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FOREWORD



The National Information Authority-Uganda Technology (NITA-U) is committed to the production and dissemination of Information Technology quality statistics. Specifically, indicators are required for monitoring the progress towards achieving the goals for the National Development Plan, and the United Sustainable Nations Development Goals among others. This Statistical Abstract is NITA-U's major annual publication through which NITA-U disseminates kev statistical information derived from the Authority's operations and administrative records of other agencies that are involved in the production of Information Technology statistics and International ICT publications. The information is critical in tracking progress, implementation, decision-making as well as ICT service delivery.

The information presented in this 2022 NITA-U Statistical Abstract covers statistics on Uganda's ICT rankings on the global scale, ICT performance the in economy, Internet and Telephony, E-waste, Operations and Human NITA-U Resources. Information is presented either based on a calendar year (January-December) or financial vear (June-July) structure. depending on availability of data.

Copies of this publication are available on the NITA-U's website: https://www.nita.go.ug/statistics-0

It is my sincere hope that the statistical information in this publication will be used by all stakeholders to make informed decisions.

Dr. Hatwib Mugasa Executive Director

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List Of Acronyms

CERT/CC	Computer Emergency Response Team/Co-ordination Centre
DC	Data Centre
DLGS	District Local Governments
DR	Disaster Recovery
EEE	Electric and Electronic Equipment
EGDI	E-Government Development Index
EPI	E-participation Index
EU	European Union
FY	Financial Year
GCI	Global Cybersecurity Index
GDP	Gross Domestic Product
GOU	Government of Uganda
GTMI	GovTech, Maturity Index
HCI	Human Capital Index
HS	Harmonised, System
ICT	Information and Communications Technology
IDI	ICT Development Index
IFMS	Integrated Financial Management System
loT	Internet of Things
ISIC	International Standard Industrial
	Classification of All Economic Activities
IT	Information Technology

ITU	International Telecommunications Union
LOSI	Local Online Service Index
MDAs	Ministries, Departments and Agencies
NBI	National Backbone Infrastructure
NCSI	National Cyber Security Index
NISF	National Information Security Framework
NITA-U	National Information Technology Authority-Uganda
NRI	Networked Readiness Index
OFC	Optic Fibre Cable
OSI	Online Service Index
РОМ	Placed on the Market
SDGs	Sustainable Development Goals
SMS	Short Message Service
TI	Telecommunications Infrastructure Index
TV	Television
UGX	Ugandan Shillings
UMCS	Unified Messaging and Collaboration System
UN	United Nations
UNBS	Uganda National Bureau of Standards
UNCTAD	United Nations Conference on Trade and Development
USD	United States Dollar
USSD	Unstructured Supplementary Service Data

EXECUTIVE SUMMARY

This National Information Technology Authority-Uganda (NITA-U) Statistical Abstract is an annual publication of key statistics produced within the Authority under its mandate to coordinate, promote and monitor Information Technology developments. Other statistics are collected from agencies that are involved in the production of Information Technology This statistics. publication is divided into six major thematic areas which include; Uganda's ICT rankings on the global scale, ICT performance in the economy, Internet and Telephony, E-waste, NITA-U Operations and Human Resources.

Uganda's ICT Ranking on the Global Scale

This section presents Uganda's ICT performance on the global scale as measured using the GovTech Maturity Index, E-government Development Index, E-Participation Index, Global connectivity report, Networked Readiness Index, and Global Cybersecurity Index.

• Uganda ranked 26th out of 198 countries in 2022 and it's GovTech Maturity index value rose from 63.9% in 2020 to 85.8% and was above the global average of 55.2%. Uganda ranked 3rd in Africa and 2nd to Tanzania in East Africa. Among the East Africa countries, Uganda took the lead in the areas of Digital citizen engagement index and Core government systems index.

• In 2022, Uganda's E-government Development Index value declined by 2% from 44.99% in 2020 to 44.24% but it was above the averages of Africa and the low-income grouping. Uganda also ranked third among the five East African countries.

• Out of 193 countries, Uganda's position in E-Participation Index improved from the 95th in 2020 to 93rd in 2022 with a score of 40.91%. Similarly, among the 5 East African Countries Uganda ranked third after Rwanda and Kenya.

• Uganda improved in its Network Readiness Index from a score of 31.51% in 2021 to 33.33% in 2022 from a position of 116 out of 130 to 116 out of 131. Uganda ranked highest in Governance of digital technologies (97th),

In 2022, Uganda's GovTech Maturity index value rose from **63.9% to 85.8%** where its achievements in Trust (87th) and Regulation (92nd) reflects on its ICT regulatory environment (58th) and cybersecurity measures (78th).

Uganda ranked the 72nd out of the 182 countries in Cybersecurity in 2020 and the 9th out of 43 countries in Africa with a score of 69.98%. Among the five East African countries, it ranked 4th after Rwanda, Kenya and Tanzania. Uganda performed fairly well on the legal measures pillar with a score of 78.20% and least on capacity development with 54.35%.

ICT Sector Performance in the Economy

ICT sector plays an important role in the economy and it is one of the most vibrant and fastest growing sectors since it's liberalization in 2010. This section covers statistics on how ICT has contributed to the economy in terms of GDP, trade, revenue and investment.

• The ICT sector value added at market prices (current prices) increased by 2.4% from UGX 2.93trillion in FY2020/21 to UGX 3.00trillion in FY2021/22 and at constant price by 6.7% from UGX 3.15trillion in FY2020/21 to UGX 3.36trillion in FY2021/22.

• The Percentage contribution

of ICT sector to overall GDP at constant price increased from 2.4% in FY2020/21 to 2.5% in FY2021/22. However, the ICT sector percentage contribution to overall GDP at market prices (current prices) declined from 2.0% to 1.8%.

• The ICT sector GDP growth rate at constant price grew at 6.7% in FY2021/22 compared to 10.7% recorded in the previous year. This decline could be attributed to a decrease in the value added for Computer, Electronic and Optical Products besides that of Postal and Courier Activities; and Audio-Visual Production and Distribution services.

• After a consistent decline in the percentage contribution of ICT goods to the country's total exports over the past five years, an increase from 0.1% in FY2020/21 to 0.3% in FY2021/22 was registered. This increase can be partly attributed to a higher increase in the earnings for Computers and peripheral equipment (91%); and Consumer electronic equipment (56%).

• The ICT sector contribution to total Gross Revenue decreased from 11.4% in FY2020/21 to 9.1% in FY2021/22. This decline could be attributed majorly to a reduction in revenues collected from telecommunications services specifically in Wired telecommunications activities.

The number of licensed ICT companies to carry out projects/services increased from 11 in FY2020/21 to 17 in FY2021/22 with planned jobs increasing from 898 to 1,247 and planned capital investment in ICT fromUSD10.65million USD to 474.77 million.

Internet & Telephony Statistics

This sub section covers statistics on internet and telephone subscriptions, as well as number of phones by type in Uganda.

Total internet subscriptions increased by 8% from 21.92million in 23.77million FY2021/22 to in FY2021/22 translating into а penetration of 55.1 internet connections for every 100 Ugandans.

Mobile phone subscriptions 28.88million increased from in FY2020/21 to 31.26 million in FY2021/22. There was an increase of 8% in total phone subscriptions from 28.99million in FY2020/21 to FY2021/22. 31.35 million in In addition, an increase of 5% was registered in telephone penetration per 100 subscribers from 67.6 in FY2020/21 to 72.6 in FY2021/22.

• Smart phone subscriptions increased by 12% from 9.73million in FY2020/21 to 10.91million in FY2021/22.

NITA-U Operational Statistics

This section contains statistics collected from NITA-U administrative reports/records on the business of the organization. It covers the National Data Backbone Infrastructure, e-Government Services, IT Standards, Laws and Regulations, and Information Security.

- In FY2021/22, an additional 752kms of Optical Fiber cable were laid bringing the total number of kilometers laid to 4,924 kms.
- In the FY2021/22, the number of districts connected to the NBI was maintained at 58 (43% of the 135 districts).

• By the end of FY2021/22, the NBI had been extended to 1,447 government sites and of these, 1,231 sites (85%) were utilizing the services provided over the NBI.

43% of districts in Uganda were connected to NBI as of FY 2021/22

• By the end of FY2021/22, the National Data Centre hosted an additional 38 applications bringing the total number of applications hosted to 193 for 66 entities.

• By the end of FY2021/22, a total of 71 entities (45% government and 55% private) were onboarded onto UGhub (Systems and Data Integration Platform) to utilize the shared services.

• By the end of FY2021/22, 126 entities had been on boarded onto the UMCS with a total of 2,1926 licenses being used.

• During the FY2021/22, 17 government entities utilized the SMS gateway service within the year; thirteen more than the previous year and a total of 54.63M SMS were pushed through.

• In the FY2021/22, additional 18 MDA/DLG websites were developed and revamped bringing the total number of websites hosted and obtaining technical support from NITA-U to 497.

• In FY2021/22, a total of 8 priority National IT standards were developed, reviewed and approved by National Technical Standards Committee.

In FY2021/22, 17 government entities utilized the SMS gateway.

• The average compliance level for 18 entities assessed against structured cabling standards and acquisition of IT hardware and software guidelines in the FY2021/22, was 54.4% a decline in comparison to the performance score of 75.5%, registered in the previous financial year.

• In FY 2021/22, 24 cyber

security advisories and alerts were disseminated to both public and private entities within the cyber space.

NITA-U Human Resources Statistics

• In the FY2021/22, the total number of NITA-U staff increased from 90 recorded in the FY2020/21 to 107 with only 31% being female.



GLOSSARY GLOSSARY

Bandwidth:

This describes the maximum data transfer rate of a network or internet connection. It measures how much data can be sent over a specific connection in a given amount of time.

Cyber Laws:

These are laws put in place to facilitate transacting and communicating using electronic specifically, platforms, consumer protection matters. They include; Electronic Transactions Act, 2011; Electronic Signatures Act, 2011 and Computer Misuse Act, 2011, The Data Protection and Privacy Act, 2019 and all the Regulations promulgated under the National Information Technology Authority, Uganda Act, 2009.

Dark fiber service:

This refers to un-used fiber optic capacity on the NBI leased out to clients.

Data Centre:

This is a large group of networked computer servers typically used by the organizations for remote storage, processing, or distribution of large amounts of data. The National Data Centre is fullv state-of-the-art equipped with technology which is utilised for Centralized Hosting Services, Disaster Recovery Services and Centre Services for other Data Government Applications & Data.



E-Citizens Portal:

centre This for а one-stop Government online services (http://www.ecitizen.go.ug). Its main objective is to enhance Government service delivery citizens, to non-citizens, businesses and to **Government Ministries, Departments** and Agencies (MDAs).

E-Government:

This is the use of information and communication technologies to deliver public services in a convenient, efficient customer-oriented and cost-effective way.

E-Government Development Index:

The United Nations e-Government Development Index (FGDI) comparatively measures the e-Government readiness of states in terms of the scope and quality of services (Online online Service Index), the development status of telecommunication infrastructure (Telecommunication Infrastructure Index) and the capital human (Human Capital Index).

E-Government Regulations:

These are regulations that aim at promoting e-government services and electronic communications and transactions with public and private bodies, institutions and citizens enacted under the National Information Technology Authority, Uganda Act, 2009.

E-Participation Index:

The e-participation index (EPI) is derived as a supplementary index to the UN E-Government Survey. It extends the dimension of the survey by focusing on the use of online services to facilitate provision of information by governments to citizens ("e-information sharing"), interaction with stakeholders ("e-consultation"), and engagement processes decision-making in ("e-decision making").

E-Services:

These are services delivered through the use information and communication technologies (ICTs).

The three main components of e-services are; service provider, service receiver and the channels of service delivery (i.e. technology).



Electronic Waste (E-Waste):

The Basel Convention on the control of trans-boundary movement and disposal of hazardous waste, to which Uganda is a member, defines E-Waste, as: "all discarded electrical and electronic assemblies, scrap, components and batteries". E-Waste includes a broad range and growing electronic number of devices ranging from large household appliances such as refrigerators and conditioners, air to personal products such as handheld cellular phones, personal stereos, consumer electronics and computers.

Exports:

Outward flows comprising goods leaving the economic territory of a country to the rest of the world.

Feature Phone:

A mobile phone that incorporates features such as the ability to access the internet and store and play music but lacks the advanced functionality of a smartphone.

Global Cybersecurity Index:

Global Cybersecurity Index (GCI) is a index composite produced, analysed and published by the International **Telecommunication** (ITU) Union the to measure commitment of countries to cybersecurity in order to raise cybersecurity awareness. Each country's level of development or engagement is assessed along five pillars - (i) Legal Measures, (ii) Technical Measures, (iii) Organizational Measures, (iv) Building, Capacity and (v) Cooperation – and then aggregated into an overall score.

Hardware & Software Standards:

These spell out the rationale for establishing minimum specifications and guidelines for use in the procurement of Information Technology hardware and software products by MDAs for sustainable and manageable IT in Government.

ICT Goods:

ICT goods is based on the World Customs Organisation's Harmonised System (HS) which defines ICT products (including ICT goods). ICT goods must either be intended to fulfil the function of information processing and communication by electronic means, including transmission and display, or use electronic processing to detect, measure and/or record physical phenomena, or to control a physical process.

ICT Sector:

ICT combines The sector manufacturing services and industries whose products primarily fulfil or enable the function of information processing and communication by electronic means, including transmission and display. This comprises ICT manufacturing industries, ICT trade industries and ICT services industries.

ICT Services:

ICT services are those intended to enable the function of information processing and communication by electronic means.



IT Certification:

IT Certification formal is а procedure, by which NITA-U assesses, verifies and attests that a company/person providing information technology products or minimum services meets the requirements and standards.

Imports:

Inward flows of goods from the rest of the world into the economic territory of a country.

Information Technology:

This means the science of collecting and using information by means of computer systems and refers to computers, ancillary or peripheral equipment such as printers and scanners, software and firmware services including support services, and related resources and includes any equipment or interconnected systems that are used in the acquisition, storage, manipulation or processing, management, movement, control, display, transmission or reception of data or information.

Information Security:

This means the protection of information and information systems from unauthorised access, use, disclosure, disruption, modification or destruction.

Internet:

This is worldwide public computer network. It provides access to a

number of communication services including the World Wide Web and carries e-mail, news, entertainment and data files, irrespective of the device used (not assumed to be only via a computer- it may also be by mobile phone, PDA, game machine, digital TV or other device). Internet access can be via a fixed or wireless network.



Leased line:

This refers dedicated to а connection that allows for communication between two sites (a point-to-point leased line) or between a site and the internet (an internet leased line). Leased lines typically deliver bandwidth over a leased fibre connection, although copper local tails can sometimes be used as well.

Local Online Service Index:

This is a multi-criteria index that captures e-government development at the local level, by assessing information and services provided by local governments through official websites. It is a score derived on the basis of an online assessment covering 86 indicators relating to 5 criteria: institutional framework (8), content provision (25), services provision (18), participation and engagement (17), and technical technology (18).

Networked Readiness Index:

The Networked Readiness Index model recognizes the pervasiveness of digital technologies in today's networked world and focuses on four fundamental dimensions: Technology, People, Governance, and Impact. It covers issues ranging from future technologies such as AI and the Internet of Things (IoT) to the role of digital transformation in reaching the Sustainable Development Goals (SDGs). The Network Readiness Index provides nations with invaluable knowledge they must have to succeed and be future-ready.

UGhub:

This is a Systems and data Integration Platform integrating all MDA systems so as to enable seamlessly sharing of data across Government systems in a rational, secure, efficient and sustainable manner.

Smartphone:

A class of mobile phones and of multipurpose mobile computing devices. They are distinguished from feature phones by their stronger hardware capabilities and extensive mobile operating systems, which facilitate wider software, internet (including web browsing over mobile broadband), and multimedia functionality (including music, video, cameras, and gaming), alongside core phone functions such as voice calls and text messaging.

Structured Cabling Standards:

These aim at providing guidance in the process of implementing structured cabling to enhance the delivery of voice, data and video conferencing services across the different Government MDAs.

Website:

This means a location on the internet and a collection of web pages, images, videos, data which are addressed relative to a common Uniform Resource Location (National Information Technology Authority, Uganda (E-Government) Regulations, 2015).

UGANDA'S ICT RANKING ON THE GLOBAL SCALE

This section presents Uganda's ICT performance on the global scale as measured using the GovTech Maturity Index, E-government Development Index; E-Participation Index; Networked Readiness Index; and Global Cybersecurity Index.

1.1 GovTech Maturity Index

Uganda's GovTech Maturity index value rose from 63.9% in 2020 to 85.8% in 2022 and was above the global average of 55.2%. Uganda also improved in all the four GTMI areas with the Core Government Systems Index from 52.2% in 2020 to 88.9% in 2022; Public Service Delivery Index improved to 88.1% in 2022 from 59.5% in 2020; Digital Citizen Engagement Index from 74.7% in 2020 to 91.7% in 2022; and GovTech Enablers Index augmented from 62.9% in 2020 to 74.8% in 2022. In all the four areas, Uganda's performance was also above the global averages. Furthermore, out of 198 countries, Uganda ranked 26th in 2022.

In 2022, Uganda ranked 3rd in Africa and 2nd to Tanzania in East Africa. Uganda took the lead in the areas of Digital citizen engagement index and core government systems index among the EA countries.`



Figure 2: Uganda's GTMI against the Global averages; 2020-2022



Source: World Bank Goulech Maturity Index Reports

Figure 3: Uganda's GTMI in East Africa; 2022



Source: World Bank GouTech Maturity Index Reports

1.2 E-Government Development Index

In 2022, Uganda's E-Government Development Index value was above the averages of Africa and the low-income grouping. However, Uganda's E-government Development Index declined by 2% from 44.99% in 2020 to 44.24% in 2022. This decline could be attributed partly to the decline in the average Online Service Index as a result of change in the UN E-government survey methodology.



1.2.1 Uganda's E-Government Index by Components

In 2022, Uganda was among the 50 countries with a high Online Service Index in spite of being landlocked and/or least developed. Nevertheless, her Online Service Index value declined from 58.24% in 2020 to 51.69% in 2022 partly due to change in the UN E-government survey methodology. This decline suggests that as a low-income country, Uganda lacks sufficient resources for investment in the development of online services.

Uganda's Telecommunication Infrastructure Index improved by 8.5% from 22.78% to 24.72% and Human Capital Index improved by 4% from 53.95% in 2020 to 56.31% in 2022.



Figure 5: Uganda's -government index by components; 2014-2022

Source: UN E-Government Survey Reports

1.2.2 Uganda's E-Government Index in East Africa

In 2022, Uganda ranked third in E-Government Development Index among the 5 East African countries. The same is true for all the three components of EGDI except the Human Capital Index where it came in second to Kenya.



Figure 6: Uganda's EGDI in East Africa; 2022

1.3 E-Participation Index

Out of 193 countries, Uganda's position in E-Participation Index improved from the 95th in 2020 to 93rd in 2022 with 40.91%. While Uganda is among those countries that are committed to improving the provision of online services and user experiences, the government's efforts to actively engage the public in e-consultations and other forms of e-participation remain somewhat limited.

Among the 5 East African Countries, Uganda ranked third after Rwanda and Kenya in 2022.





Figure 8: Uganda's E-Participation Index in East African; 2022

1.4 Local Online Service Index (LOSI)

Uganda's Local Online Service Index value improved tremendously from 17.5% in 2020 at a rank of 72 out of 100 cities to 48.84% and ranked 76th out of 193 cities in 2022. It is worth noting that Uganda transitioned from the Low LOSI group to the middle LOSI group.

Uganda's strongest performance relates to Institutional Framework (77.78%) and the weakest to services provision (16.67%). Among the East African Countries, Uganda's came second to Kenya. Uganda was ahead in the criteria of Institutional Framework and Content Provision.





Source: UN E-government survey reports

1.5 Network Readiness Index (NRI)

Uganda improved in its Network Readiness Index score from 31.51% in 2021 to 33.33% in 2022 from a rank of 116 out of 130 to 116 out of 131. Uganda ranked highest in Governance of digital technologies (97th), where its achievements in Trust (87th) and Regulation (92nd) reflects on its ICT regulatory environment (58th) and cybersecurity measures (78th). Uganda's second highest ranking dimension, Technology (104th), is bolstered by strong international internet bandwidth (34th), production of AI scientific publications (52nd), and increasing investments in emerging technologies (77th). Conversely, there are areas to improve on, as demonstrated by the Individuals sub-pillar, where low levels of tertiary enrolment (122nd) and use of virtual social networks (127th) dampen performance levels in the People pillar (130th).



Source: Network Readiness Index reports by Portulans Institute

		2021		2022	
		Score	2021 Rank (out of 130)	Score	2022 Rank (out of 131)
	NRI	31.5%	116	33.3%	116
Pillar A	Technology	22.6%	120	32.9%	104
Sub-Pillar A. 1	Access	29.4%	122	50.1%	103
Sub-Pillar A.2	Content	16.0%	118	26.5%	100
Sub-Pillar A.3	Future	22.2%	103	22.3%	103
	Technologies				
Pillar B	People	24.9%	126	17.7%	130
Sub-Pillar B. 1	Individuals	39.4%	110	20.9%	118
Sub-Pillar B.2	Businesses	8.3%	129	5.7%	131
Sub-Pillar B.3	Governments	27.0%	101	26.5%	102
Pillar C	Governance	45.7%	94	46.8%	97
Sub-pillar C. 1	Trust	33.2%	87	34.6%	87
Sub-pillar C.2	Regulation	51.1%	102	57.7%	92
Sub-pillar C.3	Inclusion	52.8%	85	48.1%	104
Pillar D	Impact	32.9%	121	35.9%	121
Sub-Pillar D. 1	Economy	22.9%	107	17.4%	110
Sub-Pillar D.2	Quality of Life	45.9%	114	47.8%	113
Sub-Pillar D.3	SDG Contribution	29.9%	124	42.5%	123

Table 1: Uganda's Network Readiness Index by Sub-Pillar; 2022

Source: Network Readiness Index reports by Portulans Institute

Despite, Uganda's 2022 Network Readiness Index being lower than the global average, her performance was higher than the average of the low-income group. Uganda is ranked 3rd out of 14 economies in the low-income category after Rwanda (101) and Zambia (113).

Among the East African countries, Uganda ranked 4th after Kenya (46.9%), Rwanda (39.5%) and Tanzania (37.8%) in Network Readiness Index.



Figure 13: Uganda's Network Readiness Index in East Africa; 2022



1.6 Global Cybersecurity Index (GCI)

The Global Cybersecurity Index is a composite index combining 25 indicators with regard to five pillars that include Legal, Technical, Organisational, Capacity Building and Cooperation.

Uganda ranked the 72nd out of the 182 countries in Cybersecurity in 2020 and the 9th out of 43 countries in Africa with a score of 69.98% from the 65th rank out of 193 countries in 2018 and the 7th in Africa with score of 62.10%. Among the five East African countries, Uganda ranked 4th in Global Cybersecurity Index in 2020 after Rwanda, Kenya and Tanzania.

In 2020, Uganda performed fairly well on the legal measures pillar with a score of 78.20%, followed by cooperative measures with 78.15%, technical measures with a score of 70.95%, organizational measures with 68.25% and least on capacity development with 54.35%.



Source: Global Cybersecurity Index reports by ITU



Figure 15: Uganda's Cybersecurity Index in East Africa; 2015-2020

ICT SECTOR PERFORMANCE IN THE ECONOMY

ICT sector plays an important role in the economy and it is one of the most vibrant and fastest growing sectors since it's liberalization in 2010. This section covers statistics on how ICT has contributed to the economy in terms of GDP, trade, revenue and investment



2.1 ICT Sector Gross Domestic Product

This sub section covers statistics on the ICT sector's gross value added, contribution to the national GDP and real ICT GDP growth rate.

2.1.1 ICT Sector GDP

The ICT sector value added at market prices (current prices) increased by 2.4% from UGX 2.93trillion in FY2020/21 to UGX 3.00trillion in FY2021/22 and at constant price by 6.7% from UGX 3.15trillion in FY2020/21 to UGX 3.36trillion in FY2021/22.



Table 2: ICT sector Gross Value Added at current prices(UGX Billion); FY2017/18- FY2021/22

ICT Activity	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22
Computer, Electronic and Optical Products	4	4	5	10	7
Postal & Courier Activities	44	45	40	39	30
Audio-Visual Production and Distribution services	69	64	63	60	57
Broadcasting and Programming services	34	40	27	25	5
Telecommunications services	1,539	1,907	2,002	2,135	2,086
Computer Programming, Consultancy and Related services	134	177	218	211	267
Information Services	103	126	162	165	251
Repair of Computers and Personal and Household Goods service	249	254	273	284	296
ICT sector GDP at current prices	2,175	2,616	2,790	2,929	2,999
Overall GDP at current prices	120,485	132,090	139,689	148,310	162,721

Source: Uganda Bureau of Statistics

ICT Activity	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22
Computer, Electronic and Optical Products	4	4	6	13	8
Postal & Courier Activities	44	49	36	28	22
Audio-Visual Production and Distribution services	69	64	65	64	59
Broadcasting and Programming services	41	36	42	44	60
Telecommunications services	1,831	1,715	2,063	2,367	2,385
Computer Programming, Consultancy and Related services	216	180	219	216	293
Information Services	114	120	162	169	278
Repair of Computers and Personal and Household Goods service	250	258	250	248	251
ICT sector GDP at current prices	2,569	2,425	2,844	3,148	3,356
Overall GDP at current prices	115,359	122,787	126,410	130,881	136,871

Table 3: ICT sector Gross Value Added at constant price (UGX Billion); FY2017/18- FY2021/22

Source: Uganda Bureau of Statistics

2.1.2 ICT Sector Contribution to GDP

The Percentage contribution of ICT sector to overall GDP at constant price increased from 2.4% in FY2020/21 to 2.5% in FY2021/22. However, the ICT sector percentage contribution to overall GDP at market prices (current prices) declined from 2.0% to 1.8%. The decline at market prices could be partly attributed to the decline in the telecommunication services value added that decreased by 2.3% in FY2021/22.

Figure 16: Percentage contribution of ICT sector to Overall GDP; FY2017/18- FY2021/22



2.1.3 ICT Sector GDP Growth Rate

Uganda's overall GDP growth rate at constant price grew at 4.7% in FY2021/22 compared to 3.5% in FY2020/21. On the other hand, the ICT sector GDP growth rate at constant price grew at 6.7% in FY2021/22 compared to 10.7% recorded in the previous year FY2020/21. This decline could be attributed to a decrease in the value added for Computer, Electronic and Optical Products besides that of Postal and Courier Activities; and Audio-Visual Production and Distribution services.



Source: Uganda Bureau of Statistics

2.2 Trade in ICT Goods

This section presents a summary of External Trade Statistics in formal ICT goods based on United Nations Conference on Trade and Development list of ICT goods based on the Harmonized Coding and Description System (HS) 2017.

2.2. Value of ICT Goods Exports

The ICT export earnings increased by 29% from USD6.48Million in FY2020/21 to USD8.35Million in FY2021/22. This could be attributed to the increase in earnings realized from computers and peripheral equipment and consumer electronic equipment that contributed more than half (66%) and 16% respectively.

ICT Activity	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22
Communication equipment	4.24	1.96	1.71	1.30	0.72
Computers and peripheral equipment	3.51	5.26	3.64	2.90	5.54
Consumer electronic equipment	2.66	1.54	1.02	0.87	1.36
Electronic components	1.22	2.77	0.35	0.83	0.68
Miscellaneous	0.38	0.15	0.15	0.58	0.05
Total ICT exports	12.01	11.67	6.87	6.48	8.35

Table 4: Value of ICT exports (Million USD); FY2017/18 - FY2021/22

Source: Uganda Bureau of Statistics

2.2.2 Contribution of ICT to Total Exports

After a consistent decline in the percentage contribution of ICT goods to the country's total exports over the past five years, an increase from 0.1% in FY2020/21 to 0.3% in FY2021/22 was registered. This increase can be partly attributed to a higher increase in the earnings for Computers and peripheral equipment (91%); and Consumer electronic equipment (56%).



2.2.3 Value of ICT Goods Imports

The FY2021/22 registered an increase of 15.5% in the ICT imports bill to USD295.93Million from the previous year FY2020/21. This change could be partly attached to the increase in the value of imported electronic components (149%), communication equipment (23%) and computers and peripheral equipment (8%).



ICT Activity	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22
Communication equipment	114.66	125.85	122.58	117.55	1,450.86
Computers and peripheral equipment	58.34	53.50	65.13	70.52	763.17
Consumer electronic equipment	36.36	44.46	35.21	39.27	124.96
Electronic components	30.27	49.19	25.99	23.20	578.71
Miscellaneous	6.82	10.96	6.62	5.72	41.59
Total ICT Exports	246.44	283.96	255.54	256.27	295.93

Table 5: ICT Imports Bill (Million USD); FY2017/18 - FY2021/22

Source: Uganda Bureau of Statistics

2.2.4 Contribution of ICT to Total Imports

The share of ICT to the overall import bill increased to 3.4% in FY2021/22 after more than three years of a decreasing trend.



2.3 ICT Sector Revenue Collections

This section includes information on the Gross Revenues (includes all non-tax revenue) from the ICT sector.

2.3.1 ICT sector Revenue Collections

The ICT sector revenue collections shifted from UGX 2.245 trillion in FY2020/21 to UGX 2 trillion in FY2021/22 with telecommunications services alone representing 78.5% of total ICT sector revenue.

Table 6: ICT Sector Revenue Collections [UGX Billions]; FY2017/18- FY2021/22

ICT Activity	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22
Manufacturing	0.69	0.54	0.49	1.28	1.03
Wholesale and retail trade; repair of motor vehicles and motorcycles	117.38	130.12	138.25	142.11	170.63
Transportation and storage	17.06	18.98	16.48	17.66	18.42
Information and communication	1.103.96	1,643.09	1,637.22	2,058.91	1,787.24
Financial and insurance activities	6.51	16.23	15.06	13.12	15.15
Other service activities	13.62	10.94	11.71	12.53	7.56
Total ICT Sector Revenue	1,259.22	1,819.90	1,819.21	2,245.60	2,000.03
Total Revenue	14,659.76	16,958.10	17,126.41	19,649.87	22,098.06

Source: Uganda Revenue Authority

2.3.2 Contribution of activities to ICT Revenue

On average Telecommunication services alone has been contributing 80% to total ICT sector revenue over the past five years. In FY2021/22, it contributed 78.5% of the ICT revenue from 83.6% in FY2020/21.

Table 7: Percentage Contribution of activities to ICT Revenue;FY2017/18- FY2021/22

ICT Activity	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22
Manufacture of computer, electronic and optical products	0.1%	0.0%	0.0%	0.1%	0.1%
Wholesale of machinery, equipment and supplies	9.3%	7.1%	7.6%	6.3%	8.5%
Postal and courier activities	1.4%	1.0%	0.9%	0.8%	0.9%
Publishing activities	2.4%	1.8%	1.7%	1.2%	1.4%
Motion picture, video and television programme production, sound recording and music publishing activities	3.2%	2.7%	2.0%	1.5%	1.8%
Programming and broadcasting activities	2.6%	2.0%	2.1%	2.5%	3.1%
Telecommunications	75.6%	80.9%	81.2%	83.6%	78.5%
Computer programming, consultancy and related activities	2.0%	1.5%	1.4%	1.3%	2.1%
Information service activities	1.8%	1.4%	1.6%	1.5%	2.4%
Activities of Mobile Money	0.5%	0.9%	0.8%	0.6%	0.8%
Repair of computers and personal and household goods	1.1%	0.6%	0.6%	0.6%	0.4%

Source: Uganda Revenue Authority

2.3.3 **Contribution of the ICT sector to Total Revenue**

The ICT sector contribution to total Gross Revenue decreased from 11.4% in FY2020/21 to 9.1% in FY2021/22. This decline could be attributed majorly to a reduction in revenues collected from telecommunications services specifically in Wired telecommunications activities.



2.4 ICT Planned Investment

This section contains information on the planned investment projects in ICT in Uganda. It contains statistics on licensed companies, planned capital investment and jobs.

2.4.1 Planned Jobs and Companies Licensed to carry out ICT Projects/ Services

The total number of planned jobs to serve in the licensed ICT investments increased from hundred ninety-eight (898) in FY2020/21 to one thousand two hundred forty-seven (1,247) in FY2021/22.

Similarly, the number of licensed companies to carry out ICT projects/services increased from eleven (11) in FY2020/21 to seventeen (17) in FY2021/22.



2.4.2 Planned Capital Investment in ICT

FY2021/22 registered a very sharp increase in planned capital investment in ICT from USD10.65million in FY2020/21 to USD474.77million.



INTERNET & TELEPHONY STATISTICS

This sub section covers statistics on internet and telephone subscriptions; as well as number of phones by type in Uganda.



3.1 Internet Subscriptions and Penetration

Both mobile and fixed internet subscriptions increased from 21.89million in FY2020/21 to 23.74 million and 29,412 to 37,468 in the FY2021/22 respectively. Total internet subscriptions increased by 8% from 21.92million in FY2021/22 to 23.77million in FY2021/22 translating into a penetration of 55.1 internet connections for every 100 Ugandans.





Source: Uganda Communications Commission

3.2 Telephone Subscriptions and Tele-Density

Mobile phone subscriptions increased from 28.88 million in FY2020/21 to 31.26 million in FY2021/22. On the other hand, there was a decrease in active fixed telephone subscription from 103,179 in FY2020/21 to 86,784 subscriptions in FY2021/22. These changes in the respective phone subscriptions resulted in an increase of 8% in total phone subscriptions from 28.99 million in FY2020/21 to 31.35 million phone subscriptions in FY2021/22. In addition, an increase of 5% was registered in telephone penetration per 100 subscribers from 67.6 in FY2020/21 to 72.6 in FY2021/22.

Figure 24: Telephone Subscriptions and Tele-Density; FY2017/18-FY2020/21



3.3 Smartphones, Feature Phones and Basic Phones

Smart phones and Feature and subscriptions increased by 12% and 16% from 9.73 million and 18.52 million in FY2020/21 to 10.91 million and 21.48 million in FY2021/22 respectively. On the other hand, basic phone subscriptions decreased by 6% from 3.95 million in FY2020/21 to 3.71 million in FY2021/22.

Figure 25: Number of phones by type; FY2018/19-FY2021/22

Basic	Mobi	le P	hones

2018/19	5,087,856
2019/20	3,949,752
2020/21	3,711,311
	2018/19 2019/20 2020/21

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	2018/19	15,962,646
	2019/20	17,090,406
-	2020/21	18,524,536
	2021/22	21,476,059

Smart phones



2018/19	5,511,987
2019/20	6,961,778
2020/21	9,729,758
2021/22	10,914,428

Source: Uganda Communications Commission



3.4 Mobile Network Coverage

Most of Uganda's population is covered by a mobile network signal, but blind spots remain. Ninety-eight percent (98%) of Uganda's population live in areas with 2G coverage. By the end of FY2020/21, mobile network coverage (3G or above) was available to 89% of the population. Between FY2018/19 and FY2020/21, 4G network coverage almost doubled to reach 47% of Uganda's population.



Source: Uganda Communications Commussion.



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NITA-U OPERATIONAL STATISTICS

This section contains statistics collected from NITA-U administrative reports/records on the business of the organization. It covers the National Data Backbone Infrastructure, e-Government Services, IT Standards, Laws and Regulations, and Information Security.

4.1 National Backbone Infrastructure (NBI)

This section provides statistics on the National Backbone Infrastructure whose major aim is to connect all major towns within the country onto an Optical Fiber Cable based Network and entities particularly Government entities. Statistics on the NBI include; number of kilometers of Optical Fiber; districts' coverage; number of entities and sites connected to the NBI and those utilizing services, and service availability.

4.1.1 Kilometers of Optical Fiber Cable on the NBI

In FY2021/22, an additional 752kms of Optical Fiber cable were laid bringing the total number of kilometers laid to 4,924 kms.



4.1.2 Districts Connected to the NBI

In the FY2021/22, the number of districts connected to the NBI was maintained at 58 (43% of the 135 districts).



Source: National Information Technology Authority-Uganda

4.1.3 Sites connected to the NBI

By the end of FY2021/22, the NBI had been extended to 1,447 government sites and of these, 1,231 sites (85%) were utilizing the services provided over the NBI. In FY2020/21, of the 1359 sites connected to the NBI only 850 (63%) were utilizing services over the NBI.



Source: National Information Technology Authority-Uganda

4.1.4 Service Availability of the NBI

In FY2021/22, the target average level of availability (average uptime) of services of the NBI was set at 99.8% for rings and 97% for spurs. The actual performance of spurs was at 99.4% fully meeting and exceeding the set target on the other hand the actual performance of rings recorded at 99.2% did not meet the set target.



4.2 National Data Centre

Following the approval of the Strategy for Rationalization of Information Technology (IT) Services, the Government of Uganda invested in a National Data Centre with a view of centralizing government data centers and minimizing the cost of building various Data Centre in MDAs. The National Data Centre provides the following cloud Services models; Co-location, Platform as a Service (PaaS), Infrastructure as a Service (IaaS), Software as a Service (SaaS), Disaster Recovery as a Service (DRaaS) and Backup as a Service (BaaS).

By the end of FY2021/22, the National Data Centre hosted an additional 38 applications bringing the total number of applications hosted to 193. Seventy-six (76%) of the 38, are hosted under IaaS, 26% under PaaS and 21% under DRaaS. None of the applications were hosted in the service type of BaaS and Co-location. Furthermore, an additional twelve (12) entities started utilizing the Data Centre Hosting Services in FY2021/22 bringing the total number to 66 since the operationalization of the Data Centre.

Figure 31: Number of additional Applications hosted at the National Data Centre; FY2017/18-FY2021/22

21	46	110 64	156 46	193 38
FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22
🛑 Total	number of applicatior	ns hosted 📃 Num	nber of applications ad	lded

Source: National Information Technology Authority-Uganda

Figure 32: Number of entities utilizing Data Centre Hosting Services; FY2017/18-FY2021/22



Source: National Information Technology Authority-Uganda

4.3 Snapshot of E-Government Services

E-Government enables citizens, enterprises and organizations to carry out their business with government in a more efficient, transparent, and effective manner. Therefore, NITA-U is championing comprehensive implementation of Information and Communication Technology in government Ministries, Departments, Agencies (MDAs) and Local Governments. The government has setup infrastructure and is promoting the roll out of e-services.

This section presents statistics on the integration Platform, Mobile Service Delivery Gateway, Unified Messaging and Collaboration System, e-services developed, and websites developed by NITA-U.

4.3.1 Data Integration Platform

NITA-U is integrating all government systems to a systems integration platform also known as UGhub so as to enable seamless sharing of data across government systems in a rational, secure, efficient and sustainable manner.

In FY2021/22, 58 additional entities (20 government and 38 private) were onboarded onto UGhub (Systems and Data Integration Platform) to utilize the shared services making a total of 71 entities.



Figure 33: Number of entities onboarded onto UGHUB; FY2020/21- FY2021/22

4.3.2 Unified Messaging and Collaboration System

NITA-U established the Unified Messaging and Collaboration System (UMCS) to provide a standardized platform for seamless communication across Government.

Over the years, the utilization of the UMCS platform has continuously increased. By the end of FY2021/22, 125 entities had been on boarded onto the UMCS with a total of 21,866 licenses being used. In FY 2020/21, 84 entities with a total of 16,959 users had been enrolled.



4.3.3 Mobile Service Delivery Gateway

NITA-U implemented uConnect, a Mobile Service Delivery Gateway (MSDG) for the Government of Uganda, with the major aim of facilitating affordable and efficient communication and e-services delivery to Citizens by all Government entities.

The uConnect platform currently provides two services; SMS gateway and USSD services. The SMS gateway was developed to provide a platform for dispatch of SMS in bulk by government entities at affordable prices.

The FY2021/22 registered a substantial improvement in the utilization of the SMS gateway; 17 government entities utilized the service within the year; 13 more than the previous year. In addition, total of 54.63M SMS were pushed through the SMS gateway within the period which is almost twice as more SMS pushed through in FY2019/20.

Furthermore, the number of entities utilizing USSD to provide a service within the FY2021/22 doubled the number of those in FY2020/21.







4.3.4 Usage of GOU Service Desk

The GOU Service Desk is the single point of contact for e-Government service delivery to all Ministries, Departments, Agencies and Local Governments. The Service Desk was set up to help streamline operations and create efficiency through tracking and timely resolution of requests.

The usage of the GOU Service Desk has increased substantially since its operationalization. In FY 2021/22, the Service Desk, together with the technical teams received and closed a total of 14,423 tickets rendering support to four hundred and sixty-nine (469) entities through the ticketing tool (https://helpdesk.nita.go.ug).



4.3.5 Websites Developed

In the FY2021/22, additional eighteen (18) MDA/DLG websites were developed and revamped bringing the total number of websites hosted and obtaining technical support from NITA-U by the end of the year to four hundred ninety-seven (497).



4.4 Development of Priority IT Standards

NITA-U is charged with the responsibility of developing national information technology standards. These standards are developed technical committees through comprised of subject matter experts. These experts are sourced different from fields such as academia. industry, business. government regulatory bodies and independent researchers etc. In developing standards. these NITA-U prioritizes different competing needs and therefore the standards that have the greatest the technological impact on advancement of the country in line with the government's development

programs are considered first for development. Such standards are considered to have a great impact trade, security and affect on positively the ability of government deliver services in a to fast. efficient, reliable effective and manner for all citizens which in turn has the effect of propelling the socio-economic development of the country.

In FY2021/22, a total of eight (8) priority National IT standards were developed, reviewed and approved by National Technical Standards Committee.

Additionally, in order to increase the awareness of the new standards developed, eleven (11) awareness sessions were held in various public entities.





4.5 Compliance to IT Standards

NITA-U conducts compliance assessments in entities against the standards for structured cabling and guidelines; Standards for the acquisition of IT Hardware & Software; E-Government Regulations, 2015 and the Electronic Transactions Act, 2011.

In the FY2021/22, eighteen (18) entities were assessed against structured cabling standards and acquisition of IT hardware and software guidelines. The average score against structured cabling standards was 52.9% a decline in comparison to the performance score of 62%, registered in the previous financial year. The average score against the guidelines and Standards for Acquisition of IT Hardware & Software for Government declined from 76% in the past financial year to 55.8%.

The overall average score against the two Standards was 54.4% a decline in comparison to the performance score of 75.5%, registered in the last financial year. This decline is majorly attributed to limited funding from the government and or budgetary allocation challenges for the IT Function.

Table 9: Number of Compliance Assessments and Compliance Levels;FY2017/18-FY2021/22

		Compliance levels (average)			
Financial Year	Number of Entities assessed	Structured Cabling Standards, 2013	Hardware & Software Standards, 2013	Overall score	
FY2017/2018	10	62%	67%	64.5%	
FY2018/2019	16	53%	-	50.0%	
	11	-	65%	99.070	
FY2019/2020	13	62%	76%	69.0%	
FY2020/2021	9	-	80%	75 5%	
	11	71%	-	73.370	
FY2021/2022	18	52.9%	55.8%	54.4%	

Source: National Information Technology Authority-Uganda

4.6 Certification of IT Service Providers

The National Information Technology Authority- Uganda (NITA-U) certifies and authenticates IT service providers and IT training institutions in Uganda for systematic growth of the sector and warrant of better-quality IT services for the consumers. The certification process enables the assessment/audit of firms to ensure that they are credible and are able to provide quality IT services to Government and citizens.

By the end of FY2021/22, NITA-U under the IT Certification Framework, certified a total of one hundred fifty-eight (158) additional providers of Information Technology Products, Services and Training bringing the total to six hundred forty-two (642).



Source: National Information Technology Authority-Uganda

4.7 Cyber Laws and Regulations Awareness

Sensitization activities to enhance awareness of the existence and application of the cyber laws have been conducted over the years.

In the FY2021/22, a total of thirty-seven (37) sensitization engagements were conducted in both the public and private sectors, to promote awareness on the IT regulatory environment and to enhance awareness and compliance of IT Certification. In FY2020/21, forty (40) sensitization and awareness activities were conducted.

Figure 41: Number of Sensitization Sessions on Cyber Laws and Regulations; FY2017/18-FY2021/22



Source: National Information Technology Authority-Uganda

4.8 Information Security

This section presents statistics on Information Security awareness sessions targeting numerous stakeholder groups, Information Security Advisories issued by the National Cyber Security Emergency Response Team/Co-ordination Centre (CERT/CC), entities implementing National Information Security Framework, privacy protection for personal or confidential data collected, processed and stored as well as the availability for hosted public services.

4.8.1 Information Security Awareness Sessions

In FY 2021/22, twenty-two (22) information security awareness sessions were conducted and these were aimed at improving the information security hygiene in the public. In FY2020/21, twenty-three (23) sessions that aimed at bridging the information gap of information security risks and vulnerabilities to the public were conducted.



4.8.2 MDAs compliant with the National Information Security Framework

In order to protect public resources and systems from potential cyber-attacks and associated risks such as cyber terrorism, the Government of Uganda put in place structures and mechanisms to operationalize the National Information Security Framework (NISF). NITA-U conducts annual NISF assessments in public entities to ensure that they are implementing the National Information Security Framework. NISF implementation assessment and remediation roadmaps are then developed for the assessed entities. The number of MDAs compliant with the National Information Security Framework (NISF) in FY2021/22 were lower at twenty (20) compared to twenty-three (23) in the previous financial year.



Source: National Information Technology Authority-Uganda

4.8.3 CERT Advisories and Alerts Disseminated

The implementation of the National CERT digital forensics solution was completed in February 2021. The CERT facilitates both computer and mobile forensic investigations. Furthermore, it has been established to support the security monitoring of the Cloud Infrastructure as well as provide support to MDAs in responding to Cybersecurity incidents. In FY 2021/22, twenty-four (24) cyber security advisories and alerts were disseminated to both public and private entities within the cyber space. For the FY2020/21, the National CERT/CC issued thirty-one (31) cyber security advisories and alerts about critical vulnerabilities in software, applications and systems and the possible mitigation procedures to the Critical Information Infrastructure Operators and other stakeholders.

Figure 44: Number of advisories and alerts disseminated annually



FY2020/21

FY2019/20

FY2021/22

Source: National Information Technology Authority-Uganda



NITA-U HUMAN RESOURCES STATISTICS

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5.1 NITA-U Staff by Gender

This section covers statistics on NITA-U staffing levels by gender. In the FY2021/22, the total number of NITA-U staff increased to one hundred seven (107) from ninety (90) recorded in the FY2020/21. Of the 107 staff recorded, only 31% are female indicating a gender bias in favor of males.



Source: National Information Technology Authority-Uganda