Digital Transformation Programme

Semi-Annual Budget Monitoring Report

Financial Year 2021/22

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Budget Monitoring and Accountability Unit
Ministry of Finance, Planning and Economic Development
P.O. Box 8147, Kampala
www.finance.go.ug

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ACRONYMS

4IR	Fourth Industrial Revolution
AIA	Appropriation in Aid
BFP	Budget Framework Paper
BPO	Business Process Outsourcing
CERT	Computer Emergency Response Team
COVID 19	Corona Virus Disease, 2019
DC	Data Centre
DLG	District Local Government
DNS	Domain Name Server
DTT/DTH	Digital Terrestrial Television/Direct to Home
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
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
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
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

The Government is implementing programmatic planning and budgeting which harnesses synergies from a number of previously independent sectors and avoids duplication of resources, thus enabling us attain efficiency in our development investments.

The Budget Monitoring and Accountability Unit (BMAU) is now undertaking Programme-Based Monitoring to assess performance of the targets and outcomes set in the Programme Implementation Action Plans (PIAPs) of the third National Development Plan (NDPIII), Ministerial Policy Statements, plus the Programme and Sub-Programme work plans.

These BMAU findings are the first Programme assessments we have conducted and I urge you to embrace the findings therein, and fully adopt the recommendations as we strive to ensure compliance to Programme-Based Budgeting.

Ramathan Ggoobi

Permanent Secretary/Secretary to the Treasury

EXECUTIVE SUMMARY

Introduction

The Digital Transformation (DT) Programme aims to increase the penetration and use of Information and Communication Technology (ICT) services for social and economic development. The key expected results include: increasing ICT penetration; reducing the 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, Vote 020) plays the lead and coordination role of programme activities, with supportive roles from the National Information Technology Authority-Uganda (NITA-U, Vote 126), Uganda Broadcasting Corporation (UBC), Uganda Communications Commission (UCC), Posta-Uganda, and Uganda Institute of Communication Technology (UICT). The programme interventions are implemented under four sub-programmes: Enabling Environment; Research, Innovation and ICT Skills Development; ICT Infrastructure and e-Services. This report highlights the half-year (FY2021/22) performance of the planned interventions under the four sub-programmes.

Overall Performance

The overall Digital Transformation Programme (DTP) performance was good (72.1%). The approved budget for DTP is Ug shs 374.147billion (bn) of which Ug shs 167.3bn (45%) was released and Ug shs 118.064bn (71%) spent by 31st December 2021. The release performance by half-year was below average.

Highlights of Performance

Enabling Environment Sub-programme

The sub-programme performance was fair at 65.7%. The MoICT&NG initiated the formulation of the following policies: National ICT Policy; National ICT Innovation Policy, and National Spectrum Management Policy. The following regulatory frameworks were developed: band policies for the 2300MHz, 3300-3600MHz, 700MHz and E-band; channel assignment in 2100MHz; spectrum variation and withdrawal; guidelines for the use short-range radio communication (SRD) and, Ultra Wide Band (UWB) devices and infrastructure deployment and sharing guidelines. The ICT and National Guidance Strategic Plan was reviewed in line with the NDP III and the E-Commerce Strategy was reviewed. Technical guidance on the planning and extension of National Backbone Infrastructure/Electronic Government Infrastructure (NBI/EGI) was provided to eight DLGs.

Research, Innovation and ICT Skills Development Sub-programme

The sub-programme performed fairly at 55.6%. The DT Programme through the MoICT&NG secured workspace at Muni and Soroti universities for the establishment of ICT hubs, and equipping of the facilities was expected in Q3 and Q4 of the FY. A total of 31 phase three (Cohort 3) innovators received 50% of the award amount from the National ICT Initiative Support Programme (NIISP), and the call for the fourth cohort was issued and applications received. The National ICT Hub at Nakawa is hosting five (5) groups/innovators namely: Kacyber, Microfuse Uganda Limited; School Master, E-Posta, and Info Consultants International Ltd. It was observed however that the facility is underutilised.

To implement an ICT professional's quality assurance framework, the NITA-U certified and inspected 69 and 47 companies involved in IT services provision respectively and 83 audits were conducted. The UICT enrolled a total of 1,708 students for its diploma and certificate

courses for the present and past three academic years against a target of 1,500 students per year. A total of 325 participants were certified in ICDL, of which 12 were Training of Trainers (ToTs). The target for admission of students for the diploma and certificate courses was affected by the COVID-19 lockdown of academic institutions.

E-Services Sub-programme

The sub-programme performance was very good at 99%. Several applications were developed and deployed. An additional 14 applications were hosted on the government cloud; the e-payment gateway was rolled out with 75 e-services in production and 16 MDAs were onboarded onto the Unified Messaging and Collaboration System (UMCS). Development of interoperability framework and enterprise architecture was ongoing and so far 41 public and private entities were integrated onto the platform.

The NITA-U conducted 11 cyber security awareness sessions, and disseminated two (2) advisories on VMware Security Update and Log4j Vulnerability Alert. The NITA-U held an e-Conference and online quiz on cyber security awareness.

ICT Infrastructure Sub-programme

The DT programme through the NITA-U connected 732 sites on the NBI under the Last Mile Connectivity Project against a target of 700. A total of 196 and 150 wifi sites were installed and activated respectively. The sites included MDAs, local governments, health centres, schools, parastatals, and some private institutions along the NBI routes. The procurement of solar power systems for the 25 transmission sites was completed and installation is planned for Q3. The MoICT&NG developed guidelines and planned to implement the National Broadband Policy and surveyed 15 private sector organisations in Central and Eastern Uganda for compliance with the National Broadband Policy.

The National Data Centre (DC) was certified by the International Organisation for Standardisation (ISO) vide certificate number ISO 27001:2013. The risk assessment for the DC services was completed and procurement of the Vulnerability Assessment and Penetration testing was ongoing. The UBC renovated structures at Arua and Mbarara sites and the radio studios for Mbarara were relocated. Renovation of the UBC Namatala-Mbale station was ongoing. The procurement of assorted equipment for Buruli FM was ongoing. The sub-programme was fair at 68%, this was attributed to late initiation of procurements and COVID-19 disruptions.

Conclusion

The overall Programme performance was good at 72.1%. Performance of the E-Services Sub-programme was very good with most of the annual planned outputs already achieved by half-year; the very good performance is attributed to the completion of most of outputs for the Regional Communication Infrastructure Project (RCIP) which was due to end in Q3 of the FY. The Enabling Environment Sub-programme initiated the development of several strategies and policies with most of the planned outputs at the initial stages. The Research Innovation and Skills Development Sub-programme disbursed funds to 31 cohort III grantees for ICT research and innovation. Support to private innovation and incubation hubs was not provided due to inadequate funds. Upgrading of broadcasting equipment and infrastructure under the UBC performed poorly due to inadequate budgetary releases.

Challenges

- Lack of operational and management guidelines for the National ICT Hub.
- Inadequate funding for the digital migration agenda to ensure countrywide coverage of the national broadcaster.
- The COVID-19 lockdown and budget cuts for activities that play a complementary role during the implementation of planned interventions hampered their achievement.

Recommendations

- The MoICT&NG should expedite the development of operational guidelines for the National ICT Hub and attract more innovators.
- The Digital Transformation Programme Working Group should prioritise the allocation of resources to digital migration, infrastructure development of UBC plus the operation and maintenance of initiatives delivered by the RCIP for sustainability.

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 mobilisation, 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, indicators and targets (how things are working). The BMAU work is aligned to budget execution, accountability, service delivery, and implementation of the Domestic Revenue Mobilisation Strategy (DRMS).

Starting FY 2021/22, the BMAU is undertaking Programme-Based Monitoring to assess performance against targets and outcomes in the Programme Implementation Action Plans (PIAPs) of the third National Development Plan (NDPIII). Semi-Annual and Annual field monitoring of government programmes and projects is undertaken to verify receipt and application 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 reviews the coherency in implementing the PIAP interventions; the level of cohesion between sub-programmes; and the challenges of implementation.

The monitoring covered the following Programmes: Agro-Industrialisation; 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; Regional 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 to December 2021.

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 the 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; and
   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; and
iv) ICT infrastructure

1.4 Programme Outcome Targets

The key results to be achieved over the five years (FY2020/21 to FY2024/25) are:

(i)   Increase ICT penetration (Internet penetration from 25 percent to 50 percent, Digital Terrestrial Television signal coverage from 56 percent to 95 percent, 70 percent NBI connectivity in Government MDAs/DLG Headquarters; 90 percent national broadband coverage with minimum speed of 8 Mbps

(ii)   Reduce the cost of ICT devices and services (unit cost of 1Mbps /month of internet on the retail market from USD 237 to USD 70, unit cost of low entry smart phones from Ug shs 100,000 to Ug shs 60,000 and cost of a computer from Ug shs 1,600,000 to Ug shs 800,000);

(iii)   Create 30,000 direct jobs annually within the ICT ecosystem;

(iv)   Increase local ICT innovation products developed and commercialized from 72 to 282;

(v)   Provide 80 percent of government services online.

CHAPTER 2: METHODOLOGY

2.1   Scope

This report is based on selected Sub-programme interventions 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); Vote 126: National Information Technology Authority of Uganda (NITA-U), and three subventions Uganda Broadcasting Corporation (UBC), Uganda Communications Commission (UCC), and Uganda Institute of Communication Technology (UICT). A total of 12 out of 22 interventions under the Digital Transformation Programme Implementation Action Plan (PIAP) were monitored (Annex 1). The selection of areas to monitor is based on several criteria:

- Outputs were planned for and undergoing implementation in the year of review
- 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.
- The votes that had submitted Q2 progress reports for FY2021/22 were followed up for verification.
- Multi-year projects that were having major implementation issues were also visited.
- Potential of interventions to contribute to the programme and national priorities.

2.2   Approach and Methods

Both qualitative and quantitative methods were used in the monitoring exercise. The physical performance of interventions and 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 interventions and outputs from the Programme Implementation Action Plans (PIAPs), Ministerial Policy Statements (MPS) and progress reports of the respective Ministries, Departments, and Agencies (MDAs) for monitoring.

To aid monitoring, mapping was done of the PIAP interventions and outputs to the outputs of programmes and projects in the Vote MPS and progress reports. Multi-stage sampling was undertaken at three levels: i) Sub programmes, ii) Sub sub-programmes, 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 FY2021/22; National and Programme Budget Framework Papers; PIAPs, the third National Development Plan (NDP III), quarterly 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); Budget Website; 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) Callbacks in some cases were made to triangulate information.

Data Analysis

Both qualitative and quantitative approaches were used to analyze 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 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 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, a traffic light colour-coded system was used to alert the policymakers and implementers on whether the interventions were achieved (Green), on track (Umber) or off track (Red) to aid decision making.

Table 2.1: Assessment Guide to Measure Performance in FY 2021/22

Score	Comment	Performance Rating
90% and above	Very Good (Achieved at least 90% of outputs)	Achieved
70%-89%	Good (Achieved at least 70% of outputs)	On Track
50%- 69%	Fair (Achieved at least 50% of outputs)	
49% and below	Poor (Achieved below 50% of outputs)	Off Track

Source: Author's Compilation

2.4   Limitations

i) The FY2021/22 budget and work plans were prepared in sector mode with an old Chart of Accounts and Output codes so they were not in sync with the PIAP interventions.

ii) Lack of reliable and real-time financial data on donor financing as this aspect is not accessible on the IFMS. Relatedly some of the implementing agencies were operating manual accounting systems which limited access to credible expenditure data.

iii) 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, namely: Introduction, Methodology, Programme Performance, and Conclusion and Recommendations respectively.

CHAPTER 3: PROGRAMME PERFORMANCE

3.1 Overall Programme Performance

The overall Digital Transformation Programme (DTP) performance was good (72.1 %) as shown in table 3.1. The E-Services Sub-programme performance was very good and had achieved 99% (Annex 6: Performance of the E-services Sub-programme) of the annual output targets whereas Research, Innovation and ICT Skills Development Sub-Programme was fair at 55.6% (Annex 5).

The approved budget for DTP is Ug shs 374.147bn, of which Ug shs 167.315bn (44.7%) was released and Ug shs 118.064bn (70.6%) spent by 31st December 2021. Both the release and expenditure performance by half-year were below average (Table 3.2). The Research, Innovation and ICT Skills Development Sub-programme received the least budget release (32% of the approved budget) while the E-Services Sub-programme had the least absorption of the released funds (54%), majorly contributed to by the Regional Communication Infrastructure Project (RCIP).

The DT Programme initiated the formulation of the National ICT Policy, National ICT Innovation Policy, and National Spectrum Management Policy. The MoICT&NG disbursed funds to 31 phase three (cohort 3) innovators. The National ICT Hub at Nakawa was hosting five (5) groups/innovators; however, the facility was still underutilised. Development of the Interoperability Framework and Enterprise Architecture was ongoing, and so far 41 public and private entities had been integrated into the platform. The DT Programme connected 732 sites on the NBI, and installed and activated 196 and 150 WIFI sites respectively. The UBC embarked on renovating structures at Arua and Mbarara sites, and the radio studios for Mbarara were relocated. Renovation of UBC Namatala-Mbale station was ongoing. The procurement of assorted equipment for Buruli FM was ongoing.

Table 3.1: Programme Performance by 31st December 2021

Sub-programme	Output (%)	Remark
Enabling Environment	65.7	On track
Research, Innovation and ICT Skills Development	55.6	On track
E-services	99	Achieved
ICT Infrastructure	67.9	On track
Average	**72.1**	**On track**

Source: Author

Table 3.2: Programme Budget Allocation and Outturn by 31st December 2021 (Ug shs)

Sub-programme	Budget	Released	Spent	% released	% Spent
Enabling environment	189,967,649,083	89,717,223,780	68,580,046,373	47	76
E-services	110,886,275,584	52,999,798,145	28,443,319,208	48	54
ICT Infrastructure	36,333,938,694	12,602,188,241	12,059,096,744	35	96
Research, Innovation and ICT skills development	36,959,136,639	11,995,789,834	8,981,537,675	32	75
Total	**374,147,000,000**	**167,315,000,000**	**118,064,000,000**	**45**	**71**

Source: MoICT, NITA-U, UCC, UICT, UBC & IFMS, December 2021

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: Review and develop appropriate policies, strategies, standards and regulations that respond to industry; and regulate, coordinate and harmonise ICT infrastructure planning, sharing and deployment within the public and private sector.

The Sub-programme performance was fair at 65.7% and the intervention for regulate, coordinate and harmonise ICT infrastructure planning, sharing and deployment within the public and private sector performed poorly compared to review and develop appropriate policies, strategies, standards and regulations that respond to industry needs. Table 3.3 shows a summary of the traffic light performance of the monitored and assessed interventions.

Table 3.3: Performance of Interventions under the Enabling Environment Sub-programme

Intervention	Performance Rating
Review and develop appropriate policies, strategies, standards and regulations that respond to industry needs	On track
Regulate, coordinate and harmonize ICT infrastructure planning, sharing and deployment within the public and private sector	Off track

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

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

The output to be achieved during the NDP III period under this intervention is: Policies, strategies, standards and regulations developed/reviewed that has 15 actions to be implemented.

The planned outputs for FY2021/22 include: National ICT Policy developed and National Cyber Security Strategy developed; National ICT Innovation Policy finalised and implemented; ICTs for persons with disabilities popularised; training on accessibility of ICTs conducted; ICT sector business processes automated: a knowledge base portal for the Ministry of ICT and National Guidance developed; consultancy studies on best practices for spectrum management and regulatory framework undertaken; guidelines to implement the broadband policy developed; frameworks to support sharing of Data Networks Infrastructure developed; 40 staff trained in G&E budgeting and programme-based budgeting; policy consultations conducted; four (4) DT Programme monitoring activities undertaken; ICT sector statistics collected, analysed and disseminated; training in planning, budgeting and policy analysis undertaken; and periodic customer/client satisfaction surveys undertaken; regulatory frameworks developed. The performance of the intervention is given below;

The MoICT&NG initiated the process of developing the National ICT Policy and also developed the first draft of the National Cyber Security Strategy. The MoICT&NG developed a zero draft of the implementation plan for the National ICT Innovation Policy. Development of the National Spectrum Management Policy was ongoing and a zero draft report on spectrum usage rights, spectrum assignment and pricing models was prepared. The MoICT&NG developed guidelines and a plan to implement the National Broadband Policy, and surveyed 15 private sector organisations in Central and Eastern Uganda for compliance with the National

Broadband Policy. The ICT & National Guidance strategic plan was reviewed in line with the NDP III and so was the E-Commerce Strategy. A total of 66 MoICT&NG staff were trained in Gender and Equity Budgeting, and Programme-Based Budgeting in collaboration with the Ministry of Finance, Planning and Economic Development.

The UCC in collaboration with MoICT&NG developed the following regulatory frameworks: band policies for the 2300MHz, 3300-3600MHz, 700MHz and E-band; channel assignment in 2100MHz; spectrum variation and withdrawal; guidelines for use of short-range radio communication (SRD) and Ultra Wide Band (UWB) devices and infrastructure deployment and sharing guidelines.

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

The key outputs to be achieved during the NDPIII period under this intervention are: a framework for a coordinated rollout of ICT infrastructure and services established, National internet infrastructure coordinated, and environment and human safety ensured.

The planned outputs for FY2021/22 include: ICT infrastructure blueprint developed; technical support and guidance on the roll-out of ICT infrastructure provided; digitisation of all content and services in the MDAs promoted; establishment of data centres in all MDAs and local governments promoted; shared critical ICT infrastructure established; deployment of new technologies to provide last-mile connectivity promoted; and national postcode and addressing system rolled out.

During the period under review, the MoICT&NG formulated requirements for the development of a database (tool) for the ICT infrastructure blueprint; developed the first draft of the National Broadband Baseline Survey and provided technical support and guidance on parameters and data collection for the development of ICT infrastructure blueprint. The MoICT&NG in collaboration with SIGNET undertook due diligence on the operational status of Add-Drop Multiplexer (ADM) transmission sites. Evaluation of proof of concept using satellite for broadband connectivity in the rural areas of Bufundi in Rubanda and Kibuku in Ntoroko was undertaken.

The MoICT&NG provided technical guidance on the following: Planning and extension of National Backbone Infrastructure/Electronic Government Infrastructure (NBI/EGI) to the DLGs of Lamwo, Nwoya, Zombo, Amoru, Nakapiripirit, Ngora, Nabilatuk and Kikuube; development of East African Regional Space Strategy; inclusion of ICT infrastructure in the design and upgrade of road projects to UNRA; development of National ICT Development Strategy; review of performance for activities in the Sustainable Energy Development Programme Working Group to Ministry of Energy and Mineral Development; and development of UDAP-Govnet Project provided to MDAs. The MoICT&NG carried out a baseline survey on content storage methodologies in selected DLGs of Kasese, Masaka, Mityana, Mubende, Mpigi and Mityana.

Challenge

Inadequate budget releases and suppression during the first two quarters led to the postponement of planned activities.

Recommendation

The DT Programme Working Group should engage MFPED to ensure timely disbursement of funds.

Conclusion

The Sub-programme performance was fair at 65.7% (Annex 2), and the planned outputs were in line with the NDPIII interventions. The first draft of the National Broadband Baseline Survey and Infrastructure Blueprint was developed and due diligence on the operational status of ADM transmission sites was undertaken. The following policies were at initial stages of formulation: National ICT Policy, National ICT Innovation Policy, National Spectrum Management Policy and National Cyber Security Strategy. Some of the planned outputs were at the initial stages of implementation due to inadequate budgetary releases and delays to implement studies on policy formulation and evaluations, thus the need to fast track their implementation to provide a conducive and regulated ICT working environment.

3.3 Research, Innovation and ICT Skills Development Sub-programme

The sub-programme aims to promote ICT research, innovation and commercialisation of indigenous knowledge products and increase the ICT human resource capital. The sub-programme has 11 interventions, of which 6 were monitored. These include: Develop and implement 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.

The sub-programme performance was fair at 55.6% attributed to low budget releases at 32% of the annual budget. The interventions - support local innovation and promote export of knowledge products, and develop an ICT professionals quality assurance framework performed better than other interventions. Summary performance of the monitored interventions is given in table 3.4.

Table 3.4: Performance of Interventions under the ICT Infrastructure Sub-programme

Intervention	Performance Rating
Develop and implement ICT Research and Innovation ecosystem	On track
Develop innovation and incubation Centers	On track
Support local innovation and promote export of knowledge products	On track
Promote local manufacturing and assembly of ICT products	On track
Develop a well-grounded ICT professional workforce	On track
Develop an ICT professional's quality assurance framework	On track

Source: Authors' Compilation

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

3.31 Develop and implement ICT Research and Innovation Ecosystem

The intervention's key deliverables during the NDPIII period are: An internship and placement framework developed; joint research program between private sector, academia and Government; and ICT research agenda developed, implemented and monitored.

The planned outputs for the FY2021/22 include: Capacity building and training activities for 40 ministry staff undertaken; and ministry internship training programs coordinated, facilitated and undertaken.

The following outputs were planned for FY2021/22 by NITA-U: Support for the development of ICT policies, strategies and technical standards provided; five (5) new IT standards in line with organisation's priorities identified and developed; MDAs supported in the uptake of IT standards; a National IT Survey conducted; IT research and data analytics to inform policy, planning and performance reporting conducted; an inclusive terminal impact evaluation of RCIP initiatives; and National Broadband Blueprint developed.

The MoICT&NG coordinated and facilitated internship training programs and developed a draft internship coordination plan. Training needs assessment and capacity building for ministry staff was undertaken. The NITA-U supported three [1]MDAs to adopt IT standards and regulations and supported review of four (4) draft guidelines and papers from the Uganda Communication Commission (UCC). The NITA-U also finalised and piloted data collection tools for the national IT survey and notification letters sent out to respective stakeholders.

3.3.2 Develop Innovation and Incubation Centers
The intervention planned key deliverables over the NDPIII period are: National ICT park established; Government owned ICT incubation hubs established and supported; privately-owned innovation hubs supported; Business Process Outsourcing/Information Technology Enabled Services (BPO/ITES) centres supported; entrepreneurship and incubation programmes developed, and partnerships with industry and academia established.

The planned outputs for the FY2021/22 are: Grants to innovators and innovation hubs provided; grants to indigenous ICT innovators provided; support to local innovation hubs provided; Universities supported to develop local solutions/innovations; and BPO industry promoted (national survey on ICT enabled services demand).

The MoICT&NG supported activities for developing the Integrated Health Management Information System (iHMIS) by Integrated Intelligent Computer Systems (IICS), and conducted M & E activities on the deployment of the IICS system in selected health centers in Uganda. Most activities under the iHMIS were differed to Q3 FY2021/22.

A total of 31 phase three (cohort 3) innovators received 50% of the award amount from the National ICT Initiative Support Programme (NIISP) and the call for the fourth cohort was advertised and applications received. Some of the Cohort 3 awardees were being managed and mentored by two innovation hubs: Resilient African Network and Camtech Hub. The MoICT&NG updated and maintained NIISP system and database for ICT Innovators. The ministry (NSIIP) provided technical and system enhancement support to the development of the Education Management Information System (EMIS), electronic government procurement (e-GP,) EDMS, IICS, XENTE, Uganda National Examinations Board Application (UNEB App) in partnership with the developing companies.

A needs assessment to identify the requirements for the innovation spaces and finalised MoUs to guide the establishment of innovation spaces at selected universities across the country was

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[1] KCCA, NBRB - National Building Review Board and NLU - National Library of Uganda

undertaken, while a research proposal for a study on both the demand BPO services by Government and capacity of the private was developed.

3.3.3 Support local innovation and promote export of knowledge products

The intervention planned key deliverables over the NDPIII period are: Local ICT products developed; export of knowledge products promoted and local digital media content produced. Planned outputs for the FY2021/22 include: ICT hub facility at Nakawa maintained; ICT equipment provided to universities innovation spaces (Hubs); ICT equipment procured and provided for the implementation of the Parish Model Digital Transformation System across the country.

The National ICT Innovations Hub at Nakawa is being managed by the Uganda Institute of Communication Technology (UICT) and is operational although at a low scale. The hub is hosting five (5) innovator groups[2]. The MoICT&NG is undertaking consultations on a value for money operationalisation model for the hub at Nakawa alongside the private-owned ICT innovation hubs. The procurement of equipment for the university and other planned innovation spaces was differed to Q3 and 4 FY2021/22.

3.3.4 Promote local manufacturing and assembly of ICT products

The intervention aims at promoting and supporting local ICTs assembly and manufacturing. The planned outputs for the FY2021/22 include: Local electronics assembling and manufacturing promoted; organise and participate in local and international ICT innovation events; support for indigenous ICT innovation hubs and innovators provided; and NIISP Annual Performance Progress Report for FY 2019/20 produced.

The MoICT&NG in collaboration with the Johannesburg Centre for Software Engineering (JCSE) updated the draft strategy for the operationalisation of the National ICT Innovation Hub. The following private ICT innovation Hubs were monitored: RAN Lab, MIIC, CAMTech, Outbox, Hive Colab, Techbuzz Hubs and Outbox. The database for ICT innovators and content was updated. The NIISP Selection Committee activities were facilitated and coordinated; implementation of the decisions of the selection committee was also monitored. Grants to Phase 3 awardees were processed and paid out in time and NIISP Annual Performance Progress Report for FY 2019/20 was produced. Support to the electronics manufacture and assembly was postponed to Q3. The intervention performed fairly due to inadequate budgetary releases.

3.3.5 Develop a well-grounded ICT professional workforce

The intervention planned key deliverables over the NDPIII period are: National Digital Skills Framework developed; ICT training for professionally certified courses and specialised short courses carried; Government ICT officers trained, and basic ICT competencies in the public service established. The planned outputs for the FY2021/22 are: Institutionalisation of ICT Functions in MDAs/LGs; and training and certification of staff conducted.

The MoICT&NG in conjunction with Enabel enhanced ICT capacity of government officers and training needs assessment for Ministry staff on ICT was undertaken. Engagement of relevant MDAs[3] to institutionalise ICT Functions was ongoing.

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[2] Kacyber, Microfuse Uganda Limited; SchoolMaster, E-Posta and Info Consultants International Ltd
[3] MAAIF, MGLSD, MEACA, MTWA and MoFA.

During the period under review, the UICT reviewed its approach to delivering its mission by enhancing online training as one of the methods of delivering content to students. The institute had enrolled a total of 1,708 students in its diploma and certificate courses for the present and past three academic years against a target of 1,500 students. A total of 764 participants from 95 districts were trained in ICT Digital Literacy using e-Learning. A total of 1,292 participants were trained in the Coursera Workforce Recovery Initiative. A total of 325 participants were certified in International Computer Driving Licence (ICDL) of which 12 were Training of Trainers (ToTs). The target for admission of students for the diploma and certificate courses was affected by the COVID-19 lockdown of academic institutions. The UCC conducted refresher courses for secondary school ICT teachers in the following schools; Mbale SS, Lango College school, Kitara SS and St Martin SS-Masaka.

3.3.6 Develop an ICT professional's quality assurance framework
The intervention planned key deliverable over the NDPIII period is a certification framework to regulate ICT professional standards developed. The planned outputs for the FY2021/22 include: twenty (20) sensitisation activities on IT legislation carried out to enhance awareness: legal support provided in the development of one (1) priority IT legislation; audits on applicants conducted; certification framework to regulate ICT professional standards developed; twenty (20) compliance assessments of MDAs and other regulated entities conducted; consumer protection framework implemented.

The NITA-U certified 69 companies (Annex 3) bringing the total to 531 in line with IT Certification Framework. The NITA-U inspected and audited 47 and 83 companies involved in IT services provision respectively. Twenty (20) sensitisation engagements were held to create awareness about ICT legislation in the public and private sector (Annex 4). Compliance assessment for four (4) MDAs was completed.

Conclusion
The Sub-programme performance was fair at 55.6% (Annex 5). The intervention on the support of local innovators and promote export of knowledge products performed better than other interventions. The fair performance is largely attributed to inadequate budgetary releases and thus postponed activities to Q3. The following achievements were registered; 31 cohort three NIISP granted received 50% of the grant amount, MoUs for the establishment of innovation spaces at selected universities across the country were finalised, activities of the IICS were supported in the deployment of iHMIS and data collection tools for the National IT survey were finalized and piloted. However, utilisation of innovation space at the National ICT hub-Nakawa was still low at less than 10% despite the facility being fully equipped.

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 monitoring exercise covered two interventions: mainstream ICT in all sectors of the economy and digitise service delivery and strengthen cyber security in the country.

The sub-programme performance was very good and the interventions achieved more than half of the planned annual targets with 48% receipt of the annual budget. The intervention on mainstreaming ICT in all sectors of the economy and digitising service delivery performed better than strengthening cyber security in the country intervention. The summary performance of the monitored interventions is given in table 3.5.

Table 3.5: Performance of Interventions under the E-Services Sub-programme

Intervention	Performance Rating
Mainstream ICT in all sectors of the economy and digitize service delivery	Achieved
Strengthening Cyber Security in the country	Achieved

Source: Author's Compilation

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

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

The intervention planned key deliverables over the NDPIII period included: Frameworks in place to guide interoperability of Government systems; a data sharing and integration platform developed to enhance the delivery of services in government and private sector and operationalised; Government Public Key Infrastructure (PKI) services developed and enforced; e-Citizens Portal enhanced; Public and Private institutions supported to review, re-engineer their processes, automate and deliver services online; public and private institutions supported to review, re-engineer their processes, automate and deliver services online; ICT needs assessments in key sectors conducted; Unified Messaging and Collaboration System (UMCS) rolled out; E-payment gateway in place; SMS gateway in place; and National ICT statistics system.

The planned outputs for the FY2021/22 include: Government cloud implemented in 100 entities; MDA & LG, ten (10) websites developed and maintained; Technical support provided to at least 100 MDAs/LGs & TUGs to stimulate the adoption of e-services; SMS gateway and mobile gateway implemented in 10 entities; interoperability Framework and Enterprise Architecture put in place; whole-of-Government Integration and data sharing platform established and 40 MDAs added on to the platform; Deploy UMCS to 70 MDAs, and manage a Unified Messaging and Collaboration platform; support the development and roll out two (2) priority e-services in two priority sectors; E-payment gateway in place; IT Service Desk operationalized; establishment of Last mile connectivity to enhance provision and access to e-Government Services through NBI/EGI (700 sites connected); Network upgrade and purchase of additional bulk internet Bandwidth BI commercialisation contract effectively implemented and Contractor supervised to generate the Projected Revenue.

During the period under review, a total of 97 applications were added to the government cloud, bringing the total number of applications hosted on the Government cloud to 178 applications. The NITA-U developed and revamped an additional 10 MDA/DLG websites and a total of 358 domains were supported and managed. Technical support was provided to a total of 388 Government MDAs/LGs, & TUGs on the adoption of e-services. The SMS Gateway was rolled out in an additional 5 entities (Judiciary, Ministry of Works and Transport, Personal Data Protection Office (PDPO), Uganda National Roads Authority (UNRA), UPSC) with 5,211 SMSs pushed through the gateway by 31st December 2021.

The Interoperability Framework and Enterprise Architecture was developed by NITA-U but not yet operationalised pending integration of systems like e-GP and NIRA. An additional 11 MDAs and eight (8) financial institutions/banks were integrated into the Whole-of-Government Integration and data-sharing platform. A total of 16 MDAs were onboarded onto the UMCS bringing the total number of MDAs enrolled to 99. The electronic Government procurement system was developed and is being managed by MFPED/PPDA and piloted in the following MDAs: NITA-U, PPDA, MOWE, UNRA, KCCA, CAA, NSSF, Mpigi DLG and Jinja DLG.

The NITA-U connected an additional 35 sites onto the NBI bringing the total number of sites connected to 1,394. Final acceptance for the connected sites was completed in three regions: Northern, Western and Eastern Uganda. A total of 196 Wi-Fi sites were installed under the Last Mile Project and 150 of the connected sites were activated. The NITA-U developed the Agro-traceability In-put System and integrated the SMS Gateway and NFASS. Bulk internet was delivered to 604 sites connected on the NBI

L-R: MyUg wifi installed at Kumi Health Centre IV and rack installed at Fort-Portal School of Clinical Officers under Last Mile Connectivity

3.4.2 Strengthen Cyber Security in the country

The intervention's planned key deliverables over the NDPIII period are: National Information Security Framework (NISF) reviewed and implemented; National cyber security strategy developed; Computer Emergency Response Teams (CERTs) strengthened and Public Key Infrastructure (PKI) developed and implemented.

The planned outputs for the FY2021/22 include: NISF reviewed and implemented across the country; National cyber security strategy developed; CERT Advisory and Alerting carried out; Cyber security monitoring capability enhanced; International Cyber Security Collaborations maintained; CERT.UG Accredited by FIRST, ISO 27001Certification Carried out for Data Center; ISO 27001 remediation carried out for Data Center; Cyber Security promoted in Uganda; Information assurance provided for the NBI & Technical support provided to MDAs.

The NITA-U completed the implementation of the NISF components for the following MDAs under Phase 3 and 4: ULC, HESFB, DGSM, NCDC and DEI. The stakeholder consultation report on the development of the National Cybersecurity Strategy and Implementation Plan was completed. The National Data Centre was ISO 27001:2013 certified and a risk assessment for the data centre services was undertaken. Cloud storage infrastructure (153Terabytes) with licenses and management switches for both the Primary Data Centre (PDC) and Secondary Data Centre (SDC) was upgraded and a new 275/250kVA (Cummins) Generator for the Disaster Recovery sites (DR) was procured and installed to provide an alternative source of power. Canopy/shade for generators at both the PDC and DR sites was also constructed to provide protection.

The NITA-U conducted and disseminated two cyber security advisory alerts; VMware Security Update and Log4j Vulnerability Alert and eleven (11) cyber security awareness sessions.

Technical support was provided to: Directorate of Citizenship and Immigration Control (DCIC), Uganda Police Force, Public Service Commission, Lotteries and Gaming Board and Ministry of Public Service. Some of the planned activities were postponed to Q3 and 4 due to delays in initiating procurements, inadequate budget releases and running valid licenses/subscriptions.

Conclusion

The performance of the sub-programme was very good at 99% (Annex 6) and most of the planned output targets were achieved. The very good performance was attributed to the attainment of deliverables under the RCIP which was expected to end in Q3. The following applications were developed and were being piloted: e-GP, SMS gateway, e-payment gateway, UMCS and a data sharing and interoperability platform. Of the 700 sites connected to the NBI under RCIP, only 604 were supplied with the internet. Therefore, for Uganda to reap from the economies of scale of the prepaid internet services over the NBI, reduce the cost of transacting with the government and improve efficiency there is a need to extend and expand NBI coverage. It was noted however that NITA-U had not budgeted for the sustainability of initiatives under the RCIP.

3.5 ICT Infrastructure Sub-programme

The sub-programme goal is to increase national ICT infrastructure coverage, and it has three interventions to be implemented over the NDPIII period. The monitoring covered two interventions: Extend broadband ICT infrastructure coverage countrywide in partnership with the private sector and implement Last-Mile Connectivity to key areas and expand the Digital Terrestrial Television and Radio Broadcasting Network.

The sub-programme performance was fair at 68% and the intervention on extending broadband ICT infrastructure coverage countrywide performed better than expanding the Digital Terrestrial Television and Radio Broadcasting Network intervention. The sub-programme received 35% of the annual budget and achieved 32% of the annual output targets. The summary performance of the monitored interventions is given in table 3.6.

Table 3.6: Performance of Interventions under the ICT Infrastructure Sub-programme

Intervention	Performance Rating
Extend broadband ICT infrastructure coverage countrywide	On track
Expand the Digital Terrestrial Television and Radio Broadcasting network	On track

Source: Author's Compilation

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

3.5.1. 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 planned key deliverables over the NDPIII period are: NBI extended; Government service delivery units connected to the NBI; Wireless hotspots (MyUg) deployed at strategic locations; and Digital Terrestrial Transmission sites (DTT) connected to the NBI.

The planned outputs for the FY2021/22 are: Solar power at 25 NBI Transmission sites across the country installed; management and extension of the MYUG Wi-Fi network to cover both rural and urban centres undertaken; stakeholder awareness/sensitisation & publicity on the Projects (Phase 5, Data Centre/Government Cloud, Wi-Fi, NBI and Services etc.) done; NBI ICT equipment to cater for the extensions and relocations acquired.

The NITA-U procured 25 units of solar panels and accessories for the 25 transmission sites. Pole erection was completed for 24 transmission sites. A total of 196 Wi-Fi sites were installed under the Last Mile Project, of which 150 sites were activated. Relocation of the NBI fibre cable was conducted during Q2 at the Hima-Katunguru Road Section.

3.5.2 Expand the Digital Terrestrial Television and Radio Broadcasting Network

The intervention planned key deliverables over the NDPIII period are: Existing transmission sites upgraded to ensure redundancy and provision of local regional program stream insertions; existing radio transmission sites upgraded to ensure redundancy and provision of local regional program stream; alternative signal transmission; a national DTT/DTH hybrid broadcast system designed and deployed; and television and radio studio facilities enhanced.

The planned outputs for the FY2021/22 include: Existing transmission sites upgraded to ensure redundancy and provision of local regional program stream insertions (cover all TV signal shadow areas in 10 major towns and cities with Digital TV signal from gap fillers), starting with one site in Kampala; a national DTT/DTH hybrid broadcast system designed and deployed in a phased manner; broadcasting equipment procured and maintained; UBC upcountry stations renovated; and UBC operation costs paid.

The UBC procured and installed two Live-U units and renovated structures at Arua and Mbarara sites and the radio studios for Mbarara were relocated. Renovation of UBC Namatala-Mbale station was ongoing, and so was the procurement of assorted equipment for Buruli FM. Utilities and operational bills for the UBC Station and sub-stations for the period under review were paid for. Most of the planned outputs were yet to be implemented due to inadequate budget releases.

L-R: Equipped production studios at UBC West in Mbarara and UBC Namata in Mbale due for renovation

Conclusion

The sub-programme performance was fair at 68% achievement of planned activities (Annex 7). The fair performance was attributed to delayed initiation of procurements and inadequate budget releases affected the implementation of planned activities. That notwithstanding, renovation of satellite UBC stations was ongoing but at a rather slow pace.

CHAPTER 4: CONCLUSION AND RECOMMENDATIONS

4.1 Challenges

i) Inadequate budgetary releases.

ii) Delayed initiation of procurements.

iii) Low uptake of services over the NBI.

iv) Limited space for data centre hosting services and old transmission and broadcasting equipment.

v) Low uptake of space at the National ICT hub by innovators.

vi) National lockdown situation caused by COVID-19 outbreak.

4.2 Recommendations

i) The DT Programme Working Group and MFPED should prioritise funding the critical technological aspects of UBC to ensure transformative broadcasting.

ii) The NITA-U and MoICT&NG should initiate procurements in time to avoid the low absorption of released funds

iii) The NITA-U and MoICT&NG should rationalise the available resources for the interventions delivering NDP III commitments, like the acquisition of critical equipment to utilise the services delivered over NBI.

iv) The DT Programme secretariat should explore partnerships with academia to stir innovative solutions that can be placed in the local market as well as compete globally.

4.3 Conclusion

The DT Programme performance was good at 72.1%. Performance of the E-services Sub-programme was very good with most annual planned outputs achieved; however, the seemingly very good performance is attributed to the Regional Communication Infrastructure Project which was due to end in February 2022 but whose outputs are provided cumulatively and lack disaggregated financial information by output. The Enabling Environment Sub-programme initiated the development of several strategies and policies with most of the planned outputs at the initial stages.

The Research Innovation and Skills Sub-programme development disbursed funds to 31 cohort III grantees for ICT research and innovation. Support to private innovation and incubation hubs was not provided owing to inadequate funds. Upgrading of broadcasting equipment and infrastructure under the UBC performed poorly due to inadequate budgetary releases.

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National Planning Authority (2020*), Third National Development Plan (NDPIII) 2020/21 – 2024/25*

Annex 1: List of Interventions Sampled for Monitoring

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 innovation and incubation Centers
	Support local innovation and promote export of knowledge products
	Promote local manufacturing and assembly of ICT products
	Develop a well-grounded ICT professional workforce
	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
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.)
	Expand the Digital Terrestrial Television and Radio Broadcasting network

Source: Author's Compilation

Annex 2: Performance of the Enabling Environment Sub-programme as at 31st December 2021

Intervention	Output	Financial Performance			Physical Performance			Remark
		Annual Budget (bn 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	Enabling policies, laws and regulations developed	0.255	47.8	60	2.00	0.50	6.45	On track
	Enabling policies, laws and regulations developed	0.319	49.9	93	5.00	1.00	6.19	Off-track
	Enabling policies, laws and regulations developed	0.230	58.7	96	1.00	0.50	9.50	On track
	Enabling policies, laws and regulations developed	0.246	54.5	100	2.00	1.00	10.94	Achieved
	Policy, consultation, planning and monitoring	0.040	57.5	100	2.00	1.00	1.69	On track
	Policy, consultation, planning and monitoring	0.650	48.9	98	22	8.5	24.86	On track
Regulate, coordinate and harmonise ICT infrastructure planning, sharing and deployment within the public and private sector	Sub-sector monitored and promoted	0.1	33.0	100	1.00	0.40	1.94	Off-track
	Logistical support ICT infrastructure	0.043	46.5	100	1.00	0.50	2.08	On track
	Sub-sector monitored and promoted	0.048	31.3	100	2.00	0.20	0.74	Off-track
	Logistical support ICT infrastructure	0.133	61.7	99	4.00	0.50	1.31	Off-track
	Total	2.064	**50.5**	**93**			**65.7**	*Good performance*

Source: Field findings, Progress Reports and IFMS

Annex 3: Certified providers of Information Technology (IT) Products, Services and Training for Q1 & Q2 FY 2021/ 2022

NO.	BUSINESS TRADING NAME	CERTIFICATE NUMBER
1	CEENEX SOLUTIONS LTD	NITA/CERT/021-488
2	PIVOT PAYMENTS LIMITED	NITA/CERT/021-489
3	RUSH TECHNOLOGIES (U) LTD	NITA/CERT/021-490
4	JAAM GROUP OF COMPANIES LIMITED	NITA/CERT/021-491
5	GIZA SYSTEMS UGANDA LIMITED	NITA/CERT/021-492
6	OPTIMUS BUSINESS SYSTEMS LIMITED	NITA/CERT/021-493
7	SAVANNAH ADVISORY LIMITED	NITA/CERT/021-494
8	GLOVAK (U) LIMITED	NITA/CERT/021-495
9	PAMOJA GROUP (U) LIMITED	NITA/CERT/021-496
10	WATEGZ TECHNOLOGIES LTD	NITA/CERT/021-497
11	AFRICA VISION COMPUTER SERVICES LTD	NITA/CERT/021-498
12	EXECUTIVE TECHNOLOGY CENTRE (U) LIMITED	NITA/CERT/021-499
13	SMS ONE (U) LIMITED	NITA/CERT/021-500
14	ZUBACX LIMITED	NITA/CERT/021-501
15	DIRO TECHNOLOGIES LIMITED	NITA/CERT/021-502
16	FOUR CORNERS TRANSFORM LTD	NITA/CERT/021-503
17	BREACHPOINT LIMITED	NITA/CERT/021-504
18	SATI CONTRACTORS (U) LIMITED	NITA/CERT/021-505
19	EASY MATATU LTD	NITA/CERT/021-506
20	WAVE TRANSFER LIMITED	NITA/CERT/021-507
21	CHAMBER GROUP OF COMPANIES LTD	NITA/CERT/021-508
22	FAME LOGISTICS COMPANY LIMITED	NITA/CERT/021-509
23	T & B GENERAL ENTERPRISES LIMITED	NITA/CERT/021-510
24	OMNI-TECH LIMITED	NITA/CERT/021-511
25	PEAK BANDWIDTH TECHNOLOGIES LIMITED	NITA/CERT/021-512
26	EZEEMONEY LIMITED	NITA/CERT/021-513
27	SAVE ELECTRICITY COMPANY LIMITED	NITA/CERT/021-514
28	RANX GROUP OF COMPANIES LIMITED	NITA/CERT/021-515
29	ALGER TECHNOLOGY SOLUTIONS & SERVICES LTD	NITA/CERT/021-516
30	SAS ADVENTIEL	NITA/CERT/021-517
31	MOBIPAY AGROSYS LIMITED	NITA/CERT/021-518
32	OVERSEA MEDIA GROUP LTD	NITA/CERT/021-519
33	CRAS LTD	NITA/CERT/021-520
34	FLOCY BUSINESS SOLUTIONS LTD	NITA/CERT/021-521
35	STANDARD ICT & ENTERPRISE SOLUTIONS LIMITED	NITA/CERT/021-522
36	NETFIX ICT SOLUTIONS LIMITED	NITA/CERT/021-523
37	EXCELLA ENTERPRISES LIMITED	NITA/CERT/021-524
38	LOYS TECHNOLOGIES (U) LIMITED	NITA/CERT/021-525
39	DOTFIELD DIGITAL SOLUTIONS LTD	NITA/CERT/021-526
40	HAMILTON GULF (U) LIMITED	NITA/CERT/021-527
41	ACERAT LIMITED	NITA/CERT/021-528

NO.	BUSINESS TRADING NAME	CERTIFICATE NUMBER
42	FORTRESS UNIVERSAL SYSTEMS LTD	NITA/CERT/021-529
43	MURCOM UGANDA LIMITED	NITA/CERT/021-530
44	DONZ TECHNOLOGY COMPANY LTD	NITA/CERT/021-531
45	COMVIVA TECHNOLOGIES LIMITED	NITA/CERT/021-532
46	CYBIT LTD	NITA/CERT/021-533
47	NSDL E-GOVERNANCE INFRASTRUCTURE LIMITED	NITA/CERT/021-534
48	ALASTAR COMPANY (U) LIMITED	NITA/CERT/021-535
49	FARMBOX MICROINSURANCE LIMITED	NITA/CERT/021-536
50	CYTEZA LIMITED	NITA/CERT/021-537
51	INTERNATIONAL SECURITY SYSTEMS (U) LIMITED	NITA/CERT/021-538
52	ARENA TECHNOLOGIES LIMITED	NITA/CERT/021-539
53	KUMUSOFT SOLUTIONS LIMITED	NITA/CERT/021-540
54	MBE EXPERT CONSULT LTD	NITA/CERT/021-541
55	WORLD CLASS TECHNOLOGIES LIMITED	NITA/CERT/021-542
56	BULUGANYA INTERNATIONAL LIMITED	NITA/CERT/021-543
57	UNIFIED TECHNOLOGY BUSINESS PARTNERS LTD	NITA/CERT/021-544
58	LOG'EL GROUP LIMITED	NITA/CERT/021-545
59	COMPUTING FOR DEVELOPMENT LTD	NITA/CERT/021-546
60	ST MARY'S COMPUTER TECHNOLOGIES LIMITED	NITA/CERT/021-547
61	ARAS CONSULTS LTD	NITA/CERT/021-548
62	PAHAPPA - SMC LIMITED	NITA/CERT/021-549
63	GLOBAL SOURCE E.A LIMITED	NITA/CERT/021-550
64	FLYHUB UGANDA LIMITED	NITA/CERT/021-551
65	DUSUPAY LIMITED	NITA/CERT/021-552
66	GUINNESS TECH (U) LIMITED	NITA/CERT/021-553
67	RELATIONAL TECHNOLOGY SA	NITA/CERT/021-554
68	PESAPAL UGANDA LIMITED	NITA/CERT/021-557
69	VESWA CONSULTANT ENGINEERS LIMITED	NITA/CERT/021-558

SOURCE: NITA-U

Annex 4: Sensitisation on Certification and Cyber Laws

Q1	
	Webinars
1.	Webinar held with registered providers of IT Services and Products on IT Policies processes and procedures and Quality manuals for consistent and effective service delivery
2	Webinar held with registered Online Providers of IT Services on IT policies setting the tone for a conducive online operating environment
3.	Ensured Online Providers of IT Services participated in the Data Protection and Privacy Webinar series organised by the (ISC)2 Uganda Chapter.
Q2	
	Radio interviews on Cyber laws and Certification
4	Radio Par cis in Arua
5	Open gate radio in Mbale
6	Buddu FM
7	Kasese Guide Radio
	Academia
8	Awareness creation on Cyber laws and Certification to Makerere students E-government Masters Class
	Radio Talk Shows on Certification
9	Namirembe FM
10	Radio Maria
11	Innerman Radio
12	Radio One
13	Prime Radio
14	Radio Sapiencia
15	UBC Radio
16	Radio Bilal
	TV Show
17	Channel 44-TV Show on Certification and Cyber laws
	Professional Associations
18	Awareness creation on IT Certification and Cyber laws at Institute of Procurement Professionals of Uganda Summit
	Distribution of Laws FAQs and Branding Materials
19	Distribution of Cyber laws, IT Certification FAQs and branding Material
	NITA Staff
20	Presentation on Certification and a high-level mention of Cyber laws

Annex 5: Performance of the Research, Innovation and Skills Development Sub-programme as at 31st December 2021

Intervention	Output	Financial Performance			Physical Performance			Remark
		Annual Budget (bn Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical Performance Score (%)	
Develop and implement ICT Research and Innovation ecosystem	Human resource management services	0.275	50.0	76	4.00	1.00	0.37	On track
	Research, Development and Innovation supported and promoted	0.291	70.5	93	13.00	7.00	0.60	On track
Develop innovation and incubation centers	Grants to innovators and innovation hubs provided	10.0	31.1	73	10.00	1.00	8.70	Off-track
	transfers to other government units	2.1	33.7	-	10.00	1.00	1.68	Off-track
	Innovators and Innovation hubs	12.432	42.5	96	3.00	1.00	26.41	On track
	BPO industry promoted	0.030	56.7	100	10.00	8.00	0.08	Achieved
Support local innovation and promote export of knowledge products	Subvention operational (UICT)	1.0	42.3	100	100.00	40.00	2.56	Achieved
	Purchase of office and ICT equipment, including software	8.310	9.9	-	100.00	5.00	11.35	On track
Promote local manufacturing and assembly of ICT products	ICT initiatives support	2.158	48.8	74	10.00	4.00	3.17	On track
Develop a well-grounded ICT professional workforce	Human resource base for IT developed	0.080	44.6	74	100.00	40.00	0.19	On track
	Human resource base for IT developed	0.04	42.4	27	100.00	10.00	0.03	Off-track
Develop an ICT professional's	A well-regulated IT environment	0.244	76.9	64	100.00	60.00	0.51	On track

quality assurance framework	in the Public and Private sectors							
	Total	**36.959**	**32.5**	**75**			**55.65**	*Fair performance*

Source: IFMS, Progress Reports and Field Findings

Annex 6: Performance of the E-services Sub-programme

		Financial Performance			Physical Performance			
Intervention	**Output**	**Annual Budget (bn Ug shs)**	**% of budget received**	**% of budget spent**	**Annual Target**	**Cum. Achieved Quantity**	**Physical Performance Score (%)**	**Remark**
Mainstream ICT in all sectors of the economy and digitize service delivery	A desired level of e-government services in MDAs & LGs attained	0.681	30.2	25	12.00	6.00	0.61	Achieved
	Purchase of specialised machinery	70.079	49.5	58	39.00	35.00	63.20	On track
Strengthen Cyber Security in the country	A desired level of e-government services in MDAs & LGs attained	0.126	44.3	31	11.00	3.00	0.10	Achieved
	A desired level of e-government services in MDAs & LGs attained	40.0	45.1	45	9.00	4.50	36.07	Achieved
	Total	110.886	**47.8**	**54**			**99.99**	*Very good performance*

Source: IFMS, Progress Reports and Field Findings

Annex 7: Performance of the ICT Infrastructure Sub-programme as at 31st December 2021

Intervention	Output	Financial Performance			Physical Performance			Remark
		Annual Budget (bn Ug shs)	% of budget received	% of budget spent	Annual Target	Cum. Achieved Quantity	Physical Performance Score (%)	
Extend broadband ICT infrastructure coverage countrywide in partnership with the private sector and implement last-mile connectivity to key areas (Districts, sub-counties,	Purchase of ICT equipment	4.624	16.5	100	10.00	3.00	12.73	Achieved
	Rationalized and Integrated national IT infrastructure and Systems	7.709	32.8	78	8.00	4.00	21.22	Achieved
Expand the Digital Terrestrial Television and Radio Broadcasting network	Transfer to other government units (UBC)	24.0	38.8	100	10.00	2.00	34.04	On track
	Total	36.334	**34.7**	**96**			**67.99**	*Fair performance*

Source: IFMS, Progress Reports and Field Findings