyber Security Policy

- (a) CGK will work with the National Government to establish an enabling legal framework, aligned with Kenya's constitutional provisions, legislative and regulatory environment, and consistent with regional and global best practices to help in combating cyber crimes
- (b) Adoption and implement the Data Protection Act within CGK operations

- (c) CGK shall build capacity of her staff tasked with the mandate of enforcement of cyber security regulatory frameworks
- (d) CGK shall adopt technologies that are reliable, secure and trustworthy as a first step towards protecting its infrastructures and resources
- (e) CGK will formulate security standards for ICT that will be adopted by all County and sub-county Government departments
- (f) CGK shall create awareness on data protection and cyber security to enhance the ability of both the staff and the residents to identify and handle potential challenges
- (g) Promote trust and confidence among the County residents by putting in place cyber threats mitigation strategies
- (h) Institute measures to protect vulnerable groups such as children and to demonstrate that they can draw good from the cyberspace
- (i) Promote recognition of consumer rights and interests, which include but are not limited to: access to publically available information and services over the Internet, quality of service, consumer choice of ICT services, privacy, safety and security and intellectual property rights
- (j) Support and promote drawing up transparent rules on the terms and conditions for concluding contracts online, the form of such contracts as well as the related procedures
- (k) Encourage the drawing up of complaints handling procedures that specifically encourage consumers to first seek redress with service providers and increase service providers' awareness of consumer needs, rights and responsibilities
- (l) Develop guidelines to educate consumers with different access needs who may be particularly vulnerable to deceptive commercial practices or have difficulties fully understanding terms and conditions of service

5.5 ICT Skills Development

5.5.1 Background

The level of utilizations of ICT technologies is generally dependent on the skills level of its users. Therefore development of the capacities of the staff and residents of the Kisii County will be key in the realization of the potentials presented by ICT.

5.5.2 Human capital

There is in general insufficient numbers of high-level skilled and experienced experts in ICT in the County. To adequately address this challenge, there is need to work closely with educational institution to develop the required expertise.

5.5.3 ICT Skill Development Policy

- (a) Establishing a County educational networks for sharing educational resources and promoting e-learning at the basic levels
- (b) Facilitate the establishment of Public-Private Partnerships to mobilize resources in order to support e-learning initiatives with the County
- (c) Encourage the residents and the County staff to exploit e-learning opportunities
- (d) Promote the Integration of e-learning resources with other existing resources with the jurisdiction of CGK
- (e) Encourage the establishment of ICT Centres of Excellence in tertiary institutions for capacity building
- (f) Encourage and provide assistance for the disadvantaged, people with special needs, women and the youth to acquire IT skills
- (g) Enter into partnership with local universities to conduct research and capacity build staff on key ICT skills and competences
- (h) Promote adult-education, life-long learning both for general and digital literacy programmes through retraining and re-skilling the existing workforce
- (i) Promote and support ICT training for political decision-makers, community and civil society leaders, as well as private and public sector executives

6 MONITORING AND REPORTING

6.1 Background

Monitoring the implementation of the ICT policy at every stage will be key in the success of this policy. Ultimately the effectiveness of the policy is also dependent on every player performing his or her role diligently.

Semi-annual audits on compliance on the implementation of the policy guidelines will help document the level of success of this policy. Key components of an ICT policy review will include: identifying key challenges and solutions; implementing mechanisms for ICT policies, plans and programs; monitoring and review, coordination mechanisms; and institutional framework and stakeholder analysis.

6.2 Monitoring and Evaluation

Monitoring and Evaluation is an integral part of this policy execution. Monitoring in the context of this policy is the process of continuously tracking the implementation of planned programs or activities to assess their progress and performance. Evaluation on the other hand, is the system of determining to what extent set goals have been met through the execution of the stated policies and standards. Monitoring and Evaluation (M&E) will therefore provide regular and timely information in support of evidenced-based decision-making serving as a key driver towards the realization of the County's goals. The information prepared should include progress made, challenges encountered and identification of emerging issues. This information can also be used to promote a culture of learning, attitude change and for the application of lessons learned.

The M&E framework will be in three components: Setting Performance Targets of the policies, Monitoring Performance, and Evaluation the Performance. Monitoring and evaluation will be on three levels: Executive Level, County Assembly Level and Individual Performance Level. The performance will be as a result of the collective of these three levels.

The effectiveness of this policy shall be tested using a longitudinal approach taking into consideration the achievements at the end of the CGK's fiscal years. To give effect to this, CGK shall develop an impact assessment framework for evaluating the extent of the achievement of the policy implementation.

6.2.1 Key implementation Indicators (KII)

The concept of Key Implementation Indicators (KIIs) is a measurable value that demonstrates how effective an organization is achieving key institutional goals. CGK will use KIIs at multiple levels to evaluate their success at reaching acceptable implementation targets. CGK shall define these implementation goals in a quantitative manner and inbuilt them within its annual key performance measures at the start of every fiscal year.

Specifically, should cover the following core key policy implementation indicators:

- i. *Adoption of policy on ICT training of all relevant County officials and service providers*
- ii. *Implementation of ICT-based delivery systems for critical services like healthcare, education and agriculture*
- iii. *Adoption levels of policy to encourage Public-Private Partnerships (PPPs) for ICT-enabled systems with the County and sub-county*
- iv. *Level of development and enhancement of policy to promote Research and to institutionalize innovation with the County*
- v. *Working document policy for facilitation of broadband access to all residents and ensure Broadband connectivity of all County public facilities by 2022*
- vi. *Level of adoption and implementation of legal framework to promote investment in the ICT sector through conducive investment policies*
- vii. *Percentage of support given to human resource development and capacity building in Kisii County through training*
- viii. *Enactment of framework to facilitate development of local content through training, workshops, seminars and hackaton challenges.*
- ix. *Adoption of emerging technologies like Mobile money, M-health and WhatsApp in the provision of services to the residents of Kisii County*
- x. *Establishment of legal framework to promote partnership with universities and other learning institutions to scale up education and incubation of ICT solutions in partnerships with the business sector*

6.3 Policy Implementation Reporting Framework

The purpose of this M&E Framework is to facilitate the tracking of progress towards the realization of CGK goals and generation of information to inform decision-making by stakeholders at the Executive and Assembly Levels. The defined data requirements and design responsibility for tracking of policy implementation at all levels is critical; further the management of data and assignment of responsibility for data collection, data flow, analysis and reporting by different stakeholders is also very important for the success of the exercise.

The following reporting matrix could be adopted by CGK:

Table 1 Monitoring & Evaluation Reporting Framework

Goal	Expected Output/Outcome	Activity	KIs	Baseline	Target	Achievements	Variance	Lessons Learnt
Policy Issue 1								
Policy Issue								

6.4 Monitoring and Evaluation Coordination

Result based Management will be adopted where every individual contributes towards the

realization of this Policy. Specifically;

- i. Individual Performance Targets will be set and agreed upon between line ministries/ departments and respective Staff Members.*
- ii. Performance Evaluation will be carried out on semi-annually basis with the final evaluation to be done at the end of the year*
- iii. Departmental Meetings will be held to monitor the implementation of agreed plans Cascaded from the policy document*
- iv. The County Assembly Department on ICT will monitor the Implementation of the policy on semi-annually Basis*
- v. Annual Reviews workshops will be held to evaluate the impact of policy enactment and the level of achievement of the set goals*

7 LIST OF ABBREVIATIONS

AI: Artificial Intelligence

GDP: Gross Domestic Product

KCG: Kisii County Government

ICT: Information & Communication Technology

ICTA: Information & Communication Technology Authority

IoE: Internet of Everything

IoT: Internet of Things

ISP: Internet Service Provider

IT: Information Technology

KII: Key Implementation Indicator

KT: Knowledge Triage

M&E: Monitoring & Evaluation

PPP: Public Private Partnership

PWD: Persons with Disabilities

R&D: Research & Development

QoS: Quality of Service

ST&I: Science, Technology & Innovation