

THE REPUBLIC OF UGANDA

MINISTRY OF INFORMATION AND COMMUNICATION TECHNOLOGY AND NATIONAL GUIDANCE

FINAL DRAFT NATIONAL ICT POLICY

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List of Acronyms

Abbreviation	Definition			
2G	Second Generation Network			
3G	Third Generation Network			
4IR	Fourth Industrial Revolution			
ABCD	Area Based Community Development			
B2B	Business to Business			
B2C	Business to Consumer			
BPO	Business Process Outsourcing			
BTS	Base Transceiver Station			
BYOD	Bring Your Own Device			
C2C	Customer to Customer			
CBOs	Community Based Organisations			
CDN	Content Distribution Network			
CERT	Computer Emergency Response Team			
CSOs	Civil Society Organizations			
DUV	Digital vision Uganda			
EGI	Electronic Government Infrastructure			
E-Government	Electronic Government			
EOC	Equal Opportunities Commission			
ERP	Enterprise Resource Planning			
E-Services	Electronic Services			
FDI	Foreign Direct investment			
FDIs	Foreign Direct Investments			
G2B	Government to Business			
G2C	Government to Citizens			
G2G	Government to Government			
GDP	Gross Domestic Product			
GII	Global Innovation Index			
GoU	Government of Uganda			

ICT	Information, Communication and Technology
IDA	International Development Association
IDI	ICT Development Index
IP	Intellectual Property
ISP	Internet Service Provider
ITES	Information Technology Enabled Services
ITU	International Telecommunication Union
IXP	Internet Exchange Point
LGs	Local Governments
M&E	Monitoring and Evaluation
MDAs	Ministries, Departments and Agencies
MoES	Ministry of Education and Sports
MoFPED	Ministry of Finance, Planning and Economic Development
MoICT & NG	Ministry of Information and Communications Technology and National Guidance
MSMEs	Micro Small and Medium Enterprises
NBI	National Backbone Infrastructure
NDP III	Third National Development Plan
NEMA	National Environment Management Authority
NGOs	Non-Governmental Organizations
NIISP	National ICT Initiatives Support Program
NISF	National Information Security Framework
NITA-U	National Information Technology Authority-Uganda
NPA	National Planning Authority
NRM	National Resistance Movement
OPM	Office of the Prime Minister
PDM	Parish Development Model
PPP	Public Private Partnership
PWDs	Persons With Disabilities
R&D	Research and Development
SDGs	Sustainable Development Goals

UBOS	Uganda Bureau of Statistics
UCC	Uganda Communications Commission
UICT	Uganda Institute of Information and Communications Technology
UN	United Nations
UNCDF	United Nations Capital Development Fund
USD	United States Dollars

Foreword

In line with global commitments to improve digital inclusion and realise the Sustainable Development Goals for 2030, the Government of Uganda aims to build a digitally enabled society that is "secure, sustainable, innovative and transformative to create a positive social and economic impact through technology-based empowerment".

Uganda places ICT in its broadest definition as a strategic pillar for social transformation, articulated in the Uganda Vision 2040, "*a transformed Ugandan society from a peasant to a modern and prosperous country within 30 years*". This Vision was approved by the Uganda Cabinet in 2007 and is operationalized through three 10-year plans and 6 National Development Plans (NDPs) that seek to deliver on the aspirations of the Vision, the latest being the NDP III (2020/21 - 2024/25). The Uganda Vision 2040 identifies ICTs as a key core project for "*building an ICT city/country with associated infrastructure*" and a key strategy for "front-ending investments in infrastructure by leveraging ICT".

The Digital Uganda Vision provides an overarching framework that responds to the national Vision 2040 by providing a unified ICT policy direction. It further provides the Government's integrated policy and strategic framework to show how Information and Communication Technologies (ICT) can empower Ugandan citizens and achieve the goals of universal inclusion, sustainable development, economic progress, and poverty eradication through digital innovation.

The National ICT Policy is grounded on pillars that are critical to be undertaken in order to *fully exploit ICT to drive modernity and prosperity for all*. This includes the need to strengthen the enabling environment to respond to emerging trends, especially 4IR, address mandate overlaps, streamline cost-effective development of a secure ICT infrastructure, position Uganda as a hub of ICT development and innovation, and reform the education sector to deliver relevant workforce for the knowledge-based digital economy.

The revised Policy has also incorporated new policy directions in line with the everchanging technological advancements in this area. The pandemic presented unprecedented changes in our communities and how we use technology. These changes, coupled with the exponential rate at which digital technology evolves, made it essential to reflect on our approach.

The most remarkable changes that have been made in the revised National ICT Policy is maintaining a very high-level policy statement giving optionality for institutions to respond to the policy statement by developing strategies that can easily be amended.

This Policy will now guide us to harness technology further in order to deliver more and better results for our people. We desire to work with all stakeholders; private sector, academia, development partners, civil society, citizens among others- to ensure this digital revolution does lead to qualitative and quantitative transformational development of our economy and society while enabling sustainable solutions to the problems facing Uganda and the rest of the world.

Hon. Dr Chris Baryomunsi (MP)

Minister of Information and Communication Technology and National Guidance

1.0 INTRODUCTION AND BACKGROUND

Uganda's transformational journey towards attaining her Vision 2040 is hinged on various primary drivers, including ICTs. The Uganda Vision 2040 aspires "**a Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years**". It is anticipated that digital technologies will play a key role in addressing the obstacles to Uganda's development opportunities hence fostering inclusive growth through a competitive economy, productive society, and improved service delivery.

The attainment of Uganda Vision 2040 is premised on an ICT-led socio-economic growth trajectory driven by the implementation of the right policies to facilitate accelerated development, effective deployment, and enhanced exploitation of digital technologies within the economy and society.

Like many African countries, Uganda's economic growth has fluctuated over the last five years, between 6.6% and 3.4% in 2020/21. The services sector continues to be the lead contributor to GDP, with five-year average growth rates of 41.9 percent, followed by agriculture at 23.8% and manufacturing at 16.5%.¹ Uganda's population, which forms the bulk of the domestic market is estimated at 48 million as of March 2022, with an annual growth rate of 3.03%. Uganda Bureau of Statistics (UBOS) Statistical Abstract 2021 reports that 76% of this population has been categorised as youthful (below 30 years) and the national literacy rate is at 76%. UBOS further reports that Uganda's working population stands at 15.9 million, signifying an employment-to-population ratio of 38.8%. However, 68% of this working population is engaged in agriculture, forestry, and fishing, followed by 23.9% in the services sector and 4.3% in manufacturing.² It is reported that 19% of Uganda's 7.2 million households have access to electricity. Household expenditure is predominantly on food (40.5%) followed by housing, water, electricity, gas, and other fuels (18.2%). relatedly, information and communication technologies accounted for only 2.9%³ of household expenditure. ICTs have remained a key catalyst to economic growth in Uganda, spearheaded by the telecommunications sector. To date, ICTs have revolutionised the delivery of financial services and continue to influence service delivery reforms in education, health, and governance, among others.

This context, coupled with a largely informal private sector, low capacity for research and innovation, large rural-urban divide, limited coverage of complementary infrastructure (roads and energy), and low digital skills capacity and literacy levels, further creates the urgent need for a revised National ICT Policy. Uganda's success in establishing a knowledge-driven economy will depend on deliberate efforts to harness the

¹ 2021 Statistical Abstract, UBOS

² Uganda National Panel Surveys (UNPS) 2019/20, UBOS

³ Uganda National Household Surveys (UNHS) 2019/20, UBOS

transformational capacity of digital technologies. The Government of Uganda, through the Ministry of ICT and National Guidance, shall set clear policies to stimulate the productive and innovative potential of the youthful population; leverage its unique location as a regional hub with access to regional, continental, and global markets, digitisation of key product and service sectors like trade, agriculture, tourism, manufacturing; transport, health, education, and governance, among others, to enhance productivity and service delivery.

The above background provides the social and economic context within which the National ICT Policy is being developed and is expected to be implemented. This is further influenced by the rapid developments in the ICT sector, evolving global technology, business trends, emerging national and regional priorities, and the fast-changing public needs.

2.0 SITUATIONAL ANALYSIS

Uganda's aspirations in the ICT sector are aligned with United Nations Agenda 2030 under Sustainable Development Goals (SDGs) more specifically goal 9 which focuses on significantly increasing access to information and communications technology and promoting universal access to affordable communication technologies and services. The policy is also aligned to Africa Agenda 2063 and The African Digital Transformation Strategy. In pursuit of that agenda, the Government has made ICT a critical pillar of social transformation⁴, resulting in job creation, enhanced productivity and efficiency (both public and private sector), which has led to an increased ICT contribution to the Gross Domestic Product (GDP) from 4 % in 2012 to an estimated 10% in 2021.

2.1 Key Sector Trends

Infrastructure and connectivity: It is estimated that Uganda has about 19,707⁵ kilometres of fibre-optic cable laid, although most of it is duplicated along the routes, leaving an effective network coverage of about 4000km. The fibre network mainly comprises the NBI and those laid by licensed operators only. Access to fibre is a challenge as only 29% of the population are within 10km of the fibre link compared to Kenya, where 41% are within 25km of the fibre link⁶. The fibre covers about 49% of districts and 24% of sub-counties and 70% of the fibre is concentrated in urban centres. The internet price for MDAs and LGs has significantly dropped, from an average cost of 1 Mbps/month of USD 300 in 2015 to USD 60 in 2020 through the Government-owned National Backbone Infrastructure. Accordingly, the commercial ISPs have slashed their prices for 1 Mbps/month from an average of USD 515 in 2015, down to USD 55 in 2021. The average cost of mobile internet access in Uganda remains high at 2.67USD per gigabyte compared to Kenya at 2.4USD, Tanzania and Rwanda at 2.18USD per gigabyte.⁷

In terms of mobile network coverage, it is estimated that 90% of the population is covered, with 65% of the geography of the country covered by mainly 2G and 3G, but only 45 percent of the country is covered by 3G and has broadband at the internationally set minimum speed. The mobile network comprises an estimated 4,295 tower sites serving over 7,366 Base Transceiver Stations (BTSs), resulting in an average tenancy ratio of just under 1.5 BTS per tower, which is still low per industry standards⁸. The 3G and 4G connectivity are concentrated in urban areas leaving most of the rural areas underserved. Uganda has only one IXP which has 29 peering networks that also access content from Content Distribution Network (CDN). The country has only two-tier III enterprise data

⁴ Digital Vision Uganda

⁵ The National Broadband Baseline Survey and Infrastructure Blueprint, 2021

⁶ <u>https://www.monitor.co.ug/uganda/business/prosper/why-uganda-s-internet-cost-is-highest-in-east-africa-1873090</u>

⁷ The National Broadband Baseline Survey and Infrastructure Blueprint, 2021

⁸ The National Broadband Baseline Survey and Infrastructure Blueprint, 2021

centres, including one run by NITA-U on behalf of the Government of Uganda, with few other operators who largely provide cloud storage services, not full data centre services. The country has adequate international connectivity to neighbouring countries through 8 interstate fibre cables. The country has 20 telecom service providers operating on various licenses.

Usage and inclusivity: Uganda completed the migration from Analogue to Digital Terrestrial Television Broadcasting in 2015. The country has over 310 radio stations and 40 TV stations. Their about 21 million internet subscriptions with over 28 million mobile subscribers as of December 2021⁹. There is a growing trend of online publications syndicated with equally growing social media, and as of 2022, the number was over 80 registered media publishers (UCC register 2022). Most of the internet subscription is centred in the urban areas while the most used access device is the 2G, with the country having telephone penetration of 70% of the population. Their about 30 million mobile money subscribers with 66% of these classified as active according to the UCC market report 2021¹⁰. Despite this success, a more recent report by MoICT & NG still shows low consumption of digital technologies at the household level with only 3.8% of households in rural areas of Uganda having a computer, of which 6.6% have internet access compared with 8.9% of households in urban areas having a computer and 16.8% of those with internet access. Thus, the country still faces challenges of inclusivity resulting in a digital divide mainly between urban (15.4%) and rural (2.6%), men (7.5%) and women (4.8%)¹¹. The use of computers among PWDs is still low at 12%. 83% of PWDs have feature phones compared to 17% with smartphones. 76% of PWDs are not aware of lowcost assistive technologies. Generally, the use of communication services among PWDs is low at 36%¹².

Skills and human capital: Uganda has one of the world's fastest growing population (1.3% per year) estimated at 48 million as of March 2022, the majority of which (70%) are youth¹³. About 70 percent of Uganda's population is literate, with males having higher literacy rates than females. The rapidly expanding population and the associated education policy reforms of Universal Primary and Secondary Education have stimulated the rapid expansion of the higher education sector with over 40 Universities (of which 11 are public) and over 80 licensed diploma and certificate awarding institutions¹⁴. According to a 2019 study on the state of ICT in Uganda, about 36% of non-internet users are digitally illiterate, with 23% stating they do not know how to use the internet, and

⁹ UCC sector report, 2021

¹⁰ UCC Market performance report Q1, 2021

¹¹ Uganda Panel Data Survey 2019-2020, UBOS

¹² Access and Usage of ICTs by persons with disabilities in Uganda, 2018, UCC

¹³ Uganda's population (source: <u>https://www.worldometers.info/world-population/uganda-population/</u>)

¹⁴ Licensed institutions by NCHE (source: <u>https://unche.or.ug/universities/</u>) accessed on 20th Mar, 2022.

13% giving a negative assessment about their need for the internet¹⁵. Therefore, while ICTs have enabled society to evolve towards electronic participation, inclusive online engagement, and global exchange of information, in rural and marginal urban areas of Uganda, the digital literacy levels are still very low. Overall, digital literacy in Uganda remains very low at 20% of the population¹⁶.

Furthermore, their number of international certifications programmes delivered via eLearning systems like Cisco Academy, Huawei academy, among others. It is estimated that the country produces about 8000 ICT graduates annually.¹⁷. The same study revealed that there are significant skills gaps in the ICT graduates, and that the country lacks critical manpower in areas of cybersecurity, data science, artificial intelligence, wireless and satellite communications, enterprise software development, animation and multimedia, robotics and embedded systems, among others. These skills are critical for the country to harness the 4IR opportunities.

Innovations, entrepreneurship, and digital services: The current innovation ecosystem is characterised by disjointed actors largely led by the young innovators working in informal structures, who face constraints of limited access to finances, high operating costs, limited access to mentoring and coaching services, low appreciation and uptake of local products, among others. The status is well summarised in GII component ranking of Uganda as show in **Figure 1** below.

¹⁵ The state of ICT in Uganda 2019, UCC

¹⁶ Inclusive Digital Economy Scorecard Report, 2021, UNCDF

 $^{^{\}rm 17}$ The ICT Skills and Training Needs Assessment Report 2021, MoICT &NG

Strengths			Weaknesses			
Code	Indicator name	Rank	Code	Indicator name	Rank	
1.2	Regulatory environment	59	2.1.1	Expenditure on education, % GDP	111	
1.2.3	Cost of redudancy dismissal	18	2.2.1	Tertiary enrolment, % gross	124	
2.2.3	Tertiary inbound mobility, %	18	2.3.3	Global corporate R&D investors, top 3, mn US\$	41	
3.2	General infrastructure	56	2.3.4	QS university ranking, top 3	74	
3.2.3	Gross capital formation, % GDP	33	3.1.1	ICT access	127	
4.1.3	Microfinance gross loans, % GDP	23	5.1.3	GERD performed by business, % GDP	89	
5.1.2	Firms offering formal training, %	42	5.1.5	Females employed w/advanced degrees, %	124	
5.2	Innovation linkages	56	6.2.3	Software spending, % GDP	121	
5.2.1	University-industry R&D collaboration	63	7.1.2	Global brand value, top 5,000, % GDP	80	
5.2.3	GERD financed by abroad, % GDP	45	7.3	Online creativity	128	
5.3.4	FDI net inflows, % GDP	43	7.3.3	Wikipedia edits/mn pop. 15-69	128	
6.1.4	Scientific and technical articles/bn PPP\$ GDP	65				
6.2.1	Labor productivity growth, %	49				
6.3.1	Intellectual property receipts, % total trade	50				

Strengths and weaknesses for Uganda

Figure 1: Uganda GII 2021 Component Ranking against 132 countries ranked¹⁸

Generally, Uganda produces fewer innovation outputs relative to her level of innovation investments. However, the country performs above the low-income group average in four pillars, namely: Institutions, Infrastructure, Market sophistication, and Knowledge and technology outputs. Thus, MoICT & NG is implementing a National ICT Initiatives Support Programme (NIISP) to facilitate the creation of an ICT Innovation ecosystem and marketplace for Ugandan innovative digital products. According to MoICT & NG, about 172 innovators have been supported under the NIISP through government grants since the programme started¹⁹. The Government also constructed a National Innovation Hub at Uganda Institute of Information Communication Technology (UICT) as the flagship national hub for the country, to supplement other private led hubs.

It is estimated that Uganda has about 16 innovation hubs around the country, most of which are in the central region. The efforts by the Government have seen the rise in Uganda's ranking on the Global Innovation Index (GII), success of local innovations attracting funding like the Rocket Health with recently raised 5 million USD to scale

¹⁸ GII Uganda Report 2021 (*source*: <u>https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2021/ug.pdf</u>)

¹⁹ Digital Vision Uganda

operations to other African countries²⁰. The support has seen the development of products that are already being used nationally, like the ClinicMaster Enterprise solution being used by over 200 hospitals and clinics, ICT4Famers solution under the Uganda National Farmer Federation, among others²¹.

The progress notwithstanding, the ICT innovation sub-sector still lacks core building blocks like technology parks that would attract anchor companies to the country, low private sector investment, a weak triple-helix (academia, government, and ICT industry), and high barriers related to Intellectual Property protection.

Cybersecurity and data protection: The increasing consumption of digital services, growing internet penetration, expanding higher education sector and the emerging global geopolitics mean that cyber security is critical in planning, deployment, and use of digital solutions. The country has made strides to ensure the security of information, privacy, and protection of personal data, through the development of the National Information Security Strategy; development and implementation of the National Information Security Framework (NISF); Development and Implementation of Uganda Communications (Computer Emergency Response Team) Regulations 2019, establishment of Uganda National Computer Emergency Response Team and Coordination Centre; establishment of, Computer Emergency Response Team (UG-CERT) in 2013. The U-GCERT under Uganda Communications Commission (UCC) was the first CERT established in Uganda in partnership with International telecommunications Union (ITU) to protect the critical communications infrastructure and cybersecurity management and investigations and development of twelve information security standards.

Despite that progress, Uganda still needs to rapidly grow the human capital in cyber security and digital forensics, enhance coordination with international partners, establish various state of art digital forensic and cybersecurity labs and enhance the capacity of the private sector to secure digital systems. It is worth noting that (a) most threats experienced in Uganda have largely been a result of social engineering; and (b) lack of realisation at all levels that cybersecurity is largely a sociological challenge, not just a technical one²². Therefore, an integrated approach across all sectors, public and private, is required to build national cyber-security and resilience. Furthermore, there is a need to increase awareness and basic cyber security training among the users of digital services.

²⁰ RocketHealth Raised 5M USD (Source: https://techcrunch.com/2022/03/07/ugandas-rocket-health-raises-5m-inround-led-by-creadev-to-scale-telemedicine-across-africa/)

²¹ About ClinicMaster (source:www.clinicmaster.net)

²² The state of cybersecurity in Uganda - Summit Consulting Ltd (summitcl.com)

2.2 Policy, Legal and Regulatory Environment

The legal and regulatory environment of Uganda's ICT sector is grounded in the Constitution of Uganda 1995 (as amended), the national aspirations as defined in the Uganda Vision 2040, operationalized through five-year rolling National Development Plans, and granulated in the Digital Vision Uganda. The key policies include the National Broadband Policy 2018, the National ICT Policy 2014, Electronic Waste Management Policy 2012, and the National E-government Policy Framework 2011. Others include Draft Telecommunications Policy (2011), Digital Migration Policy (2011), Draft Information Management Service Policy (2011), Draft Infrastructure Sharing Policy (2017), Draft Open Data Policy (2017), Draft Spectrum Management and Licensing Policy (2017), and the Draft National Postcode and Addressing System Policy (2017). Figure 2 below shows the hierarchy of the policy and regulatory environment of Uganda ICT sector.



Figure 2: Hierarchy of the Policy, Legal and Regulatory Environment

The core legal instruments are Acts of Parliament that include, among others, Access to Information Act 2005; National Information Technology Authority-Uganda Act 2009; Regulation of Interception of Communication Act 2010; Electronic Transactions Act 2011, Electronic Signatures Act 2011; Computer Misuse Act 2011; Uganda Communications Act 2013; Data Protection and Privacy Act 2019; Press and Journalists Act, 1995; Interception of Communications Act, 2010; and Uganda Broadcasting Corporation Act, 2005.

A number of regulations have been issued mainly by UCC and NITA-U, key among these include Uganda Communications (Licensing) Regulations 2019, Uganda Communications (Interconnection and Access Regulations 2019, , Uganda Communications (Emergency Response) Regulations 2019, Uganda Communications (Competition) Regulations 2019, Uganda Communications (Consumer Protection) Regulations 2019, Communications (Radio) Regulations 2005, Uganda Communications (Content) Regulations 2019, Uganda Communications (Text and Multimedia Messaging) Regulations 2019, Uganda Communications (Content) Regulations 2019, Uganda Communications (Content) Regulations 2019, Uganda Communications (Content) Regulations 2019, Electronic Signatures Regulations 2013, National Information Technology Authority – Uganda (NITA-U) (e-Government) Regulations 2014, NITA-U (Certification of Providers of IT Products & Services) Regulation 2016, Electronic Transactions Regulations 2013, NITA-U (National Databank) Regulations 2020, and NITA-U (Authentication of IT Training) Regulations 2016.

Despite the robust regulatory framework, it's worth noting that most of the current policies and laws are outdated and cannot match the current technology trends (especially the 4IR) and emerging user experiences. Policy and legislation development are fragmented rising a potential risk of duplications and conflicts as observed in the gap analysis report²³. Most of the policies have remained in draft form, rising concerns about their implementation, this can cause confusion among the implementing actors.

2.3 Global and Regional Trends

The global trends are characterised by increased connectivity and access to cheaper broadband internet to a very large extent. With the advancement in electronic manufacturing, which is accelerating ubiquitous communications, enabling the advancement of the Internet of Things (a mobile-first approach to engagement with technology); disruptions in finance (like cryptocurrency, Blockchain technologies); online certified education; and remote working are some of the disruptive trends. Deep learning, data science, and artificial intelligence are some of the methodological innovations that are further disrupting businesses and extending the possibilities of technologies to previously unimaginable spaces. As of January 2022, it is estimated that

²³ Gap Analysis report on the policy Legal and regulatory Framework for Uganda's ICT sector, 2019, MoICT &NG

about 4.95 billion people (62.5% of the world's total population) use the internet, and Africa with 1.3 billion people has a 43% internet penetration rate. This means Uganda's internet penetration of 49% is slightly above the African average but much lower than Kenya's 85%²⁴.

Globally, countries are developing ICT policies aiming at positioning themselves as global hubs in ICT innovations, technologies and services. Countries are putting emphasis on integrated development of ICT infrastructure and infrastructure sharing, emphasising spectrum optimisation for national development, enhancing last-mile connectivity, lowering the digital divide, promoting the human capital development and entrepreneurship, promoting business competitiveness and FDIs, balancing cyber security and digital rights, promoting regional harmonisation of ICT regulations to facilitate inter-State connectivity and development of regional digital markets. Generally, ICTs are being earmarked from all corners of the globe as the pillar for the accelerated social transformation of nations.

Most importantly, the trends point to nationalist aspiration with a drive to self-reliance especially promoting the development and consumption of local innovations and manufacturing of ICT devices to reduce dependence on the importation of ICT products and services, but also promote retention of earnings in the country through license regimes that promote local content in firms' equity. There is also an emerging trend of Bring Your Own Device (BYOD), especially among the private sector players as a means of lowering ICT infrastructure costs of organisations. Furthermore, nations are accelerating the digitalisation of government processes in order to achieve government efficiencies, effectiveness in service delivery and public accountability. To address emerging data protection challenges and cyber security management, the general trends point toward the development of national data centres to ensure national data is stored within geographical borders of the country and multi-stakeholder collaboration on data security involving State and non-State actors.

²⁴ https://datareportal.com/global-digital-overview

2.4 Thrust for National ICT Policy Review

This review follows on the backdrop of a Gap Analysis of the Policy, Legal and Regulatory Framework for Uganda's Information & Communications Technology (ICT) Sector study conducted by the Uganda Ministry of ICT and National Guidance (MoICT-NG) in 2019 that highlighted a lot of misalignments in the over 10 policies and strategy documents related to ICT. The focus of this review has been to highlight the key policy areas and identify the broad objectives and strategies that align with the current state of the art, having been benchmarked with similar countries and cross-referenced with the current technological advances.

The 4th Industrial Revolution, in part, aspires to close the gap between citizens and government, allowing for ever increased and timely feedback from citizens to government. This requires new ways of developing policy and regulation. The advent of the COVID-19 pandemic has shown what rapid iteration of policy based on feedback looks like. The current trend worldwide is a move towards evidence-informed policy making and execution, which requires agility in formulating and reviewing policy and regulation.

The Government of Uganda is presently implementing a strategy of organising and delivering public and private sector interventions for wealth creation and employment generation at the parish level as the lowest economic transformation unit; a strategy termed the Parish Development Model (PDM). It is a strategy for the implementation of the 16th NDPIII development programme on Public Sector Development and a delivery mechanism for the Area-Based Commodity Development (ABCD) strategy of Uganda.

The PDM emphasises 7 pillars that underlie its execution, all of which can benefit from a solid ICT infrastructure. Specifically, the 5th pillar is on Community Information Systems and Data as essential ICT tools to facilitate decision making and measurement of performance of this model at central and local government levels.

The overarching goal of the PDM is transitioning households out of the subsistence economy, which is a goal re-echoed in the other key strategies of Government that focus on the human-centred, digital-first, and a whole of government approach to achieving Digital Uganda Vision aspirations as illustrated in Figure 3 below. The role of an overarching National ICT policy as a vehicle for delivering the aspirations of this strategy cannot be overstated.



Figure 3: Digital Vision Uganda Framework

The digital transformation strategy of Uganda is premised on the existence of a secure reliable and cost-effective digital infrastructure, vibrant digital market ecosystems, innovative human resources, and effective government support, among others.

Thus, the development of this policy is grounded in the policy, legal, and regulatory framework gap analysis study, which recommended strengthening of ICT sector enabling the environment to respond to emerging trends especially 4IR; addressing mandate overlaps; streamlining cost effective development of a secure ICT infrastructure; position Uganda as a hub of ICT development and innovation; and reform the education sector delivery relevant workforce for the knowledge-based digital economy. It is worth noting that a 10% higher broadband penetration could add up to USD 916 million in GDP and USD 108 million in taxes through productivity gains across all sectors. Dropping excise duties altogether combined with a 10% increase in broadband penetration would raise more revenues for the state and this does not even account for additional multiplier effects throughout the economy²⁵.

²⁵ National Broadband Baseline Survey and Infrastructure Blueprint 2021, MoICT & NG

3.0 POLICY GUIDING PRINCIPLES, VISION, MISSION, AND OBJECTIVES

The Third National Development Plan (NDP III) emphasises the need for a humancentred development where the Ugandan population is at the centre of innovation and development. In line with this aspiration and the broader aspirations in the Uganda Vision 2040, this policy framework draws on Seven (7) key guiding principles that cut across all the policy strategies and underlie this policy's vision, mission, and objectives.

3.1 Guiding Principles

The policy is developed based on several principles and its implementation should necessarily promote these same principles.

- a) *Inclusiveness*: All residents of Uganda shall have the same consideration in the enjoyment of rights and freedoms, and attainment of access to affordable and reliable ICT, services, and content. This consideration emphasises universal access and usage of digital services by all citizens irrespective of the gender, providing equal opportunities and mitigating risks of exclusion.
- b) *Technology neutrality and open access*: The development and deployment of ICT infrastructure and solutions shall be technology-neutral and rely on common, interoperable, open access standards and protocols which foster infrastructure sharing. This principle promotes innovation and delivery of technology-neutral services.
- c) *Strategic collaboration and partnerships*: The implementation of most of the policy provisions in this document, shall harness the aggregate power of strategic collaborations and partnerships amongst various stakeholders at; national, regional, and international.
- d) **Safety and privacy**: This principle ensures that all stakeholders in the digital value chain, are empowered and informed about both the opportunities and risks arising from a digital economy and society. Thus, the secure deployment and utilisation of ICTs shall maintain social cohesion, personal security, and environmental integrity.
- e) *Standardisation:* This principle ensures that in all interventions, standards are adhered to. Standardisation is key in ensuring complementarity and interoperability in the different technologies and interventions taken and is also key for data aggregation and collation in this data-driven society.
- f) *Sustainability and local content*: Interventions resulting from strategic actions of this policy shall provide sustained value to Ugandans, in part through the consumption of locally developed ICT solutions and digital services.

- g) **Digitalisation:** This principle promotes digitalisation of services, content, and data by the Government and other actors in Uganda society such as private sectors, and civil society among others.
- h) *Fair competition*: The principle ensures the promotion of fairness and sustainable competition in the Ugandan ICT sector that fosters new and diverse forms of value creation and service delivery for the benefit of all citizens of Uganda.

3.2 Vision

A country where ICT is fully exploited to drive modernity and prosperity for all.

3.3 Mission

To transform Uganda into a digitally enabled society that is innovative, productive, and globally competitive.

3.4 Policy Objectives

The broad policy objectives of the National ICT policy 2022 are to:

- a) Build a knowledge and information-based human capital;
- b) Promote ICT research and innovations to Harness the opportunities of emerging technologies and 4IR;
- c) Promote the expansion of a secure digital infrastructure throughout the country;
- d) Deepen utilisation of ICT services by Government, private sector, Non-Governmental Organisations, and citizenry;
- e) Improve ICT governance and environment in Uganda;
- f) Promote ICT Sector competitiveness, BPOs, and export of ICT enabled services;
- g) Promote digital inclusion and citizen empowerment; and
- h) Promote the development of quality and accessible digital markets.
- i) Promote the integration of government systems.

4.0 POLICY FOCUS AREAS

4.1 Digital Infrastructure and Connectivity

It is estimated that Uganda has about 4000Km of effective fibre cable spanning about 50% of districts and mainly concentrated in the urban centre about 70%²⁶. The country has about 3000 base stations providing 2G, 3G, and 4G network services. The country has 8 international cables providing connectivity to neighbouring countries. It is estimated that 90% of the population and 65% of the geography of the country is covered by mainly 2G and 3G, while only 45 percent of the country is covered by 3G comprising broadband at the internationally set minimum speed.

Issues

- Uncoordinated infrastructure development by utility service providers.
- Slow pace of infrastructure sharing.
- Non-classification of broadband infrastructure as a public utility.
- High costs of internet, digital services and access devices
- Existence of digital divide between urban and rural.
- Weak spectrum management practices.
- Slow alignment with regional and international initiatives to promote efficient and effective management of spectrum at national, regional, and international levels.

Goal

A cost effective, integrated, secure, and resilient digital infrastructure that supports the delivery of digital services and universal access to communication services.

Policy Statements

Government shall:

- a) Seek to promote the cost-effective mechanisms in the development and deployment of digital infrastructure;
- b) Promote coordinated cross-sector infrastructure development and sharing among stakeholders e.g., public utility and infrastructure providers;
- c) Promote the advancement and proactive uptake of new and emerging technologies;

²⁶ National Broadband Baseline Survey Infrastructure Blueprint, 2021

- d) Establish a national mission-critical core infrastructure (data centres, fibre, tower infrastructure, high power computing centres, IXP and specialised labs);
- e) Promote nationwide ICT infrastructure coverage to achieve universal connectivity for all;
- f) Promote coordinated and harmonised development and interconnectivity of regional high-speed broadband infrastructure;
- g) Promote efficient and effective spectrum resource management at national, regional and international level with intent of alignment.
- h) Promote equitable, fair, and efficient management and utilisation of the spectrum as per the set standards to address national priorities and market demands; and
- i) Ensure the deployment of a sustainable National Postcode and addressing System to facilitate the development of location-based services e.g. e-commerce.

4.2 Digital Services

There has been immense investment in the roll-out of infrastructure to support the provision of digital services over the last five years. However, the growth in the development and uptake of digital services has been slowly occasioned by challenges related to affordability, reliability, and relevance. The largely informal digital innovation ecosystem has hampered efforts to develop local digital markets and further promote access to regional and continental markets as well as draw linkages between technology trends, innovative capacity, and dynamic public needs and preferences.

Issues

- i. Poor quality and unreliable digital services (reliability and availability).
- ii. Limited availability of digital content and services in local languages.
- iii. High cost of communication services.
- iv. Limited confidence in the use of digital solutions.
- v. Low levels of digital literacy
- vi. The slow pace of digitisation in key service and productive sectors i.e. education, health, and agriculture.
- vii. Slow pace of adoption of digital services
- viii. Insufficient sensitisation on communication services.

Goal

Citizens utilising affordable, quality, relevant, reliable, and secure digital services for economic and social use.

Policy Statements

Government shall:

- a) Promote the development of relevant, affordable, secure, and reliable digital services (G2B, G2C, G2G, B2B, B2C, and C2C) by both Government and private sector that address the unique needs of diverse consumers;
- b) Promote equitable access and usage of digital services to disadvantaged communities such as rural areas, PWDs, Women, Youth, Urban Poor, Older persons, immigrants, orphans, and Refugees, among others.
- c) Ensure digitalisation and integration of government business processes and services to enhance information sharing, business efficiency, and effective service delivery;
- d) Ensure the provision of quality products, devices, and digital services to citizens by state and non-state actors;
- e) Promote the development of a diverse, responsible, and viable creatives and audiovisual industry (broadcast, film, and cinematography) that is responsive to the national development agenda, national values, and culture;
- f) Promote the development, commercialisation, and consumption of local content;
- g) Ensure the availability and proper management of open government data; and
- h) Promote the "Build Once, Re-use Always" approach to digital service and transformation.

4.3 Fair Competition and ICT Entrepreneurship

Investment policies and incentives in Uganda are still skewed toward traditional economic activities like processing of natural resources, Agro-processing, and manufacturing with limited recognition of software and application development, digital platform development, and cloud computing among others. There is limited appreciation of the global nature of digital markets, characterised by the absence of traditional boundaries when developing investment policies. This has further complicated the implementation of territorial-specific industry and market regulations whilst promoting national interests. The increased liberalisation coupled with weak competition and enforcement capacity has indirectly advantaged multi-national providers. As such, multi-national operators tend to have a larger market share compared to local operators. There is also predatory behaviour due to first-mover advantage, dominance, subsidised

technology transfer, and restrictive trade practices among others. The slow pace of harmonisation and often lengthy negotiation processes to address political, economic, and business interests have hampered the creation of regional digital markets.

Issues

- i. Anti-competitive practices and lengthy redress mechanism.
- ii. Barriers to entry occasioned by the high cost of investment, regulatory burden, and lack of incentives for new entrants.
- iii. The slow pace of policy development to respond to dynamic industry needs.
- iv. Limited awareness and weak enforcement of intellectual property rights.
- v. Limited cross-sectorial coordination mechanisms.
- vi. Unfair Tax policy.
- vii. Nascent digital markets and low access to international digital markets.

Goal

A competitive digital ecosystem characterised by fair competition, innovation and entrepreneurship, vibrant digital markets and uptake of indigenous ICT solutions, products, and services

Policy Statements

Government shall:

- a) Promote the development, manufacturing, and commercialisation of local ICT products (data, hardware, and Software) and services;
- b) Position Uganda as a regional ICT hub for the provision of Business Process Outsourcing (BPO) and Information Technology Enabled Services (ITES);
- c) Strengthen the national ICT Research and Innovation ecosystem to, reduce investment risks, add efficiency in innovation, scale processes and stimulate competition among different actors;
- d) Strengthen enforcement of the national intellectual property (IP) system, with respect to digital innovations and creative content;
- e) Promote fair and sustainable competition in the digital markets to spur the development of diverse new products, services, and business models;
- f) Strengthen the private sector capacity to drive growth, attract FDI, create jobs, and leverage Public Private Partnership (PPP) initiatives in the ICT sector; and

- g) Promote the development of digital marketplaces to act as a get way for the locally developed ICT products and services.
- h) Government shall ensure development and implementation of a fair digital policy

4.4 Skilling and Human Capital

Uganda has one of the world's fasters growing population (1.3% per year) estimated at 48 million as of March 2022, the majority of which (70%) are youth. The country has over 40 Universities (of which 11 are public) and over 80 licenced diploma and certificate awarding institutions²⁷. Furthermore, their number of international certifications programmes delivered via eLearning systems like Cisco Academy, Huawei academy, the UICT, the country also has over 600 ICT firms registered by NITA-U that provide professional level ICT capacity building programmes²⁸. Basic ICT is integrated into both "O" and "A" levels of education and nearly all programmes at the tertiary level include an ICT component. It is estimated that the country produces about 8000 ICT graduates annually, from Ph.D. to professional certification programmes.

Issues

- i. The majority of fresh ICT graduates lack industrial entry-level professional skills.
- ii. Uncompetitive compensation of ICT professionals in government service.
- iii. The country has a skills gap in critical areas of digital leadership and strategy, cybersecurity, data science, artificial intelligence, wireless and satellite communications, enterprise software development, animation and multimedia, Robotics, and embedded systems, among others.
- iv. Limited industry collaboration between training institutions and industry in curriculum development and delivery.
- v. Courses offered in tertiary institutions are not aligned to address market needs
- vi. Low eLearning penetration.
- vii. Low digital literacy skills within the entire population at all levels.

 ²⁷ Licensed institutions by NCHE (source: <u>https://unche.or.ug/universities/</u>) access on 20th Mar, 2022.
²⁸ <u>Certification (nita.go.ug)</u>

Goal

A knowledge society that is agile, develops and uses technology to address social and economic needs.

Policy Statements

Government shall:

- a) Transform the educational system, starting from the lowest levels, to provide the requisite technology-mediated educational environment and programs to produce industry-relevant skilled human resources aligned to the demands of a knowledge-based society and economy;
- b) Promote the development of digital skills framework to guide the development and implementation of digital literacy interventions;
- c) Promote industry-academia collaborations to spur the development of industryrelevant academic programmes; and
- d) Promote collaborations for the establishment of a national ICT professional's observatory platform to guide ICT sector skills development.

4.5 Cybersecurity

According to the Draft National Cyber Security strategy 2021, E-Services and the widening use of ICT are the lifeblood of the digital economy globally. Over the last two decades, the number of e-Services globally has accelerated exponentially such as mobile money and the internet, helping to connect industry, facilitate trade, and drive international investment. E-Services have also impacted environmental and social practices and transformed the delivery of government services. Mobile money transactions facilitated via telecommunication company platforms more than doubled in value to US\$ 20 billion in 2019, from \$9 billion in 2015, according to the Bank of Uganda. Therefore, a number of reports of mobile money fraud incidents and cyber-attacks largely on financial institutions. The country ranked number 55 and 72 on the National Cyber security index and Global cybersecurity Index respectively in November 2021 (*refer* to **Figure 4**).



Figure 4: Uganda's Rank on Cybersecurity Indices November 2021²⁹

Generally, cyber security continues to be a challenge in Uganda and the share of cyber (computer) crimes in total economic crimes is on the rise. In 2020 the cybercrime report of the Uganda Police acknowledged the relative increase in cases of cybercrimes related with 250 cases formally reported to police, an increase of 3.2% from the year 2019 and they led to a loss of UGX 15,949,236,000 in 2020. The major categories of cybercrimes were electronic fraud and obtaining money by false pretence.

In addition to economic crimes, cyber security threats pose a serious risk to the integrity of the government system and internet in Uganda generally. Uganda Communications Commission maintains and operates a cyberthreat intelligence system and the Honeypot network. The Uganda Police Force has a digital forensics capacity and a cyber-crime unit. The cybercrime unit helps the Police to participate and get knowledge on current trends in cyber security. Police, in collaboration with National Information Technology Authority – Uganda and Uganda Communications Commission, have published several cybercrime awareness materials and initiated thematic campaigns. Uganda Communications Commission established the digital forensic lab in 2014 to aid cyber related investigations in the country. Cybercrime is reported to have had a 300%-fold growth in the year 2020 [8], thus the need for capacity building and an increase in cyber security awareness is urgent to cope with the increasing number of cybercrimes.

²⁹ Uganda NCSI 2021 <u>https://ncsi.ega.ee/country/ug/</u>

Issues

- i. Limited awareness of online safety and basic cyber-security principles by all users of digital services.
- ii. Limited research and development in cyber security.
- iii. Low human capital in cyber security as the country lacks sufficient experts in the area.
- iv. Weak coordination between Government, academia, and private sector on cyber security matters.
- v. Evolving technology that presents new cyberthreats
- vi. The slow pace of policy development to respond to dynamic industry needs.
- vii. Weak practices of security integration in systems development and design.
- viii. Low compliance level with national and international standards and best practices in cybersecurity.

Goal

A secure trusted, and reliable digital services ecosystem.

Policy Statements

Government shall:

- a) Support the establishment of a robust multi-stakeholder cyber security ecosystem to enhance trust in digital systems and foster coordinated response to emerging cyber threats;
- b) Promote Cyber Security awareness among citizens to enhance online safety and protection of personal data;
- c) Support initiatives related to cybersecurity capacity and capability enhancement
- d) Establish a security framework to mitigate cyber security threats to critical national information infrastructure and resources.
- e) Encourage the establishment of sector cybersecurity strategies
- f) Promote online child protection
- g) Promote cross sectorial, multi-actor, regional and global collaboration mechanisms for detection, prevention, and response to cybersecurity incidences;
- h) Promote compliance to national cybersecurity and data protection standards as well as sectoral cybersecurity regulatory legal frameworks; and

i) Promote research and innovations in cyber security.

4.6 Consumer Empowerment and Protection

Digital communications continue to provide critical services to consumers including facilitating the exchange of information and ideas and fostering economic activity in many ways. As more people and activities move online, there are growing concerns about many consumer-protection issues, including safety, security, competition, and consumer rights. The advent of converged services has changed the consumer protection frameworks that were traditionally hinged on traditional communications services including telecom, broadcast and postal. There is a need for more frequent and widespread consumer empowerment to enable the communication consumer to navigate the dynamism in the digital services market and the various innovative service offerings in place. The nature of consumer protection in the area of converged services will continue to change due to rapid technological progress, the emergence of new services and their widespread uptake. There is also a need for coordinated consumer protection mechanisms, especially with relevant sector regulators and the civil society to address the needs of consumers. The regulatory frameworks should further emphasise the enforcement of consumer management mechanisms among service providers.

Issues

- i. Insufficient Consumer empowerment covering consumer rights and obligations.
- ii. Insufficient consumer redress mechanisms for some markets including broadcasting and postal services.
- iii. Lack of clarity on consumer management practices of converged service providers including third-party providers Limited awareness of protection mechanisms for personal data.
- iv. Weak cross-sector and cross-jurisdictional consumer redress mechanisms e.g. digital financial services.
- v. Limited awareness of Environment protection and poor e-waste management

Goal

An empowered Digital services consumer base.

Policy Statements

Government shall:

- a) Promote awareness of digital hazards as well as digital rights and obligations among the entire population;
- b) Protect consumers from unfair deceptive and fraudulent business practices;
- c) Strengthen the consumer rights arbitration mechanisms to address emerging consumer issues including enhancing accessibility to consumer arbitration mechanisms;
- d) Promote health and safe use of ICTs through e-waste management, encouraging green computing practices and responsible deployment and use of digital infrastructure and devices;
- e) Ensure that ICT players and consumers minimise the effect of ICT infrastructure and devices on the environment;
- f) Promote the use of ICTs in monitoring and detection of the environment; and
- g) Foster coordinated response to climate-related disasters.

4.7 Inclusivity

Uganda continues to grapple with the challenge of addressing the digital divide which is hindering the full exploitation of digital services. This divide has been manifested in various underserved and unserved communities. These exist within the rural and some urban areas where service coverage is low. It also exists in instances where usage is low, especially among communities comprising Persons with disabilities, women, youth, older persons, ethnic minorities, people in hard-to-reach areas, rural workers and rural populations, informal and precarious workers, elderly, refugees, immigrants, MSMEs, refugees, asylum seekers and migrants The Government seeks to achieve ubiquity in infrastructure, connectivity and usage through the National Broadband policy, communication sector laws, regulatory frameworks, and targeted interventions. There are also committed efforts toward promoting access to digital services, and products through different mediums for persons with disabilities in partnership with the civil society.

Issues

- i. Limited coverage of broadband infrastructure and connectivity.
- ii. Limited access to broadband services by communities with special needs, including persons with disabilities, women, youth, older persons, ethnic minorities, people in

hard-to-reach areas, rural workers and rural populations, informal and precarious workers, MSMEs refugees, asylum seekers, and migrants.

- iii. Usage gap due to low levels of digital literacy and digitalised content.
- iv. High cost of digital services, and devices which affects usage and uptake.
- v. The limited capacity of service providers to make available services and technologies accessible to persons with disabilities.
- vi. Weak digital identity framework to facilitate access to digital services.
- vii. Highly taxed ICT sector

Goal

Universal access and usage of digital services by citizens

Policy Statements

Government shall

- a) Promote the development and deployment of inclusive digital technologies and services to facilitate equal access for women, youth, and persons with special needs, among others.
- b) Require providers of digital services to put in place mechanisms that foster access to information by persons with disabilities.
- c) Promote research and innovation in the areas of ICTs for PWDs and other underserved communities.
- d) Promote access to secure, quality, and affordable digital technologies and services by PWDs and other under-served communities.
- e) Promote action-oriented partnerships among various state and non-state actors to enhance the utilisation of ICTs among PWDs and under-served communities.
- f) Review and reduce taxation of devices and services to make them more affordable
- g) Enforce measures to ensure cost-based pricing within the ICT sector
- h) Promote digital literacy including development of content in Uganda's diverse languages.

4.8 Enabling Environment

The enabling environment is composed of policy, legal and regulatory instruments. They include Acts of Parliament, Instruments issued by regulators, and those issued by the Minister of ICT and National Guidance. On the legal side, Uganda has made strides in putting in place necessary laws to guide ICT Sector development. A number of policies and strategies have also been developed. A number of challenges, however, still exist as articulated below.

Issues

- i. Outdated existing policies and laws that are not aligned with emerging technologies and realities.
- ii. Slow policy development process coupled with many policies in draft form for many years.
- iii. Lack of alignment of the policy development process with national guidelines on policy development.
- iv. Fragmented efforts to policy and legislation development rising a potential risk of duplications and conflicts.
- v. Limited information on the impact of policies from other sectors with the Digital Uganda Vision.
- vi. Uncoordinated, ineffective, and in some cases contradictory Policy communication.
- vii. The growing multiplicity of information sources is largely characterised by foreign content with an emerging gap regarding diminishing national identity, values, and cultures, especially in the media environment.
- viii. Ethical issues related to a growing media and information technologies environment where practitioners have inadequate statutory and self-regulating professional bodies and arbitration mechanisms for the protection of public interest.
- ix. Low awareness of policies and legal instruments among stakeholders.
- x. Limited coordination with regional and international initiatives regarding ICT development and lack of policy harmonisation with regional and continental frameworks to promote interstate connectivity and digital market spaces

Goal

A responsive policy legal and regulatory environment that addresses the needs of the industry, empowers and protects consumers, and enhances government accountability

Policy statements

Government shall:

- a) Harmonise the national legal and regulatory instruments with regional, continental, and global frameworks to foster innovations, facilitate fair competition, encourage investment, and promote access to digital markets;
- b) Promote parity in the implementation of the legal and regulatory framework including access to legal redress;
- c) Ensure compliance with national guidelines for policy development, coordination, and implementation;
- d) Develop and implement mechanisms for monitoring and enforcing compliance to established policy, legal and regulatory frameworks;
- e) Support establishment of a robust multi-sector policy communication mechanism with provision for public participation and responsive stakeholder platforms across Government;
- f) Promote sustainable growth and operation of an effective market for local content with a focus on national identity, values, and cultural heritage; establishing national audio-visual production centers, competitions, and festivals with provision for quality assurance and enhancing creativity as a leader in the region;
- g) Strengthen and establish information technology, communication, and media practitioners' professional bodies to address both statutory and self-regulation regarding ethical conduct, continuous career development, and regional profession competitiveness.
- h) Support the establishment of a responsive independent ICT sector arbitration mechanism as provided for under the UCC 2013 Act and promote awareness and sensitisation of stakeholders including citizens about the existing policy, legal and regulatory instruments.
- i) Promote public participation in investments in the digital economy
- j) Support the establishment of a National Sector Data Bank
- k) Government shall ensure development and implementation of a fair digital tax policy

5.0 IMPLEMENTATION FRAMEWORK

5.1 Policy Implementation Mechanism

The successful achievement of the National ICT Policy will depend on an integrated approach during implementation supported by developing strategic synergies and partnerships, involving all stakeholders in the ecosystem.

The Ministry of Information, Communication Technology & National Guidance shall be responsible for providing policy guidance and oversight for implementation of the policy. It will lead and manage the development, adoption, implementation, monitoring and evaluation of the National ICT Policy.

The Ministry of Information, Communication Technology & National Guidance will work with the Digital Transformation Programme Working Group (DT PWG) as envisioned in the programme based approach in NDP III to ensue multi-sectoral approach in planning and implementation of the policy and ensure synergies are formed among the various stakeholders (including private sector, development partners, CSOs, MDAs, LGs), programme activities are well coordinated and the silo-based approach to working is mitigated.

5.2 Policy Monitoring and Review

The implementation of this policy and achievement of its vision, mission, and objectives will need to be monitored and evaluated throughout the useful lifetime of the policy. Progress in the execution of the activities will be conducted in accordance with the predetermined Key Performance Indicators and other specific evaluation indicators. Ministry of ICT and National Guidance will also develop a road map to implement the National ICT Policy. The road map will inform the Monitoring and Evaluation Framework and Implementation Matrix of the National ICT Policy.

This Policy will be subjected to a midterm review every three (3) years and a long-term review after five (5) years, to cater for the rapidly changing ICT and business trends, and match sector priorities with those in the National Development Plan. In addition to these reviews, the Ministry will carry out an annual monitoring and evaluation exercise and report on the implementation of the Policy.

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