



Digital Transformation Programme

Annual Budget Monitoring Report

Financial Year 2022/23

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ACRONYMS AND ABBREVIATIONS

4IR	Fourth Industrial Revolution
BFP	Budget Framework Paper
BPO	Business Process Outsourcing
CERT	Computer Emergency Response Team
COVID-19	Coronavirus Disease - 2019
DC	Data Centre
DLG	District Local Government
DNS	Domain Name Server
DT	Digital Transformation
DTT/DTH	Digital Terrestrial Television/Direct-to-Home
EMIS	Education Management Information System
EDRMIS	Electronic Document and Records Management Information System
E-GP	Electronic Government Procurement
ERP	Enterprise Resource Planning
ESA	Enterprise Security Architecture
ETA	Electronic Transactions Act
FIA	Financial Intelligence Authority
FOSS	Free and Open Source Software
GB	Giga Byte
GCIC	Government Citizens Interaction Centre
GoU	Government of Uganda
GOVNET	Government Networks
IAC	Information Access Centre
ICT	Information, Communications Technology
ICTAU	Information Communications Technology Association of Uganda
IFMS	Integrated Financial Management System
iHMIS	Integrated Health Management Information System
IPPS	Integrated Payroll and Pension System
ISO	International Standards Organisation
ITES	Information Technology Enabled Services
ITU	International Telecommunication Union
IXP	Internet Exchange Point
LG	Local Government
MBPS	Mega Byte Per Second
MBSA	Microsoft Business and Services Agreement
MDAs	Ministries, Departments and Agencies
MoICT&NG	Ministry of Information, Communications Technology and National Guidance
MoU	Memorandum of Understanding
NBI	National Backbone Infrastructure
NDC	National Data Centre
NDP III	Third National Development Plan
NEMA	National Environment Management Authority
NISF	National Information Security Framework

NITA-U	National Information and Technology Authority
NOC	Network Operating Centre
OFC	Optic Fibre Cable
PDMIS	Parish Development Model Management Information System
PBS	Programme Budgeting System
PWG	Programme Working Group
RCIP	Regional Communication Infrastructure Programme
SIGNET	Signal Network Limited
SLA	Service Level Agreement
SMS	Short Messaging System
SOPs	Standard Operating Procedures
ToRs	Terms of Reference
TV	Television
UBC	Uganda Broadcasting Corporation
UCC	Uganda Communications Commission
UDAP	Uganda Digital Acceleration Project
Ug shs	Uganda Shillings
UICT	Uganda Institute of Information Communication Technology
UMC	Uganda Media Centre
UMCS	Unified Messaging Collaboration System
UPL	Uganda Posts Limited
US\$	United States Dollar
Wi-Fi	Wireless (Internet)

FOREWORD

With a strategic focus on the theme for Financial Year 2022/23, “Full Monetization of the Ugandan Economy through Commercial Agriculture, Industrialization, Expanding and Broadening Services, Digital Transformation and Market Access,” the Government of Uganda has focused on the allocation of resources to strategic interventions which reflect a strong drive and dedication towards sustainable economic growth for the people of Uganda.

The findings from this year’s annual monitoring exercise reveal commendable strides in the programme operations, however, the challenges we face in the pursuit of economic transformation are evident. Limited resources demand service delivery efficiency, thus the urgent need for strategic reforms if we are to reap the development dividends of our investments.

A recent project review in some programmes revealed ineffective usage of loans and counterpart funding. This raises concerns about potential funding losses and increased costs. I urge all the implementing agencies to ensure that adjustments in planning, financial monitoring and analysis, coupled with prudent management are undertaken immediately. Let us seize this moment to build a more prosperous and sustainable Uganda for generations to come.



Ramathan Ggoobi

Permanent Secretary/Secretary to the Treasury

EXECUTIVE SUMMARY

The Digital Transformation (DT) Programme seeks to increase information and communication technology (ICT) penetration and use of ICT services for social and economic development. The key expected results include: increasing ICT penetration; reducing cost of ICT devices and services; creating more direct jobs in the sector; increasing ICT incubation; and increasing government services online.

The Ministry of Information, Communication Technology and National Guidance (MoICT&NG) plays the lead and coordination role of programme activities with supportive roles from the National Information Technology Authority-Uganda (NITA-U). Other core agencies include: Uganda Communications Commission (UCC), Uganda Broadcasting Corporation (UBC), Posta-Uganda, and Uganda Institute of Communication Technology (UICT).

The DT Programme interventions are implemented under four sub-programmes: Enabling Environment; Research, Innovation and ICT Skills Development; ICT Infrastructure; and e-Services. This summary contains key performance highlights for the period July 2022 to June 2023 against planned interventions under the four sub-programmes and the budget pronouncements for the FY2022/23 namely:

1. Support the Fourth Industrial Revolution Technologies such as artificial intelligence, Internet of Things (IoT) and the use of robotics.
2. Extend broadband ICT infrastructure to enable connectivity to facilitate public service delivery.
3. Parish Model Management Information System.

Overall Performance

The DT programme approved budget FY2022/23 was Ug shs 208.09 billion (bn) which was revised upwards to Ug shs 254.05bn, of which Ug shs 217.85 bn (85.8%) was released and Ug shs 98.43bn (45.2% of the release) spent by 30th June 2023 (Table 3.2). Whereas the release was good, expenditure performance was poor. The poor expenditure performance was a result of the unspent supplementary meant to clear pension arrears for former workers of the Uganda Posts and Telecommunication Corporation whose verification was not concluded within the financial year.

The Digital Transformation Programme overall performance was fair at 65.8%. The Enabling Environment, and E-services sub-programmes performance was good whereas ICT Infrastructure and Research, Innovation and ICT Skills Development sub-programmes performed fairly. The low budget releases on critical service delivery activities at MoICT affected the performance of the ICT Infrastructure and Research, Innovation and ICT Skills Development sub-programmes.

Enabling Environment Sub-programme

The Enabling Environment Sub-programme performance was good at 79.6%. The regulatory impact assessment report for the Business Process Outsourcing (BPO) Policy was finalised and a memorandum of understanding (MoU) between M/s Monenco Iran consulting Engineers and the MoICT&NG for the provision of technical support in telecom and data governance in Uganda was signed. The basic skills for data analysis and visualization using artificial intelligence and machine learning were acquired by MoICT&NG. The NITA-U developed five IT standards during the period under review.

Research, Innovation and ICT Skills Development Sub-programme

The Research, Innovation and ICT Skills Development Sub-programme performance was fair (60.1%). The MoICT&NG developed, piloted, rolled out and operationalised the Parish Development Model Management Information System (PDMIS) registration and financial inclusion system in 10,594 Parishes and 2,184 sub-counties. The MoICT&NG reviewed the system requirements for the Integrated Health Management Information System (iHMIS). The quality assurance and information security audits for the electronic government procurement (e-GP), iHMIS, Education Management Information Systems (EMIS), and Electronic Document and Records Management Information System (EDRMIS) were provided to the developers.

The fourth Industrial Revolution (4IR) Strategy was launched, and the draft ICT Intellectual Property guidelines were developed. The ICT Innovation Hub at Kabale was operationalised and the Soroti University ICT hub was in the final stages of operationalisation. The National ICT Innovation Hub at Nakawa was hosting 26 innovators compared to seven in FY2021/22. A total of 166 IT service providers were certified and technical support was provided to the Ug Hub Data Integration Project. The UICT admitted, registered and supported 972 students out of 1,219 planned GoU-sponsored students for diploma programs. A total of 353 students belonged to the cohort of 2022/23 intake and 619 continuing students for FY 2021/22. The UICT also provided digital literacy skills to 5,214 people across the country. The institute supported block chain capacity enhancement as part of implementing the fourth industrial revolution strategy. A meeting app called “CAUCUS” was being used by the UICT for meetings and trainings. It was rolled out to the Ministry of Education and Sports (MoES) for piloting purposes.

E-services Sub-programme

The e-Services Sub-programme performance was good at 72.7%. A total of 43 entities were enrolled on the whole of government integration, 16 websites were developed, and 15 entities onboarded on the Unified Messaging and Collaboration System (UMCS) with 24,605 active users out of the 30,574 licenses issued by NITA-U. Through routine cyber security monitoring of shared e-services, 41 cyber threat advisories were issued as a proactive measure to reduce cyber risk exposure to ministries, departments and agencies (MDAs). However, cyber security risk and penetration testing capacity building, the establishment of the Cyber Threat Intelligence Platform and cyber penetration audits were not implemented due to budget limitations.

ICT Infrastructure Sub-programme

The ICT Infrastructure Sub-programme performance was fair at 59% because most outputs related to infrastructure development were not implemented. The MoICT&NG finalised the draft regulatory impact assessment report for spectrum management in Uganda and surveyed standards of ICT and e-government services provided by post offices in Western, Eastern and Northern regions. The NITA-U delivered bulk internet to 1,241 sites and connected an additional 52 sites to the National Backbone Infrastructure (NBI). A total of 11 BPO centres were supported during this period, three of these were new and connected to the internet. Bulk internet bandwidth was delivered to a total of 115 sites against a target of 100 during the period. An additional 68 new applications were hosted in the National Data Centre (NDC) cumulatively bringing the total number of applications hosted in the NDC to 264. The establishment of the third National Data Centre was not achieved due to delays in the approval of the Uganda Digital Acceleration Project (UDAP).

Conclusion

The overall Digital Transformation Programme (DTP) performance was fair with substantial annual targets not achieved. Although the release performance was good with 84.4% of the approved budget realized, only 46.9% was spent. The MoICT&NG vote recorded poor absorption of funds with only 26.5% of the released funds spent. The bulk of unspent funds (Ug shs 113bn) related to clearance of arrears whose verification was ongoing by the end of the financial year. It was observed that the uptake of e-services was still low given the low funding for critical activities. The UBC did not implement over 80% of the planned outputs due to inadequate release of funds having received only 20% of the annual budget.

The UICT admitted, registered and supported 972 students out of 1,219 planned GoU-sponsored students for diploma programs and a meeting app called “CAUCUS” was being used by the UICT for meetings and trainings. The 4th Industrial Revolution Strategy was launched and the UICT supported and hosted 26 events, meetings and training. The National ICT Innovations Hub at Nakawa was operational although at a low scale and hosted 26 private innovators in various fields though it had a capacity of over 100. The low number of MDAs connected to the NBI is likely to delay the reaping of the returns on investment for the various ICT infrastructure established and the prepaid internet.

The key challenges included: lack of programming interface for applications developed by some MDAs that affected their integration onto the data sharing platform, delayed approval of the UDAP which greatly hindered the commencement of the planned infrastructure activities and utilization of the services across the country, limited network coverage, poor quality services, high cost of end-user devices and services, limited ICT knowledge and skills, increased sophistication of cyber criminals and limited innovation capacity. In addition, it was noted that the NITA-U Board had expired and is yet to be renewed owing to the pending merger of the agency.

Recommendations

1. The DT Programme Working Group and MFPED should prioritise funding for critical technological interventions.
2. The NITA-U/MoICT&NG should enforce the rationalization and harmonization of IT initiatives and services in MDAs to ensure compatibility of the developed applications with national data-sharing platforms.
3. The MoICT&NG should prioritise funding for the UBC to enable it to execute its mandate and meet programme targets.
4. The MoICT&NG should support the UICT to establish the required infrastructure in the form of lecture rooms equipped with smart technology to facilitate specialized ICT training.
5. The DT Programme Secretariat and MoICT&NG should review the existing frameworks and implement the broadband policy to reduce the cost of internet and gadgets and increase ICT uptake.
6. The MoICT&NG should expedite the verification of beneficiaries of the arrears.
7. The MFPED should halt the provision of any budget for the arrears until verification of beneficiaries is concluded.

CHAPTER 1: INTRODUCTION

1.1 Background

The mission of the Ministry of Finance, Planning and Economic Development (MFPED) is, “*To formulate sound economic policies, maximize revenue mobilization, and ensure efficient allocation and accountability for public resources so as to achieve the most rapid and sustainable economic growth and development.*”

The MFPED through its Budget Monitoring and Accountability Unit (BMAU) tracks the implementation of programmes/projects by observing how values of different financial and physical indicators change over time against stated goals and indicators. The BMAU work is aligned with budget execution, accountability, and service delivery.

Commencing FY 2021/22, the BMAU began undertaking Programme-Based Monitoring to assess performance against targets and outcomes in the Programme Implementation Action Plans (PIAPs)/Ministerial Policy Statements. Semi-annual and annual field monitoring of Government programmes and projects was undertaken to verify receipt and expenditure of funds by the user entities and beneficiaries, the outputs and intermediate outcomes achieved, and the level of gender and equity compliance in the budget execution processes. The monitoring also reviewed the level of cohesion between sub-programmes and noted implementation challenges.

The monitoring covered the following Programmes: Agro-Industrialization; Community Mobilisation and Mindset Change; Digital Transformation; Human Capital Development; Innovation, Technology Development and Transfer; Integrated Transport Infrastructure and Services; Manufacturing; Mineral Development; Natural Resources, Environment, Climate Change, Land and Water Management; Public Sector Transformation; Private Sector Development; Sustainable Development of Petroleum Resources; and Sustainable Energy Development.

This report presents findings from monitoring the Digital Transformation Programme for the budget execution period from July 2022 to June 2023.

1.2 Programme Goal and Objectives

The Digital Transformation Programme is envisaged to increase ICT penetration and use of ICT services for social and economic development. The objectives of this programme as laid out in the NDP III are to:

- i) Increase the national ICT infrastructure coverage.
- ii) Enhance usage of ICT in national development and service delivery.
- iii) Promote ICT research, innovation and commercialization of indigenous knowledge products.
- iv) Increase the ICT human resource capital.
- v) Strengthen the policy, legal and regulatory framework.

1.3 Sub-programmes

The National Digital Transformation Programme is implemented through the following sub-programmes:

- i) Enabling Environment.
- ii) Research, Innovation and ICT Skills Development.
- iii) E-services.
- iv) ICT Infrastructure.

CHAPTER 2: METHODOLOGY

2.1 Scope

This report is based on selected sub-programme interventions and outputs under the Digital Transformation Programme that are contributed to by the following votes: Vote 020: Ministry of Information, Communication Technology and National Guidance (MoICT&NG), and Vote 126: National Information Technology Authority of Uganda (NITA-U). The selection of areas to monitor is based on a number of criteria:

- Outputs were planned for and undergoing implementation in the review period
- Significance of the budget allocations to the sub-programmes within the programme budgets, with focus being on large expenditure interventions. Preference is given to development expenditure.
- Potential of interventions to contribute to programme and national priorities.

Out of the 22 interventions, 14 (63.6%) were monitored (Annex 1: List of interventions sampled for monitoring).

2.2 Approach and Methods

Both qualitative and quantitative methods were used in the monitoring exercise. The physical performance of planned outputs was assessed through monitoring a range of indicators and linking the progress to reported expenditure and/or planned targets. The purposive sampling method was used in selecting outputs from the Programme Implementation Action Plans (PIAPs), Ministerial Policy Statements (MPSs) and progress reports of the respective Ministries, Departments, and Agencies (MDAs) for monitoring. Multi-stage sampling was undertaken at three levels: i) Sub-programmes, ii) intervention, and iii) outputs.

2.3 Data Collection and Analysis

Data Collection

Both primary and secondary data was collected from the sources and by the means that are indicated below:

- i) Literature review: MPS FY2022/23; National and Programme Budget Framework Papers; PIAPs, the third National Development Plan (NDP III), periodic progress reports and work plans for the respective implementing agencies, Budget Speech, Public Investment Plans, Approved Estimates of Revenue and Expenditure, project reports.
- ii) Review and analysis of data from the Integrated Financial Management System (IFMS), Program Budgeting System (PBS), institutional websites, and quarterly performance reports.
- iii) Consultations and key informant interviews with project managers and activity implementers.
- iv) Field visits to various project sites for primary data collection, observation and photography.
- v) Call-backs in some cases were made to triangulate information.

Data Analysis

Both qualitative and quantitative approaches were used to analyse the data. Qualitative data was examined and classified in terms of constructs, themes or patterns to explain events among the beneficiaries (interpretation analysis) and reflective analysis where the monitoring teams provided an objective interpretation of the field events.

Quantitative data on the other hand was analyzed using advanced excel tools to aid interpretation and presented in the form of tables.

Comparative analysis was done using the relative importance of the outputs and the overall weighted scores. Relative importance (weight) of an output monitored was based on the amount of budget attached to it; thus the higher the budget the higher the contribution of the output to the programme performance. This was derived from the approved annual budget of each output divided by the total annual budget of all outputs of a particular programme/project.

The weight of the output and percentage achievement for each output were multiplied to derive the weighted physical performance. The attained outputs contributed 100% to the overall semi-annual programme performance.

The overall programme performance is an average of individual sub-programme performances assessed. The performance of the programme and sub-programme was rated on the basis of the criterion in Table 2.1. Based on the rating assigned, an enhanced traffic light colour-coded system was used to alert the policymakers and implementers on whether the interventions were achieved (green), performed well (yellow), on track (umber) or off track (red).

Table 2.1: Assessment guide to measure performance in FY 2022/23

Score	Comment	Traffic Light
90% and above	Very Good (Achieved at least 90% of outputs)	Green
70%-89%	Good (Achieved at least 70% of outputs)	Yellow
50%- 69%	Fair (Achieved at least 50% of outputs)	Orange
49% and below	Poor (Achieved below 50% of outputs)	Red

Source: Author's Compilation

2.4 Limitation

Lack of disaggregated financial information for some outputs that contribute to several interventions.

2.5 Structure of the Report

The report is structured into four chapters. These are: Introduction, Methodology, Programme performance, and Conclusion and Recommendations respectively.

CHAPTER 3: PROGRAMME PERFORMANCE

3.1 Overall Programme Performance

The Digital Transformation Programme overall performance was fair at 65.8%. The Enabling Environment and E-services sub-programmes performance was good, whereas the ICT Infrastructure and Research, Innovation and ICT Skills Development Sub-programmes performed fairly as shown in Table 3.1. The low budget releases on critical service delivery activities at MoICT affected the performance of the ICT Infrastructure and Research, Innovation and ICT Skills Development sub-programmes.

Table 3.1: Digital Transformation Programme performance as at 30th June 2023

Sub-programme	% Output Performance	Remark
Enabling Environment	79.6	Good performance
Research, Innovation and ICT Skills Development	60.1	Fair performance
E-services	64.5	Fair performance
ICT Infrastructure	59	Fair performance
Average	65.8	Fair performance

Source: Authors' Compilation

The DT Programme approved budget for FY2022/23 was Ug shs 208.09bn which was revised upwards to Ug shs 254.05bn of which Ug shs 217.85 bn (85.8%) was released and Ug shs 98.43bn (45.2% of the release) spent by 30th June 2023 (Table 3.2). Whereas release was good, expenditure performance was poor. The unspent funds were related to the clearance of pension arrears for former workers of the Uganda Posts and Telecommunication Corporation.

Table 3.2: Financial performance of the Digital Transformation Programme as at 30th June 2023

Sub-programme	Budget	Revised	Released	Spent	% Release	% Spent
Enabling environment	137.309	183.664	172.344	52.095	93.8	30.2
E-Services	12.766	12.766	10.498	10.474	82.2	99.8
ICT Infrastructure	26.313	25.916	24.632	24.41	93.6	99.1
Research Innovation and ICT Skills Development	31.705	31.705	10.384	11.453	32.8	110.3
Total	208.093	254.051	217.858	98.432	85.8	45.2

Source: PBS

The Research, Innovation and ICT Skills Development Sub-programme had the lowest budget release at 32.8%, whereas the Enabling Environment, E-Services, and ICT Infrastructure sub-programmes had good receipts at over 82% of the annual budget as shown in Table 3.2. The Enabling Environment Sub-programme had the least absorption at 30.2% of the budget release, whereas the Research, Innovation and ICT Skills Development Sub-programme had the highest release absorption at 110%. The more than 100% absorption under the subprogram is attributed to support from development partners (Enabel) under the UICT to support the installation of e-learning systems/modalities and establish International Certification of Digital Literacy (ICDL) centres. The poor absorption under the Enabling Environment is attributed to the none payment of pension arrears for the former employees of the Uganda Posts and Telecommunication Corporation.

3.2. Enabling Environment Sub-programme

The sub-programme aims at strengthening the policy, legal and regulatory framework of the DT Programme and has two interventions to be implemented over the NDPIII period. These are: i) review and develop appropriate policies, strategies, standards and regulations that respond to industry needs; and ii) regulate, coordinate and harmonize ICT infrastructure planning, sharing and deployment within the public and private sector.

Performance

The overall sub-programme performance was good at 79.6% (Table 3.5). Five IT standards were developed and basic skills for data analysis and visualization using artificial intelligence (AI) and machine learning were acquired by MoICT&NG staff. The detailed performance of the two monitored interventions is given in the ensuing sub-sections. Table 3.3 highlights the performance of the monitored interventions.

Table 3.3: Performance of monitored Interventions under the Enabling Environment Sub-programme by 30th June 2023

Interventions	Colour Code	Remark
Review and develop appropriate policies, strategies, standards and regulations that respond to industry needs	60.6%	Fair performance
Regulate, coordinate and harmonize ICT infrastructure planning, sharing and deployment within the public and private sector	80.7%	Good performance

Source: Authors' Compilation

3.2.1 Review and develop appropriate policies, strategies, standards and regulations that respond to industry needs

The intervention aims at strengthening the ICT policy, legal and regulatory framework and the planned outputs for FY2022/23 include: audit and risk management; finance and accounting; human resource management; planning and budgeting services; procurement and disposal services; records management; administrative and support services; general administration; and data protection and privacy. The performance of the intervention is given hereafter:

The intervention performance was fair at 60.6% which was attributed to low absorption of funds under the administrative and support services. A review of the following policies, strategies and frameworks were undertaken and cleared by MoICT&NG Top Management - the Business Process Outsourcing (BPO) Policy, the Digital Transformation Roadmap, the National Electronic Government Framework, the Digital Uganda Vision (DUV) and Information and Communication Bill, 2022. Stakeholders' engagement for the National ICT Policy were finalized pending submission to the Cabinet Secretariat. The paper on the National Electronic Government Policy Framework and a brief report on the National Broadband Policy were presented to the Ministry's Top Management. Staff training and development, and rationalisation and mainstreaming of NITA-U into the MoICT&NG were not undertaken during the period under review owing to a one-year extension of time issued by the Ministry of Public Service on the merger of government agencies.

The NITA-U developed five IT standards against the annual target of five standards as listed in Table 3.4. Six sensitization engagements were conducted in Uganda Business and Technical Examinations Board (UBTEB), National Curriculum Development Centre (NCDC), Standard Gauge Railway (SGR), Ministry of Local Government (MoLG), National Council for Higher Education (NCHE), and KDLG to support the uptake of standards.

Table 3.4: Information Technology Standards developed in the FY 2022/23

S/N	Standard	Description of the developed standards
1	FDUS ISO 17363:2013 Supply chain applications of RFID — Freight containers.	The standard defines the usage of read/write radio-frequency identification technology (RFID) cargo shipment-specific tags associated with containerized freight for supply chain management purposes ("manifest tags").
2	FDUS ISO 17364:2013 Supply chain applications of RFID — Returnable transport items (RTIs) and returnable packaging items (RPIs)	The standard provides specifications for the identification of the RTI and the returnable packaging item (RPI); makes recommendations about additional information on the RF tag; specifies the semantics and data syntax to be used; and the air interface standards between the RF interrogator and RF tag.
3	FDUS ISO/IEC 9594_8:2020/ Cor 1:2021 Information technology — Open systems interconnection — Part 8: The Directory: Public-key and attribute certificate frameworks - Technical Corrigendum	The standard addresses some of the security requirements in the areas of authentication and other security services through the provision of a set of frameworks upon which full services can be based specifically focusing on public-key certificates and attribute certificates.
4	Information Technology – Generic cabling for customer premises – Part 1: General requirements	This standard specifies a multi-vendor cabling system which may be implemented with material from single or multiple sources.

Source: NITA-U

The NITA-U further conducted two sensitization engagements with the Office of the President and the National Building Review Board (NBRB) on data protection and privacy. The agency reviewed the annual audit plan. Four television and one radio talk shows were undertaken, and three online articles were published to increase awareness of NITA-U initiatives.

Additionally, the NITA-U Local Area Network (LAN) and computers were serviced and new *wifi* equipment were installed to improve the network within the office premises. A total of 10 compliance audits were conducted during the FY and these were: Give Directly, Stanbic Bank, UAP Old Mutual Insurance, MTN, Airtel, *Safe Boda*, International Hospital Kampala, *Jumia*, Ministry of Gender, Labour and Social Development, and National Identification and Registration Authority (NIRA).

The NITA-U fully developed the Personal Data Protection Office (PDPO) web solution with five fully functional solution modules namely: registration and renewals, complaints reporting and review, breach reporting, online searchable register and information centre module. It was however observed that during the period under review, the NITA-U did not have a functional board in place.

3.2.2 Regulate, coordinate and harmonize ICT infrastructure planning, sharing and deployment within the public and private sector

The intervention contributes to the programme’s objective of strengthening the policy, legal and regulatory framework. The planned output for FY2022/23 was ICT infrastructure planned, developed and managed.

The intervention performance was good at 80.7%. Mapping of ICT infrastructure information requests with utility sectors was undertaken by MoICT&NG. With support from the UN Global Pulse Laboratory; an introduction to basic skills and tools training for data analysis, and visualization using artificial intelligence (AI) and machine learning was undertaken. A Memorandum of Understanding (MoU) between the Ministry and Monenco Iran Consulting Engineers was signed for the provision of technical support in telecommunications and data governance in Uganda. The MoICT&NG developed

a concept paper for business promotion tools, and materials for the BPO/Information Technology Enabled Service (ITES) industry were developed. The key challenge was a shortfall in funding during the period under review. Table 3.5 shows the performance of the sub-programme.

Table 3.5: Performance of the Enabling Environment Sub-programme by 30th June 2023

Output Performance								Remark
Intervention	Output	Financial Performance			Physical Performance			
		Annual Budget (Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	
Review and develop appropriate policies, strategies, standards and regulations that respond to industry needs	Planning and budgeting services	1,040,000,000	66.8	100	14	7	74.82	Good performance
	Data protection and privacy	165,000,000	100.0	100	9	4	44.44	Poor performance
	Administration and support services	41,638,000,000	100.0	5	4	2.5	62.5	Fair performance
Regulate, coordinate and harmonize ICT infrastructure planning, sharing and deployment within the public and private sector	Legal and advisory services	250,500,000	97.4	96	8	5	64.16	Fair performance
	Policies, regulations and standards	175,200,000	51.5	99	6	3	97.18	Very good performance
Average Output Performance							68.62	Fair performance
Outcome Performance								
Outcome Indicator				Annual Target	Achieved	Score (%)	Remark	
No. of Legal and regulatory framework in place				1	5	100		
Average outcome performance						100.0		
Overall sub-programme performance						79.6	Good performance	

Source: Field Findings, PBS and IFMS

Conclusion

The Enabling Environment Sub-programme's performance was good at 79.6% with most of the planned and funded activities implemented. Some policy frameworks and strategies were developed but not finalized and the basic skills for data analysis and visualization using artificial intelligence and machine learning were acquired. Gratuity and pension arrears contributed 53% of the budget and 67%

of the release was for the same. However, the payment of the pension arrears to former workers of the Uganda Posts and Communication was not done due to an ongoing verification exercise. The delays in finalizing legal, policy and regulatory frameworks are likely to impact the country on leveraging the benefits of a highly revolving ICT ecosystem. The budget shortfalls affected the implementation of some activities like monitoring of programme activities, training of staff, and undertaking surveys among others.

3.3 Research, Innovation and ICT Skills Development Sub-programme

The sub-programme aims to promote ICT research, innovation and commercialization of indigenous knowledge products and increase the ICT human resource capital. The sub-programme has 11 interventions of which six (6) were under implementation. These include: develop and implement an ICT research and innovation ecosystem, develop innovation and incubation centres, support local innovation and promote export of knowledge products, promote local manufacturing and assembly of ICT products, develop a well-grounded ICT professional workforce, and develop an ICT professional’s quality assurance framework. All six interventions under implementation were monitored.

Performance

The sub-programme overall performance was fair at 60.1% (Table 3.7). The performance of the outcome indicators however was poor at 28.3%. The intervention of developing ICT centres of excellence and vocational institutions registered a very good performance compared to the development and implementation of the ICT Research and Innovation ecosystem. Table 3.6 highlights intervention performance under the sub-programme by 30th June 2023.

Table 3.6: Performance of interventions under the Research, Innovation and ICT Skills Development Sub-programme by 30th June 2023

Intervention	Colour code	Remark
Support local innovation and promote export of knowledge products	85.8%	Good performance
Promote local manufacturing and assembly of ICT products	85%	Good performance
Develop and implement ICT Research and Innovation ecosystem	66%	Fair performance
Develop innovation and incubation Centres	65.4%	Fair performance
Develop an ICT professional’s quality assurance framework	75%	Good performance
Develop ICT centres of excellence and vocational institutions	99%	Very good performance

Source: Authors’ Compilation

3.3.1 Develop and implement ICT Research and Innovation ecosystem

The intervention contributes to the objective of promoting ICT research, innovation and commercialization of indigenous knowledge products. The planned outputs for the FY2022/23 include: information systems and innovation fund managed, and support to the Uganda Institute of Information and Communication Technology (UICT) provided.

Support to UICT provided: The development of the ICT research, innovation and pre-incubation operational framework and agenda was at 60% against the 100% target. The Applied Research, Innovation and Pre-Incubation unit was established and staff were recruited to operationalise it. The draft research and innovation manual was developed and awaited approval by UICT Management.



A silver fish solar dryer prototype made by UICT students

The 4th Industrial Revolution Strategy was launched and the innovation hub was promoted through the Ministry's social media pages. Under the fourth industrial revolution, the UICT supported and hosted 26 events, meetings and trainings at the National ICT Innovation Hub in Nakawa and the ICT Hub was maintained. Additionally, four staff were recruited¹ in a bid to operationalize the National ICT Innovation Hub in partnership with Crossroad's Animation Uganda. Through the various trainings at the National ICT hub in Nakawa, a total of 4,544 persons benefited where 42% were female attendees and 58% were male. Additionally, 42 of the total beneficiaries were People with Disabilities (PWDs).

The Hub conducted the following ICT boot camps: A 3D animation boot camp that provided a practical overview of computer animation, a holidaymakers ICT Innovation and Coding Boot camp was organized in partnership with Dipo Technologies, the Youth Equality Center (YEC) ICT boot camp on basic ICT Skills and entrepreneurship for youths in Nakawa,

a two-week ICT boot camp in partnership with Engage Consults the Hub for Women in Organizations, and ICT Boot Camp for Women Entrepreneurship for Africa (WE4A) in partnership with Engage consults aimed to build the capacity of women-led enterprises to increase their capacity of raising follow on funding from Private sector investors.

Innovation fund management: Under this output, the MoICT&NG reviewed the systems requirements and specifications for the Integrated Hospital Management Information System and National Assets Information Management System (NAIMS). The PDMIS Registration and Financial Inclusion System was launched and piloted to collect data from 48% of the parishes in Uganda.

3.3.2 Develop ICT centres of excellence and vocational institutions

The intervention contributes to the programme's objective of increasing the ICT human resource capital. The planned output for FY2022/23 is inclusive access to quality ICT training at the tertiary education level ensured (Support to UICT). Intervention performance is discussed hereafter:

Support to UICT: Out of 1,219 planned GoU-sponsored students for diploma programs, the UICT admitted and registered 972 students of which 289 (36%) were female and 683 (64%) were male. A total of 353 students were for the cohort 2022/23 intake (24.4% of whom were female) and 619 continuing students for 2021/22 of which 25.4% were female and 75% male. These were supported in the form of teaching, learning, specialized skilling, upkeep, accommodation, and industrial training. A grant offer for the development of an artificial and virtual reality (AVR) centre was approved and 13 staff undertook specialized training and professional certification plus 20 staff undertook specialized short courses and continuous professional/ development training.

¹ Hub Technical Service Associate; Physical Facilities Associate; Hub Procurement Associate; Public Relations and Communications Associate

The National ICT Innovations Hub at Nakawa was operational though at a low scale under the management of the UICT. The hub hosted 26 (Annex 3) private innovators in the fields of coding training, e-commerce, product visualization, education, entertainment, information and electronic records management, transport and logistics, and premise security (artificial intelligence) among others. These were at different levels of progress ranging from collaboration startups, ideation, and acceleration to incubation.



Some of the work spaces at National ICT Innovation Hub in Nakawa

M/s Hardware Kit Limited supplied and delivered 80% of the ICT equipment and ICT accessories for the national ICT Innovation Hub against a target of 100%. The delayed delivery was attributed to late release of funds hence delayed completion of procurement. A generator was also procured and installed at the National ICT Innovation Hub.

The NITA-U certified 166 IT service providers against a target of 100 in line with the certification regulations bringing the total number of IT firms certified to 808 and 25 awareness engagements were conducted in both private and public sectors to increase awareness of IT certification, and consumer protection.

3.3.3 Develop innovation and incubation Centres

The intervention contributes to the programme's objective of promoting ICT research, innovation and commercialization of indigenous knowledge products. The planned outputs for the FY2022/23 are: regional ICT hubs supported, and grants to ICT innovators provided.

Regional ICT hubs supported: The MoICT&NG supported three ICT innovation hubs at Kabale, Soroti and Muni universities by providing technical support and guidance on the operationalization of the regional innovation hubs. By the end of FY2022/23, only the Kabale University Regional ICT Hub was operational. The services offered at the regional ICT innovation hubs included: innovation ideation, capacity building workshops including how to commercialise innovations, proposal generation, link innovators to potential funders, support intellectual property (patents) processing, ICT skilling to the community like boot camps, and co-working space where free internet, and mentorship is provided. Two of the three regional hubs were monitored and the findings are discussed hereafter:

The Kabale University ICT Hub is hosted on the premises of the Faculty of Agriculture and was furnished with 25 computers, 10 office chairs, one board room table, a business hub printer, 45

executive chairs for the students, one projector, Local Area Network (LAN) installation, and four surveillance cameras.

During the period under review, a two-week boot camp for Primary Seven, Ordinary Level, and Advanced Level leavers was successfully organised to equip them with hands-on skills in the fields of Microsoft software, computer maintenance, records management, and internet usage. The hub reported a lack of dedicated staff at the universities to effectively and efficiently offer services and a lack of reliable and regular operational funds.

Soroti University ICT Hub: The ICT Hub at Soroti University was in the final stages of establishment at an estimated cost of Ug shs 250 million. A room was allocated and partitioned, and a total of 15 computers and associated equipment were procured and installed. The pending activities included: the installation of the operational software, delivery of the printer and the furniture, and recruitment of staff. The facility was being manned by volunteers. The training programmes, operational policies and procedures had not been worked out and there was no operational budget. The University needs to assign a full-time staff to run the hub as well as budget for operational costs.

In addition to supporting the regional ICT hubs, the MoICT&NG implemented a partnership with M/s Refactory, Code Impact, Crossroads, Fundibots and Wal-e Visual to provide advisory services to the National ICT Innovation Hub at Nakawa with a specific focus on innovation, incubation and acceleration processes. An MoU was signed with the Innovation Village and Estonian Development Agency, MTN Foundation, Sunbird AI, Talent Cultivation, Huawei and Airtel Uganda aimed at benefiting all innovators that the village works with and supporting those within the ICT innovation ecosystem.

Grants to ICT innovators provided: Grants were not extended to ICT innovators due to inadequate budget releases.

3.3.4 Support local innovation and promote export of knowledge products

The intervention contributes to the programme's objective of promoting ICT research, innovation and commercialization of indigenous knowledge products. The planned outputs for the FY2022/23 are: e-services provided, Business Process Outsourcing (BPO) support services provided, and ICT services provided. The performance of the outputs under the intervention is discussed hereafter:

E-services: The MoICT&NG conducted intellectual property management training for 100 innovators from the Western region at the Kabale Regional ICT Innovation Hub, and also conducted training of trainers for the financial inclusion system of the Parish Development Model Information System (PDMIS).

BPO Support Services: The MoICT&NG profiled core ICT and non-ICT-based BPO companies and conducted a BPO/ITES industry situational monitoring and evaluation exercise. The draft National BPO Policy was approved by the ICT Sector Top Management for onward transmission to Cabinet and one BPO benchmarking exercise on business process management for the Republic of Philippines was undertaken. Training manuals and materials were prepared for BPO service providers and training was rescheduled to FY2023/24.

ICT Services: The MoICT&NG collected data on local ICT manufacturing and assembling companies in Uganda to support the electronics manufacture and assembly in the country. Three innovators were supported in access to infrastructure, connectivity, and business development services. Data on the uptake of ICT solutions across the country was collected and ICT equipment at the National ICT Innovation Hub at Nakawa was maintained.

3.3.5 Promote local manufacturing and assembly of ICT products

The intervention aims at promoting and supporting local ICT assembly and manufacturing through the promotion of ICT research, innovation and commercialization of indigenous knowledge products. The planned output for the FY2022/23 was ICT services provided.

The MoICT&NG supported the deployment of the Electronic Document and Records Management Information System (EDRMIS) at the MoTIC and Uganda Retirement Benefits Regulatory Authority (URBRA); and the development of the financial inclusion system, and citizen participation system under the PDMIS. The MoICT&NG provided quality assurance and information security audits for the following systems: e-government Procurement System (e-GP); iHMIS; Education Management Information System (EMIS); and Electronic Document and Records Management Information System (EDRMIS).

The MoICT&NG also supported the deployment and conducted public training of both back and front-end users of the Online Business Registration System (OBRS). The bid evaluation for the design, development and supply of the Government Assets Management Information System was completed. The final draft of the ICT Intellectual Property Guidelines was developed and professional development training for Government ICT officers and innovators was undertaken.

3.3.6 Develop an ICT professional's quality assurance framework

The intervention contributes to the NDP III objective of increasing the ICT human resource capital. The planned key deliverable over the NDPIII period is a certification framework to regulate ICT professional standards developed. The planned output for the FY2022/23 was legal and advisory services provided.

During the FY2022/23, the UICT developed and approved an ICT practitioners' course for ICT professionals and the Digital Literacy Skills Transfer (DLST) Project M&E framework was developed in collaboration with the Uganda Communications Commission (UCC).

The NITA-U registered and certified a total of 166 IT service providers against a target of 100 (Annex 3: List of Certified IT Service Providers during the FY2022/23) in line with the IT certification regulations registered in FY2022/23. In addition, 55 awareness events were conducted against a target of five under consumer protection, certification and compliance with IT legislation to enhance awareness within Government, regulated entities and the public.

The NITA-U stakeholder engagements with UNBS to review and provide input in the IT products certification regulations were also held but the regulations were not finalised. A compliance assessment plan to guide the compliance assessments for FY 2022/2023 was developed. Table 3.7 shows the performance of the sub-programme.

Table 3.7: Performance of the Research, Innovation and ICT Skills Development Sub-programme by 30th June 2023

Output Performance								Remark
Intervention	Output	Financial Performance			Physical Performance			
		Annual Budget (Ug shs)	% of Budget Received	% of Budget Spent	Annual Target	Cum. Achieved Quantity	Physical Performance Score (%)	
Support local innovation and promote export of knowledge products	E-services	222,245,000	97.8	99	1	0.7	71.61	Good performance
	BPO Support services	5,842,000,000	14.3	100	4	1.5	98	Good performance
Promote local manufacturing and assembly of ICT products	ICT services	2,642,949,682	70.6	98	10	6	84.98	Good performance
Develop and implement ICT Research and Innovation ecosystem	Innovation fund management	1,200,000,000	23.4	100	7	1	60.98	Fair performance
	Support to UICT	9,360,000,000	49.3	100	2	0.7	71.03	Good performance
Develop innovation and incubation Centres	Grants to ICT innovators	4,000,000,000	10.7	100	1	0.04	37.56	Poor performance
	Support to regional ICT hubs	220,000,000	75.0	100	10	7	93.33	Good performance
Develop an ICT professional's quality assurance framework	Grants to ICT innovators	7,181,151,127	99.7	100	2	1.5	75.19	Good performance
Develop ICT centres of excellence and vocational institutions	Support to UICT	8,440,000,000	26.0	150	10	5	98	Good performance
Average Output Performance							77.19	
Outcome Performance								
Outcome Indicator					Annual Target	Achieved	Score (%)	Remark
ICT Development Index (IDI value)					3.2	0	0	
ICT directly created jobs ('000s)					30000	452	2	

Output Performance							Remark
Intervention	Output	Financial Performance			Physical Performance		
		Annual Budget (Ug shs)	% of Budget Received	% of Budget Spent	Annual Target	Cum. Achieved Quantity	
Cost of a computer -(UGX '000s)				1,300,000	1,500,000	12	
Unit cost of low-entry smartphones (UGX '000s)				87000	153200	100	
Average outcome performance						28.3	
Overall sub-programme performance						60.1	Fair performance

Conclusion

The sub-programme performance was fair at 60.1%. Through the UICT and the ICT innovation hubs, several beneficiaries received IT-related trainings. The UICT registered and supported students undertaking diploma courses and short trainings during the period under review. The National ICT Innovation Hub and the regional hubs were supported, however, there were no grants extended to innovators under the National ICT Initiatives Support Program (NIISP) due to inadequate budget. This posed a risk to achieving the promotion of ICT research, innovation and commercialization. There was an observed poor performance on three of the four outcome indicators which exacerbated the overall performance of the sub-programme.

3.4. E-services Sub-programme

The sub-programme goal is enhanced usage of ICT in national development and service delivery and has six interventions to be implemented over the NDPIII period. The current monitoring covered three interventions namely: mainstream ICT in all sectors of the economy and digitize service delivery; strengthen cyber security in the country; and digitize, archive and commercialize local content and data.

Performance

The sub-programme performance was good at 72.7% (Table 3.9). Most of the planned outputs under the digitize, archive and commercialize local content and data intervention were not implemented due to inadequate budget releases. The intervention to mainstream ICT in all sectors of the economy and digitize service delivery registered a good performance as highlighted in Table 3.8. The detailed performance of the three monitored interventions is given hereafter:

Table 3.8: Performance of selected interventions under the E-Services Sub-programme by 30th June 2023

Intervention	Colour code	Remark
Mainstream ICT in all sectors of the economy and digitize service delivery	79.4%	Good performance
Strengthen Cyber Security in the country	30.7%	Poor performance
Digitize, archive and commercialize Local Content and data	38.6%	Poor performance

Source: Authors' Compilation

3.4.1 Mainstream ICT in all sectors of the economy and digitize service delivery

The intervention contributes to the programme's objective of enhanced usage of ICT in national development and service delivery. The intervention aims to promote interoperability, data sharing and integration of government systems; and rollout of e-services to citizens and government institutions. The planned outputs for the FY2022/23 include: ICT Infrastructure Planning; e-services rolled out; parish development model (PDM) equipment procured; and PDM operations supported. The overall intervention performance was good at 79.4%.

ICT Infrastructure Planning undertaken: The MoICT&NG undertook an infrastructure needs assessment for digitization and broadband connectivity of health centres III and IV in Nakasongola, Luweero, Jinja, Iganga, Mbale, Hoima, Kabarole, Mbarara, Kabale, Kisoro, Kayunga, Mukono, Mubende and Kiryandongo in collaboration with the Ministry of Health. Mediation and guidance were provided between M/s Group Vivendi Africa and UCC for the commencement of the provision of last-mile connectivity using *fibre-to-the-home* technology. The company had started setting up their network. As part of the overall infrastructure monitoring, infrastructure requirements were assessed for smart city development in greater Kampala in collaboration with KCCA, and a technical review of the proposed International Traffic Management Platform was undertaken to enhance traffic revenue and monitor illegal spectrum use in collaboration with key stakeholders like MFPED, UCC and URA.

The Digital Transformation Roadmap was finalized, and the process to adopt the draft Spectrum Management Policy was ongoing. The draft policy guidelines as recommended in the National Broadband Baseline Survey and Infrastructure Blueprint developed by the MoICT&NG were adopted. The final draft National Business Process Outsourcing (BPO) Policy was developed and awaited submission to the Cabinet, and a regulatory impact assessment was undertaken in collaboration with the BPO and Innovation Council.

An MoU was signed with M/s Monenco Iran Consulting Engineers for the provision of technical support in telecommunications and data governance in Uganda. One module for the Financial Inclusion System (FIS) was developed and rolled out to all 181 high-level LGs, that were also trained and supported on disbursing funds to over 29,500 beneficiaries through the PDMIS-FIS. Two additional modules for monitoring and evaluation and citizen participation were developed.

E-services rolled out: The National Cybersecurity Strategy was implemented through the coordination and setup of a task force to undertake the ratification process for cooperation with International Agencies (European Union and African Union) on cybercrime skilling and technology transfer. Data sensitization exercises for the FIS and PDMIS registration were undertaken, 12 commercial banks were supported to integrate with the FIS, and the integration of five commercial banks with the NIRA system was completed.

Four out of the six modules in the PDMIS were operationalized and 17 districts were using the PDMIS's FIS Module. Integration of 13 commercial banks with the FIS module was ongoing with nine participating banks at the Application Programming Interface (API) verification stage to enable automated disbursement of the funds to the beneficiaries. The Digital Transformation Roadmap and E-waste steering committee coordination engagement were undertaken on the development of a roadmap and operationalization of the Recycling and Collection Centre for e-waste.

The Unified Messaging and Collaboration System (UMCS) was further rolled out with an additional 24,605 active users of the 30,574 issued licenses and it was also rolled out to an additional 15 MDAs/LGs/other target user groups (TUGs) (Annex 5: List of entities enrolled on UMCS in the FY 2022/23) making a cumulative total of 145 entities on-boarded. The NITA-U supported 11 BPO centres, three of which were new centres through internet connectivity. The E-payment gateway was being upgraded to enable the integration with Ug Hub.

A total of 43 public and private entities were integrated into the Whole Government Integration and Data-Sharing Platform against an annual target of 20. By the end of FY2022/23, the cumulative number of entities on-boarded was 116. Sixty-nine of these were utilizing services over the platform with a cumulative total of 93,790,610 transactions.

A database of ICT innovators under the NIISP was developed and BPO and ICT innovations were promoted by the MoICT&NG across various media houses. Sixteen government websites were developed and revamped bringing the total number of websites hosted and obtaining technical support from NITA-U to 547. Relatedly, technical support was provided to 124 MDAs, DLGs, development partners, incubation hubs, and academia covering service requests such as websites, UMCS, connectivity, data centre, IT advisory and information security among others.

Parish Development Model Equipment: A total of 200 laptops were procured for the deployment of the Parish Model Digital Transformation System in selected sites across the country.

Parish Development Model Operations: The PDMIS was rolled out and Training of Trainers (ToTs) was carried out. Internet broadband was procured for ICT district trainers countrywide.

3.4.2 Strengthen Cyber Security in the country

The intervention aims at enhancing cyber security through the implementation of the National Information Security Framework (NISF), provision of Computer Emergency Response Teams (CERTs) services, utilization of the national cyber threat intelligence platform, and training in cybercrime investigation and prosecution. The planned output for the FY2022/23 was cyber security strengthened.

The intervention performance was poor at 30.7%. A total of 21 assessments were conducted on the NISF in 20 entities as planned. To enhance coordination for critical information infrastructure, the National Information Security Advisory Group (NISAG) held two meetings aimed at planning for her annual action plan and subsequently updated and approved the National Information Risk Register. Routine cybersecurity monitoring of shared e-services was conducted and forty-one (41) cyber threat advisories were disseminated.

Thirty-two information security awareness campaigns were conducted covering over 2,000 participants and these were aimed at improving information security. The cybersecurity risk and penetration testing capacity building, establish a cyber-threat intelligence platform and procurement of penetration testing and audit services for CNII were not undertaken due to a shortage of funds. Most of the planned outputs were not implemented due to delayed approval of funds which poses a risk to ICT users in terms of preparedness to cyber insecurity.

3.4.3 Digitize, archive and commercialize Local Content and data

The intervention contributes to the programme's objective of enhancing the usage of ICT in national development and service delivery. The planned outputs for FY2022/23 were: a centralized archiving system (first phase) established; a regional broadcasting centre established; digitization of delivery platforms for persons with disabilities (PWDs) developed; and platforms for digitization and documentation of ongoing government programmes for MDAs & LGs provided.

The intervention performance was poor at 38.56%. By 30th June 2023, the Uganda Broadcasting Corporation (UBC) had collected and broadcasted local news and content in the four regional languages, however, the Corporation has yet to put in place a regional broadcasting centre. All other planned outputs under the UBC were not implemented due to inadequate release of funds. The UBC received Ug shs 4.36bn (20%) out of the budgeted Ug shs 21.05bn which largely covered the wage component of Ug shs 3.7bn. It was observed that the UBC satellite link was switched off by the service

provider due to non-payment and therefore unable to raise non-tax revenue from the hosted broadcast stations. Table 3.9 shows the performance of the E-Services Sub-programme.

Table 3.9: Performance of the E-Services Sub-programme by 30th June 2023

Output Performance								Remark
Intervention	Output	Financial Performance			Physical Performance			
		Annual Budget (Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	
Mainstream ICT in all sectors of the economy and digitize service delivery	E-services	514,532,000	63.4	99	5.0	2.3	72.54	Good performance
	PDM equipment	4,800,000,000	83.1	100	1.0	0.6	72.22	Good performance
	PDM Operations	480,000,000	68.8	100	2.0	1.0	72.73	Good performance
	E-services	6,350,855,159	85.4	100	4.0	3.8	100	Good performance
Strengthen Cyber Security in the country	Cyber security	106,400,000	97.7	90	15.0	4.5	30.72	Poor performance
	UBC	21,047,000,000	20.7	100	1.0	0.08	38.56	Poor performance
Average Output Performance							64.46	Fair performance
Outcome Performance								
Outcome Indicators					Annual Target	Achieved	Score (%)	Remark
ICT contribution to GDP					2.8	1.8	64.3	
National broadband coverage with a minimum speed of 8 Mbps, %					51	61	100.0	
Proportion of government services online					40	40	100.0	
Average outcome performance							88.1	
Overall sub-programme performance							72.7	Good performance

Source: Author's Compilation

Conclusion

The sub-programme performance was good at 72.7%, however, it was affected by the inadequate budget release for key interventions. The MoICT&NG undertook an infrastructure needs assessment for digitization and broadband connectivity of health centres III and IV. The Digital Transformation Roadmap was finalized, the National Cybersecurity Strategy was implemented and four modules in the PDMIS were operationalized. In addition, information security awareness campaigns were conducted and cyber threat advisories were disseminated. However, outputs under the digitize, archive and commercialize local content and data intervention were poorly funded which compromised the achievement of the sub-programme targets and overall programme objectives.

3.5 ICT Infrastructure Sub-programme

The sub-programme goal is to increase national ICT infrastructure coverage and has three interventions to be implemented over the NDPIII period.

Performance

The sub-programme performance was fair at 58% (Table 3.11). The intervention to establish and enhance national common core infrastructure (data centres, high power computing centres, specialized labs) registered poor performance since the planned outputs were not implemented yet 84% of the funds and 94% of the release expended. Table 3.10 highlights the performance of the monitored interventions by 30th June 2023.

Table 3.10: Performance of monitored Interventions under the E-Services Sub-programme by 30th June 2023

Intervention	Colour code	Remark
Implement the national addressing system	61.52%	Fair performance
Extend broadband ICT infrastructure coverage countrywide in partnership with the private sector and implement last-mile connectivity to key areas (Districts, sub-counties, schools, hospitals)	57.15%	Fair performance
Establish and enhance national common core infrastructure (data centres, high power computing centres, specialized labs)	0%	Poor performance

Source: Authors' Compilation

The detailed performance of the two monitored interventions is given hereafter:

3.5.1: Implement the national addressing system

The intervention contributes to the objective of enhancing the usage of ICT in national development and service delivery. The planned output under the intervention is infrastructure development and management.

The performance of the intervention was fair at 61.52%. During the FY2022/23, the MoICT&NG held a meeting where the National Northern Corridor Integration Project (NCIP) and the ICT matrix were updated in preparation for the Rwanda Joint Permanent Commission (JPC). A survey was carried out in selected radio and television stations in Eastern and Northern regions of Uganda to provide information necessary for developing a strategy for the delivery of radio and digital TV services using OTT and internet protocol platforms.

A draft governance model for Internet Exchange Points (IXPs) in Uganda was developed and a survey on standards of ICT and e-Government services provided by Post Offices in Western, Eastern and Northern regions of Uganda conducted.

3.5.2 Extend broadband ICT infrastructure coverage countrywide in partnership with the private sector and implement last-mile connectivity to key areas (Districts, sub-counties, schools, hospitals)

The intervention contributes to the sub-programme goal of increased national ICT infrastructure coverage through extension of the national backbone infrastructure and connection and provision of internet to MDAs. The planned outputs for the FY2022/23 are: infrastructure development and management; infrastructure planning; and ICT infrastructure deployment.

ICT infrastructure planning: A total of 52 MDAs (Annex 8: List of sites connected to the NBI in the FY 2022/23) and other target user sites were connected to the NBI against an annual target of 70, however, nine of these sites were temporary sites, whose service has since been terminated. By the end of FY2022/23, a cumulative total of 1,466 sites were connected to the NBI. Bulk bandwidth was provided to 19 entities against a planned target of 200 making a cumulative total of 1,250 entities utilizing services over the NBI.

Three MDAs were enrolled into the Microsoft Business and Services Agreement (MBSA) bringing the number to a cumulative total of 62 MDAs. Additionally, 35 laptops, 4 Mac Books and one tablet were procured and distributed to NITA-U staff.

The planned activities under the ICT infrastructure deployment output were not implemented due to the delayed obtaining of a project code for the Government Network (GOVNET) project. However, a total of Ug shs 3.785bn was spent on the output against a budget of Ug shs 4.018bn even when no activity was reported to have been implemented during the period under review.

3.5.3 Establish and enhance national common core infrastructure (data centres, high power computing centres, specialized labs)

The intervention has two key planned deliverables over the NDP III period: The Third National Data Centre established and enhancement of usage of the National Data Centre (NDC). The planned output in the FY2022/23 is IT infrastructure and systems maintained.

The NITA-U leveraged the National Data Center (NDC) and the Disaster Recovery (DR) site facilities to manage the increasing data volumes through the provision of hosting services to an additional 68 applications from 47 entities making a cumulative total of 264 applications hosted from 95 entities the previous FY. The NDC service time was maintained at 100%. However, the NDC wasn't upgraded and the third national data centre was not established because some of the activities were planned under the UDAP project which did not commence and delayed obtaining of project approval for the GOVNET project. However, despite not executing any of the planned outputs, funds were spent on different outputs. Table 3.11 shows the performance of the sub-programme.

Table 3.11: Performance of the ICT Infrastructure Sub-programme by 30th June 2023

Output Performance								Remark
Intervention	Output	Financial Performance			Physical Performance			
		Annual Budget (Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	
Implement the national addressing system	Infrastructure development and management	427,074,000	81.3	100	4.00	2.00	61.52	Fair performance
Extend broadband ICT infrastructure coverage countrywide in partnership with the private sector and implement last-mile connectivity to key areas (districts, sub-counties, schools, hospitals)	Infrastructure planning (MoICT&NG)	373,258,400	58.8	100	3.00	1.40	79.37	Good performance
	Infrastructure planning (NITA-U)	21,048,087,407	95.3	100	6.00	2.00	34.97	Poor performance
Establish and enhance national common core infrastructure (data centres, high power computing	ICT Infrastructure deployment	4,464,543,940	89.7	95	14.00	0.00	0.00	Poor performance with no outputs implemented

centres, specialized labs)								
Average Output Performance							43.97	
Outcome Performance								
Outcome Indicators				Annual Target	Achieved	Score (%)	Remark	
Digital Terrestrial TV signal coverage				79	56	71		
Fixed broadband connectivity				13038	41311	100		
Internet penetration				35	57.5	100		
Population covered by broadband services (%)				79	85	100		
Radio signal coverage (%)				85	90	100		
Unit cost of 1Mbps/month of internet				140	70	50		
Average Outcomes performance							86.8	
Overall sub-program Performance							59.0	Fair performance

Author's Compilation

Conclusion

The sub-programme performance was fair 62.6%. A draft governance model for Internet Exchange Points (IXPs) in Uganda was developed. More MDAs were connected to the NBI and bandwidth was provided to entities via the NBI. However, the planned activities under the ICT infrastructure deployment output were not implemented due to the delayed obtaining of a project code for the GOVNET Project as much as resources were spent. The NDC was not upgraded and the third National Data Centre was not established.

CHAPTER 4: CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

The overall Digital Transformation Programme (DTP) performance was fair at 65.8% with some annual targets not achieved. Although the release performance was good with 84.4% of the approved budget realized, only 46.9% was spent. The MoICT&NG vote recorded poor absorption of funds with only 26.5% of the released funds spent. The bulk of unspent funds (Ug shs 113bn) were related to the clearance of arrears part of which was received as a supplementary budget whose payment was pending completion of the reverification process.

The UICT admitted, registered and supported 972 students out of 1,219 planned GoU-sponsored students for diploma programs. The 4th Industrial Revolution Strategy was launched and the UICT supported and hosted 26 events, meetings and training at the National ICT Innovation Hub in Nakawa. The National ICT Innovations Hub at Nakawa was operational, though at a low scale and hosted 26 private innovators in the fields of coding training, e-commerce, product visualization, education, entertainment, information and electronic records management, transport and logistics, and premise security (artificial intelligence) among others.

The UBC did not implement over 80% of the planned outputs due to inadequate release of funds having received 20% of the annual budget. Moreover, out of the received Ug shs 4.37bn, 86% was spent on salaries and wages. The uptake of e-services is still low given the low funding of critical activities. This is exacerbated by the low number of MDAs connected to the NBI which is likely to delay the reaping of the returns on investment for the various ICT infrastructure established and prepaid internet over NBI.

The key programme challenges included: slow progress on the programming interface for applications developed by some MDAs that affected their integration onto the data sharing platform, delayed approval of the UDAP/GOVNET projects which hindered the commencement of the planned infrastructure activities and utilization of the services across the country, limited network coverage, poor quality services, high cost of end-user devices and services, limited ICT knowledge and skills, increased sophistication of cyber criminals and limited innovation capacity. In addition, the tenure of the NITA-U Board had expired and was yet to be renewed owing to the pending final decision on the merger of some agencies.

4.2 Recommendations

1. The DT Programme Working Group and MFPED should prioritise funding for critical technological interventions.
2. The NITA-U/MoICT&NG should enforce the rationalization and harmonization of IT initiatives and services in MDAs to ensure compatibility of the developed applications with national data-sharing platforms.
3. The DT Programme Working Group should prioritise funding for the UBC's critical aspects to enable it to execute its mandate and generate revenue for sustainability.
4. The MoICT&NG should support the UICT to establish the required infrastructure in the form of lecture rooms equipped with smart technology to facilitate specialized ICT training.
5. The DT Programme Secretariat and MoICT&NG should review the existing frameworks and implement the Broadband Policy to reduce the cost of internet and gadgets and increase ICT uptake.
6. The MoICT&NG should expedite the verification of beneficiaries of the arrears.
7. The MFPED should halt the provision of any budget for the arrears until verification of beneficiaries is concluded.

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Annex 1: List of interventions sampled for monitoring in the FY2022/23

Sub-programme	Intervention
Enabling Environment	Review and develop appropriate policies, strategies, standards and regulations that respond to industry needs
	Regulate, coordinate and harmonize ICT infrastructure planning, sharing and deployment within the public and private sector
Research, Innovation and ICT Skills Development	Develop and implement ICT Research and Innovation ecosystem
	Develop ICT centres of excellence and vocational institutions
	Develop innovation and incubation Centres
	Support local innovation and promote export of knowledge products
	Promote local manufacturing and assembly of ICT products
	Develop an ICT professional's quality assurance framework
E-services	Mainstream ICT in all sectors of the economy and digitize service delivery
	Strengthen Cyber Security in the country
	Digitize, archive and commercialize Local Content and data
ICT Infrastructure	Extend broadband ICT infrastructure coverage countrywide in partnership with the private sector and implement last-mile connectivity to key areas (Districts, sub-counties, schools, hospitals, post offices, tourism sites, police, LGs etc.)
	Establish and enhance national common core infrastructure (data centres, high power computing centres, specialized labs)
	Implement the national addressing system

Source: Author's Compilation

Annex 2: List of innovations supported at the ICT National Innovation Hub at Nakawa by 30th June 2023

S/N	Name	Profile	Standing
ACCELERATOR			
1.	CITZ Technologies	CITZ developed the E-Posta system. E-Posta is a Post Office Information Management System that makes it possible for anyone to enjoy all services offered by the Post Office online. CITZ also developed the Online Business Registration Management Information System	Product launched and rolled out under Posta Uganda
2.	Info Consults	Info Consults International Limited provides a comprehensive range of records and information management services that enable organisations to comply with regulatory requirements, realise operational efficiencies and provide better customer service to their clients.	The product was launched and rolled out at MOICT, MOT and MOPS
3.	KaCyber	KaCyber Technologies is a registered transport and logistics technology Company offering electronic ticketing, digital payments, delivery, logistics management systems and other e-services. The Company is certified by NITA-U at Level II for the provision of IT services including computer programming, information services, consultancy, and other technical/scientific activities. Currently, KaCyber's robust digital ticketing and payment system is used by Uganda Railways Corporation and some local bus operators such as Star Link Transporters, Highway Coaches, and Malayika Transporters.	Product launched
4.	QuestLyft	QuestLyft is an Education (EdTech) platform currently available on the Google Play store and working towards being available on the App Store and the Web. The platform delivers Secondary school curriculum-aware assessment tests, instructor-led 20-minute video lessons segmented by class, subject and topic as well as a discussion forum for learners to ask questions and get answers.	The product was launched in several schools
INCUBATION			
5.	Microfuse	Microfuse Computer Technologies is a Ugandan startup that was started with a vision of designing and manufacturing reliable and affordable digital consumer electronics for the East African market. For the past three years, the firm has heavily invested in research and product development and now has a ready product to put on the market (www.micfusetechologies.com).	E-commerce platform released for testing
6.	Ridelink	Ridelink is a third-party transport and logistics company focused on stimulating the growth of businesses by creating sustainable and affordable mobility solutions tailored to facilitate the smooth running of business operations, increase revenue earning, improve mobility efficiency, and performance and the ability for businesses to tap into new markets. A peer-to-peer car rental company offering innovative transport solutions to Small and Medium Businesses that give entrepreneurs and SMBs the power to grow	Product released for testing in the field
7.	Sumic online	Sumic Online is an online marketplace for businesses and services where consumers can find, discover, buy and consume anything.	E-commerce platform released for testing
8.	UZAZI	Uzazi Hub is a social e-commerce platform for African working moms aged 22 - 45 years to help address the breakdown in traditional motherhood support systems by offering a credible and secure online community with verified insights from professionals in the motherhood space.	E-commerce platform released for testing by consumers
9.	AUTOFORE	Autofore is building the capacity of local mechanics commonly known as "juakali" (school dropout youth) to become proficient car mechanics. The platform increases visibility for the mechanics to access customers and in turn, reduces downtime of cars. Using data, the platform maps where and when transport is needed through a demand-respond transport platform.	
IDEATION			

S/N	Name	Profile	Standing
10.	Askari Project / Najod Surveillance System	Askari Project / Najod Surveillance System enables companies to proactively monitor their premises using computer vision and automatically alert officials making the job of securing a premise much more efficient.	Product is under development – 3 months' timeline
11.	Elago Technologies Ltd	Elago Technologies Ltd focuses on software development, and mobile app development to train world-class remote developers who will work on robust applications that can solve the world's problems.	Developing a rent management system and a donation app
COLLABORATION STARTUPS			
12.	UICT – Technology Innovation Association	UICT – Technology Innovation Association (TISA), assists students in bridging the gap between innovation ideation, and realization of these ideas and helping them sustain their innovations and grow them into game-changing enterprises.	Students' association uses Hub space to meet and discuss innovations and attend training programs at the Hub
13.	Code Impact	Code Impact is a platform that solves the problem of unemployment among the youth by delivering job-ready tech skills and runs coding and robotics skills.	Training partnership
14.	Crossroads Digital Multimedia	Is a local animation studio in Uganda which tells African stories using animation sustainably and also trains animators through project-based learning.	Training partnership
15.	Wal-e Visual	WAL-e Visual is a start-up that pioneers XR development in Uganda. It incorporates extended reality (a combination of augmented and virtual reality) in education, architecture automotive, tourism and product visualization to create engaging user experiences.	Partner
16	IoTEC	Software development and consultancy firm. Iotec engineers and builds mobile and web-based products for African, American and European Markets.	Renting space
17	Uriel LTD	Uriel is a tax and audit company.	Renting space
18	SMS One	SMS One developed the Education Management Information System (EMIS).	Offered space
19	Alipata Limited	Alipata developed a B2B e-commerce platform and Solutions that connect Manufacturers, Suppliers and Distributors with wholesale buyers	Renting space
20	SPOVO (U) Ltd	Spovo Uganda Limited deals in Telecommunications, Electrical, and Information Technology with competencies in ICT Systems, Analysis System Design, Testing Supplies, Maintenance and Training, Civil Engineering, Fire Safety Installations and other related Services	Renting space
21	RentBeta	Rent Beta is an all-in-one financial solution that unlocks opportunities for everyone involved in the residential and commercial rental space.	Renting space
22.	Deron Limited	Leading provider of scalable and innovative ICT solutions in connectivity, automation and digitization. Deron Ltd developed the Parish Development Model (PDM).	Offered space
23	Omugundu Gwa Tech	OMUGUNDU GwaTech startup is a technology and Innovation media promotion exposure start-up managed under NX GROUP LIMITED that promotes the use of technology in solving current challenges such as Climate crisis, Pandemics, access to Education, Food insecurity, Youth unemployment and others.	Offered space
24	Innovent LTD	Innovent LTD (Pesa Smart) PesaSmart created a financial literacy money game which leads to an easier understanding of money concepts, in just fifteen minutes of play one understands concepts of; loan management, expense planning, savings, investments, insurance, negotiation and planning for the future.	Offered space

S/N	Name	Profile	Standing
25	Eryte Museum of Technology	eRyte Museum of Technology (eMoT) is a first-of-its-kind Museum of Technology in Uganda focused on collecting, studying, documenting and preserving the science & technology heritage as a means to innovation for the future.	Offered space
26	Kwetu Auctions LTD	a) Kwetu Auctions and Realty Developed an online auctioning platform that incorporates timed bidding for businesses to achieve a greater profitability ratio than traditional auctioning methods.	Offered space

Annex 3: List of Certified IT Service Providers during the FY 2022/23

S/N	APPLICANT NAME	BUSINESS TRADING NAME	CERTIFICATE NUMBER
1.	SUPPLY MASTERS (U) LTD	SUPPLY MASTERS (U) LIMITED	NITA/CERT/022-598
2.	THENECTO INTERNATIONAL LTD	THENECTO INTERNATIONAL LTD	NITA/CERT/022-649
3.	TABLINE INTERNATIONAL LIMITED	TABLINE INTERNATIONAL LIMITED	NITA/CERT/022-650
4.	DIPO TECHNOLOGIES LIMITED	DIPO TECHNOLOGIES LIMITED	NITA/CERT/022-651
5.	ZONELA INTERNATIONAL LTD	ZONELA INTERNATIONAL LTD	NITA/CERT/022-652
6.	PROVIDE INTERNATIONAL LIMITED	PROVIDE INTERNATIONAL LIMITED	NITA/CERT/022-653
7.	RHOLIN TECH LIMITED	RHOLIN TECH LIMITED	NITA/CERT/022-654
8.	THE UHURU INSTITUTE FOR SOCIAL DEVELOPMENT	THE UHURU INSTITUTE FOR SOCIAL DEVELOPMENT LIMITED	NITA/CERT/022-655
9.	CHEMIX & TECH LTD	CHEMIX & TECH LIMITED	NITA/CERT/022-656
10.	GIMEI TECH SOLUTIONS	GIMEI TECH SOLUTIONS	NITA/CERT/022-657
11.	HITASH CONSULTS LTD	HITASH CONSULTS LIMITED	NITA/CERT/022-658
12.	EIGHT TECH CONSULTS LIMITED	EIGHT TECH CONSULTS LIMITED	NITA/CERT/022-659
13.	ISWAYA JOHN GIBWA	ISWAYA JOHN GIBWA	NITA/CERT/022-660
14.	TRESTLE LIMITED	TRESTLE LIMITED	NITA/CERT/022-661
15.	MILPACK INVESTMENTS LTD	MILPACK INVESTMENTS LIMITED	NITA/CERT/022-662
16.	ICT-EMBEDDED (UG) LTD	ICT-EMBEDDED (UG) LTD	NITA/CERT/022-663
17.	KONVERGENZ NETWORK SOLUTIONS LTD KENYA	KONVERGENZ NETWORK SOLUTIONS LIMITED	NITA/CERT/022-664
18.	JHUB TECHNOLOGIES LTD	JHUB TECHNOLOGIES LTD	NITA/CERT/022-665
19.	ALVIN & PARTNERS LTD	ALVIN & PARTNERS LTD	NITA/CERT/022-666
20.	QUEST DIGITAL FINANCE LIMITED	QUEST DIGITAL FINANCE LIMITED	NITA/CERT/022-667
21.	WAYA LIMITED	WAYA LIMITED	NITA/CERT/022-668
22.	SYSIMO TECHNOLOGIES LTD	SYSIMO TECHNOLOGIES LIMITED	NITA/CERT/022-669
23.	ENACT CONSULTING LIMITED	ENACT CONSULTING LIMITED	NITA/CERT/022-670
24.	EVALUATE COMPANY LIMITED	EVALUATE COMPANY LIMITED	NITA/CERT/022-671
25.	GEMCO INVESTMENT CO. LTD	GEMCO INVESTMENTS COMPANY LIMITED	NITA/CERT/022-672
26.	QUIDEXPLUS UGANDA LIMITED	QUIDEXPLUS UGANDA LIMITED	NITA/CERT/022-673
27.	PDO SYSTEMS LTD	PDO SYSTEMS LIMITED	NITA/CERT/022-674
28.	MFT SOLUTIONS SMC LTD	MFT SOLUTIONS - SMC LTD	NITA/CERT/022-676
29.	SARACEN UGANDA	SARACEN UGANDA LIMITED	NITA/CERT/022-677

S/N	APPLICANT NAME	BUSINESS TRADING NAME	CERTIFICATE NUMBER
30.	ROKE TELKOM LIMITED	ROKE TELKOM LIMITED	NITA/CERT/022-678
31.	BLOOM ELECTRONICS (PVT) LIMITED	BLOOM ELECTRONICS PRIVATE LIMITED	NITA/CERT/022-679
32.	LEGITEX SOLUTIONS LTD	LEGITEX SOLUTIONS LTD	NITA/CERT/022-680
33.	MAKERERE CORPORATE INITIATIVE AFRICA	MAKERERE COPORATE INITIATIVE AFRICA LIMITED	NITA/CERT/022-681
34.	TARGET LINK UGANDA LIMITED	TARGET LINK UGANDA LIMITED	NITA/CERT/022-682
35.	NECAM SERVICE LIMITED	NECAM SERVICES LIMITED	NITA/CERT/022-683
36.	KIRON GROUP LTD	KIRON GROUP LIMITED	NITA/CERT/022-684
37.	OCAJA TECHNOLOGIES LIMITED	OCAJA TECHNOLOGIES LIMITED	NITA/CERT/022-685
38.	PRIMUS AUTO SOLUTIONS	PRIMUS AUTO SOLUTIONS LIMITED	NITA/CERT/022-686
39.	B-CORESOLUTIONS LIMITED	BCORE SOLUTIONS LIMITED	NITA/CERT/022-687
40.	AIRCOM TECHNOLOGIES LIMITED	AIRCOM TECHNOLOGIES LIMITED	NITA/CERT/022-688
41.	VANTAGE SUPPLIERS- SMC LIMITED	VANTAGE SUPPLIERS - SMC LIMITED	NITA/CERT/022-689
42.	CELLULANT (U) LIMITED	CELLULANT (U) LIMITED	NITA/CERT/022-690
43.	POWERMAN ENGINEERING LIMITED	POWERMAN ENGINEERING LIMITED	NITA/CERT/022-691
44.	HITECH INFOSYS LIMITED	HITECH INFOSYS LIMITED	NITA/CERT/022-692
45.	FLY ONLINE LTD	FLY ONLINE LIMITED	NITA/CERT/022-693
46.	KINCONSULTS LTD	KINCONSULTS LIMITED	NITA/CERT/022-694
47.	REVOLUSYS SOFTWARE LIMITED	REVOLUSYS SOFTWARE LTD	NITA/CERT/022-695
48.	AFROTECH MANAGEMENT CONSULT LIMITED	AFROTECH MANAGEMENT CONSULT LIMITED	NITA/CERT/022-696
49.	COLQWIK INVESTMENTS LTD	COLQWIK INVESTMENTS LTD	NITA/CERT/022-697
50.	FORDWICH COMPANY LIMITED	FORDWICH COMPANY LIMITED	NITA/CERT/022-698
51.	PROFUSE HITECH SYSTEM AND SOLUTIONS SNC LIMITED	PROFUSE HITECH SYSTEMS & SOLUTIONS - SMC LIMITED	NITA/CERT/022-699
52.	ANVII HOLDING LIMITED	ANVII HOLDING LIMITED	NITA/CERT/022-700
53.	FARAS TECHNOLOGIES	FARAS TECHNOLOGIES LTD	NITA/CERT/022-701
54.	KONERGENZ NETWORK SOLUTIONS LTD	KONVERGENZ NETWORK SOLUTIONS (U) LTD	NITA/CERT/022-702
55.	ISHONI INVESTMENTS LIMITED	ISHONI INVESTMENTS LIMITED	NITA/CERT/022-703
56.	LAMININ COMPANY LIMITED	LAMININ COMPANY LIMITED	NITA/CERT/022-704

S/N	APPLICANT NAME	BUSINESS TRADING NAME	CERTIFICATE NUMBER
57.	NAVANTIS SYSTEMS LIMITED	NAVANTIS SYSTEMS LIMITED	NITA/CERT/022-705
58.	PRESENT SECURITY TECHNOLOGY CO LTD	PRESENT SECURITY TECHNOLOGY CO LTD	NITA/CERT/022-706
59.	HAK COMPUTERS AND ELECTRONICS UGANDA LIMITED	HAK COMPUTERS & ELECTRONICS (U) LIMITED	NITA/CERT/022-707
60.	SURE PAY LIMITED	SUREPAY LIMITED	NITA/CERT/022-708
61.	JUBA EXPRESS	JUBA EXPRESS FOREX BUREAU & MONEY TRANSFER LIMITED	NITA/CERT/022-709
62.	MIMITO TECHNOLOGIES LIMITED	MIMITO TECHNOLOGIES LIMITED	NITA/CERT/022-710
63.	POWERLINE CONSULT LTD	POWER LINE CONSULT	NITA/CERT/022-711
64.	JB IT SERVICES LTD	JB IT SERVICES LIMITED	NITA/CERT/022-712
65.	WAKANDI UGANDA LIMITED	WAKANDI UGANDA LIMITED	NITA/CERT/022-713
66.	APHRO LEGACY COMPANY LIMITED	APHRO LEGACY COMPANY LIMITED	NITA/CERT/022-714
67.	LYCAMONEY UGANDA LIMITED	LYCAMONEY UGANDA LIMITED	NITA/CERT/022-715
68.	DIGITAL INFRASTRUCTURE SERVICES	DIGITAL INFRASTRUCTURE LIMITED	NITA/CERT/022-716
69.	PAYLINE HOLDINGS LLC	PAYLINE HOLDINGS LIMITED	NITA/CERT/022-717
70.	BERYL TECH LIMITED	BERYL TECH LIMITED	NITA/CERT/022-718
71.	STREAMLINE HEALTH TECH CO. LTD	STREAMLINE HEALTH TECH CO. LTD	NITA/CERT/022-719

Source: NITA-U

Annex 4: List of entities integrated with the data sharing and integration platform in the FY 2022/23

S/N	Entity	Category	Ownership	Role
1.	Wave Uganda	Fintech	Non-Government	consumer
2.	Zoe Financial Services	Fintech	Non-Government	consumer
3.	UAP Insurance	Insurance	Non-Government	consumer
4.	Profiles International	Fintech	Non-Government	consumer
5.	Office of the Prime Minister	MDA	Government	consumer
6.	Ministry of Trade, Industry and Cooperatives	MDA	Government	consumer
7.	Solooza	Fintech	Non-Government	consumer
8.	Britam	Insurance	Non-Government	consumer
9.	Personal and Data Protection Office	Other TUG	Government	consumer
10.	Approve Technologies Limited	Fintech	Non-Government	consumer
11.	Electricity Regulatory Authority	MDA	Government	consumer
12.	Ministry of water and environment	MDA	Government	consumer
13.	Guaranty Trust Bank (Uganda) Ltd	Bank	Non-Government	consumer
14.	Sail Global Corporation	Fintech	Non-Government	consumer
15.	Uganda People's Defence Force (UPDF)	MDA	Government	consumer
16.	Uganda Post Office	Fintech	Non-Government	consumer
17.	Interswitch East Africa	Fintech	Non-Government	consumer
18.	BORA Technologies	Fintech	Non-Government	consumer
19.	Uganda Printing and Publishing Corporation	MDA	Government	consumer
20.	Cairo Bank	Bank	Non-Government	consumer
21.	Exim Bank (Uganda)	Bank	Non-Government	consumer
22.	NPC (National Population Council)	Mda	Government	consumer
23.	Uganda National Meteorological Authority UNMA	MDA	Government	Producer
24.	Jjengo Tech LTD	Fintech	Non-Government	consumer
25.	Sage Group	Fintech	Non-Government	consumer
26.	Bayport Financial Services Uganda Limited	Fintech	Non-Government	consumer
27.	National Social Security Fund	MDA	Government	consumer
28.	Local Government Finance Commission (LGFC)	MDA	Government	consumer
29.	Seamfix	Fintech	Non-Government	consumer
30.	Fido Credit	Fintech	Non-Government	consumer
31.	MTN (Uganda)	Telecom	Non-Government	consumer

Annex 5: List of entities enrolled on UMCS in the FY 2022/23

S/N	Entity Name	No. of License	Used	Status	Activation Date
1.	Kiboga District Local Government	30	19	Active	03/08/2022
2.	Uganda Printing & Publishing Corporation	130	87	Active	05/08/2022
3.	Plusnms	3	3	Active	17/08/2022
4.	Kaliro District Local Government	140	61	Active	09/09/2022
5.	Lugazi Municipal Council	45	36	Active	13/09/2022
6.	Uganda Telecommunications Corporation Limited	20	13	Active	04/10/2022
7.	Kaberamaindo District Local Government	130	126	Active	14/10/2022
8.	Bukomansimbi District Local Government	60	48	Active	17/10/2022
9.	National Council for Persons With Disabilities	10	1	Active	27/10/2022
10.	Ministry of Water and Environment	450	407	Active	27/10/2022

Source: NITA-U

Annex 6: BPO centres supported in the FY 2022/23

S/N	Company Name	Location	Status	BW Offered (Mbps)
1.	CAMTECH	Mbarara	Existing	50
2.	Luweero Incubation Centre	Luweero Community Centre	Existing	1
3.	Exquisite solutions	Namanve Business Park	New	30
4.	Empowering Youth in Technology (EYIT)	Mbarara	Existing	32
5.	Hive Colab	Mbarara	Existing	60
6.	SIM for Life	Mbarara	Existing	50
7.	Hive Colab	Kampala	Existing	100
8.	WITU Hub	Kamwokya, Kampala	Existing	100
9.	Cayman consult	Mukono	Existing	100
10.	Service Cops Limited	Kololo, Kampala	New	15
11.	Emvigo Technology	Bugolobi Industrial Park, Kampala	New	20

Source: NITA-U

Annex 7: List of Information security awareness sessions conducted in the FY 2022/23

S/N	Awareness Session
Quarter one	
1.	Internet Safety Awareness Session held for forty-one (41) Mengo Senior School Students on 17th August 2022 at ICT Hub, UICT.
2.	Cyber Hygiene Awareness Session held for Civil Society held in August 2022
3.	Cyber Hygiene presentations for GCIC held on 15th -16th September 2022 for 42 participants.
4.	ISC2 –NITA “Relevance of ICT security in Data Protection & Privacy” webinar held on 22nd September, 2022 for 35 participants from both public & private sector
5.	UGNOG Summit 2022- Awareness session for Uganda Network Operators held on 4th October 2022 at Naguru Skyz Hotel
6.	FITSPA Annual Fintech Conference- Session on Digital Identity (Streamlining customer due diligence to enhance customer experience held on 13th October 2022
7.	KTA Annual Symposium- Awareness session on “Leveraging Big Data Analytics and Artificial Intelligence in the Formation of Policy and Provision of Public Services” held on 20th -21st October 2022 at Speke Resort
8.	Milima Security- Twitter Space session on Cyber Hygiene best practices held on 26th October 2022 for over 30 online participants
9.	Course on Uganda’s policy on ICT infrastructure and Cybersecurity held on 2nd November 2022 at Senior Command and Staff College, Kimaka for over 15 participants
10.	UIGF- Awareness session on “Advancing normative frameworks for responsible state behaviour in cyberspace in Uganda” held on 8th November 2022 at Golf Course Hotel
Quarter two	
11.	Cyber security awareness was held on 18th November 2022 at the FUE-CEO breakfast meeting. This was attended by over 40 CEOs.
12.	Awareness on Child Online Protection held on 21st November 2022 in Jinja
13.	Awareness session on “Ransomware” held on 9th December 2022 via Twitter Space. This session was attended by over 1,000 online participants
14.	Awareness session on “Online Safety Tips for Online Shopping” held on 14th December 2022 via Twitter Space. This session was attended by over 60 online participants

Source: NITA-U

Annex 8: List of sites connected to the NBI in the FY 2022/23

No	Category	Type	Entity	Site	District	FY	Project	Connectivity Status
1.	MDA	Government	Operation Wealth Creation (OWC)	Operation Wealth Creation (OWC) - Kyaliwajala Extension	Kampala	FY 22/23	COO	Connected - Using Service
2.	Other TUG	Non-Government	Kyangabi Crater Resort	Kyangabi Crater Resort	Kasese	FY 22/23	COO	Connected - Using Service
3.	BPO/ITES	Non-Government	LAVIT (Lake Victoria Information Technology)	Lavit Kampala	Kampala	FY 22/23	COO	Connected - Using Service
4.	MDA	Government	Ministry of Gender, Labour and Social Development (MOGLSD)	Regional Technical Support Unit (RTSU) Ministry of Gender Labour & Social Development Nebbi	Nebbi	FY 22/23	COO	Connected - Using Service
5.	MDA	Government	Ministry of Gender, Labour and Social Development (MOGLSD)	Regional Technical Support Unit (RTSU) - Ministry of Gender Labour & Social Development Mbarara	Mbarara	FY 22/23	COO	Connected - Using Service
6.	MDA	Government	Ministry of Gender, Labour and Social Development (MOGLSD)	Regional Technical Support Unit (RTSU) - Ministry of Gender Labour & Social Development Mbale	Mbale	FY 22/23	COO	Connected - Using Service
7.	MDA	Government	Ministry of Gender, Labour and Social Development (MOGLSD)	Regional Technical Support Unit (RTSU) - Ministry of Gender Labour & Social Development Moroto	Moroto	FY 22/23	COO	Connected - Using Service
8.	MDA	Government	Ministry of Gender, Labour and Social Development (MOGLSD)	Regional Technical Support Unit (RTW) - Ministry of Gender Labour & Social Development Kyenjojo	Kyenjojo	FY 22/23	COO	Connected - Using Service
9.	MDA	Government	Ministry of Gender, Labour and Social Development (MOGLSD)	Regional Technical Support Unit (RTSU) - Ministry of Gender Labour & Social Development Gulu	Gulu	FY 22/23	COO	Connected - Using Service
10.	Other TUG	Non-Government	Sami Apartments limited	Sami Apartments limited	Rubirizi	FY 22/23	COO	Connected - Using Service
11.	Schools	Non-Government	Kinoni Girls Secondary School	Kinoni Girls Secondary School	Rwampara	FY 22/23	COO	Connected - Using Service
12.	MDA	Non-Government	Deposit Protection Fund of Uganda	Deposit Protection Fund of Uganda	Kampala	FY 22/23	COO	Connected - Using Service

Source: NITA-U

Annex 9: List of New applications & systems hosted in the National Data Centre in the FY2022/23

S/N	Application	Entity	Category of Entity
1.	National Central Electronic Monitoring System (NCEMS)	Lotteries and Gaming Regulatory Board (LGRB)	Existing
2.	Mbarara Service Portal MIS	Mbarara District Local Government	New
3.	Albertine Region Sustainable Development (ARSDP) Bursary Scheme Tracking System	Ministry of Education and Sports (MOES)	Existing
4.	Pearlwood e-portal	Ministry of Gender, Labour and Social Development (MGLSD)	Existing
5.	Citizen Participation System MoICT	Ministry of ICT and National Guidance (MOICT)	Existing
6.	PDMIS Monitoring & Evaluation Module (MEVAL)	Ministry of ICT and National Guidance (MOICT)	Existing
7.	Building Information Management System (BIMS)	National Building Review Board (NBRB)	New
8.	DAES – Digital Authentication and Electronic Signature	National Information Technology Authority (NITA-U)	Existing
9.	The National Population Council Databank	National Population Council	New
10.	The NPC Knowledge Management Information System	National Population Council	New
11.	Moodle E-learning	Office of Prime Minister (OPM)	Existing
12.	Library Information Management System - PCF ELIB	Presidential CEO Forum (PCF)	New
13.	Pride E-Recruitment System	Pride Microfinance Bank Limited	New
14.	SRB Authentication Portal	Surveyors Registration Board (SRB)	New
15.	Enterprise Data Warehouse System	Uganda AIDS Commission (UAC)	Existing
16.	National Aids spending assessment (NASA) Accreditation system for NGOs	Uganda AIDS Commission (UAC)	Existing
17.	Airport Permit Application System	Uganda Civil Aviation Authority (UCAA)	New
18.	UEGCL Co-location	Uganda Electricity Generation Company Limited (UEGCL)	Existing
19.	Human Rights Integrated Information System (HURIS) – Complaints Database	Uganda Human Rights Commission (UHRC)	New
20.	Registration and Nursing System	Uganda Nurses and Midwives Council (UNMC)	New
21.	Integrated Management Information System (ISI-Roads)	Uganda Road Fund (URF)	New
22.	YOUTUNE	YoTune Tech Limited	New
23.	Mental Health and Psychological Social Support (MHPSS)	Ministry of Gender, Labour and Social Development (MGLSD)	Existing
24.	Library Information Management System - PCF ELIB	Presidential CEO Forum (PCF)	New
25.	Electronic Government Procurement (EGP) - Reports and File Servers	Ministry of Finance, Planning and Economic Development (MOFPED)	Existing
26.	IGPAC WEB Server	Ministry of Local Government	Existing
27.	Moodle E-learning UPIK	Uganda Petroleum Institute Kigumba (UPIK)	New
28.	UMRA MIS	Uganda Microfinance Regulatory Authority	New
29.	Agriculture Market Information System (AMIS)	Ministry of Agriculture, Animal Industry and Fisheries	Existing
30.	Livestock Integrated Management Information System (LIMIS)	Ministry of Agriculture, Animal Industry and Fisheries	Existing

S/N	Application	Entity	Category of Entity
31.	National Parameters Website Test	Ministry of Finance, Planning and Economic Development (MOFPED)	Existing
32.	EMIS	Uganda Export Promotion Board	New
33.	Volunteer & Member Registration System	Uganda Red Cross Society	New
34.	NIRA AUTH API	NIRA	
35.	UWEC Online Booking and Ticketing System	Wild Life Education Center	New
36.	Small Scale Cross Border Trader's Facilitation System	Ministry of Trade, Industry and Cooperatives	New
37.	Wild life Permit	Ministry of Tourism	New
38.	MUBS Health Information Management System (HMS)	Makerere University Business School	New
39.	MUBS Human Resource Management System (HRMS)	Makerere University Business School	New
40.	MUBS FGSR Supervision Portal (FGSR)	Makerere University Business School	New
41.	MUBS Document Tracking Platform (DOCTRACK)	Makerere University Business School	New
42.	WEB system	Mulago National Women's Hospital	New
43.	System Requirements for the Development of the Geo-Spatial M&E System and Farmer Registration Application	UCDA	
44.	SoftPower	SoftPower	New

Source: NITA-U