



INNOVATION, TECHNOLOGY DEVELOPMENT AND TRANSFER PROGRAMME

Annual Budget Monitoring Report

Financial Year 2024/25

September 2025

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



INNOVATION, TECHNOLOGY DEVELOPMENT AND TRANSFER PROGRAMME

Annual Budget Monitoring Report

Financial Year 2024/25

September 2025



TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS	iv
FOREWORD	v
EXECUTIVE SUMMARY	vi
CHAPTER 1: INTRODUCTION	1
1.1 Background	1
1.2 Programme Goal and Objectives	1
1.3 Sub-programmes	2
1.4 Programme Outcomes	2
CHAPTER 2: METHODOLOGY	3
2.1 Scope	3
2.2 Approach and Methods	3
2.3 Data Collection and Analysis	3
2.3.1 Data Collection	3
2.3.2 Data Analysis	4
2.4 Limitation	5
2.5 Structure of the Report	5
CHAPTER 3: PROGRAMME PERFORMANCE	6
3.1 Overall Performance	6
3.1.1 Financial Performance	6
3.1.2 Physical Performance	6
3.2 Industrial Value Chain Development Sub-programme	7
3.2.1 Design and implement special programmes for nanotechnology, space exploration, nuclear technology, biosciences, ICT, and engineering	7
3.2.2 Strengthen the function of technology acquisition, promotion as well as transfer and adoption	8
3.2.3 Increase investment in research and development in key priority sectors like agriculture, oil and gas, minerals, energy, health, and transport	28
3.3 STI Ecosystems Development Sub-programme	33
3.3.1 Support the establishment and operations of technology and business incubators and technology transfer centres	34



3.3.2 Increase investment in research and development in key priority sectors like agriculture, oil and gas, minerals, energy, health, and transport	35
3.3.3 Develop a framework for the promotion of multi -sectoral and multilateral collaborations.....	37
3.3.4 Design and conduct practical skills development programmes	38
3.3.5 Support academia and research institutions to acquire research and development infrastructure.....	38
3.4. NDP III outcome indicators performance for the Innovation, Technology Development and Transfer Programme	41
CHAPTER 4: CONCLUSION AND RECOMMENDATIONS.....	43
4.1 Conclusion.....	43
4.2 Recommendations	43
REFERENCES.....	45
Annex 1: List of interventions monitored during the first half of FY 2024/25	46
Annex 2: List of grantees funded by STI during the FY 2023/24 (implementation was in FY 2024/25)	47



ABBREVIATIONS AND ACRONYMS

BIRDC	Banana Industrial Research and Development Centre
BMAU	Budget Monitoring and Accountability Unit
Billion	Billion
COVAB	College of Veterinary Medicine, Animal Resources and Biosecurity
COVID-19	Coronavirus Disease
EDIC	Engineering Development and Innovation Centre
GMP	Good Manufacturing Practice
GoU	Government of Uganda
HPLC	High-Performance Liquid Chromatography
IFMS	Integrated Financial Management System
ISO	International Organisation for Standardization
ITDT	Innovation Technology Development and Transfer
KMC	Kiira Motors Corporation
MDAs	Ministries, Departments and Agencies
MoFPED	Ministry of Finance, Planning and Economic Development
MUST	Mbarara University of Science and Technology
NCRI	Natural Chemotherapeutics Research Institute
NDA	National Drug Authority
NDP	National Development Plan
NPA	National Planning Authority
NSTEIC	National Science, Technology Engineering, and Innovation Centre
NSTEI-SEP	National Science, Technology, Engineering, Innovation and Skills Enhancement Project
OP	Office of the President
PIAP	Programme Implementation Action Plan
PCR	Polymerase Chain Reaction
PRESIDE	Presidential Scientific Initiative on Epidemics
R&D	Research and Development
RNA	Ribonucleic Acid
SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus 2
TIBIC	Technology, Innovation and Business Incubation Centre
UIRI	Uganda Industrial Research Institute
UNBS	Uganda National Bureau of Standards
UNCST	Uganda National Council for Science and Technology
USD	United States Dollar



FOREWORD

The Government of Uganda outlined strategies, for FY 2024/25, to restore the economy back to the medium-term growth path with the ultimate vision of a self-sustaining, integrated economy. The strategies emphasized accelerating commercial agriculture, fostering industrialization, and expanding both service sectors and digital transformation. Key areas of focus included enhancing market access and leveraging technological advancements to drive economic growth.

The strategic interventions that were prioritized under various programmes included: roads under Integrated Transport and Infrastructure Services; electricity under the Sustainable Energy Development; irrigation under Agro-Industrialization; Industrial parks under Manufacturing; support to medical schools and science-based research and development under Human Capital Development; as well as oil and gas among others.

The Annual programme assessments have been made, and it was established that performance was fairly good. This implies that programmes are on track, but with a lot of improvements required. The challenges noted, are not insurmountable. These monitoring findings form a very important building block upon which programmes can re-strategize for FY 2025/26.

The government has embarked on the 10-fold growth strategy that demands for enhanced efficiency and effectiveness within programmes. We cannot afford to have fair performance scores hence forth, as this will jeopardize the prospects of doubling the economic growth rates in the medium term.

Partick Ocailap


For Permanent Secretary/ Secretary to the Treasury



EXECUTIVE SUMMARY

The Innovation, Technology Development, and Transfer (ITDT) Programme seeks to increase the application of appropriate technology to the production and service delivery processes. The programme activities were executed through the Science, Technology and Innovations (STI) Secretariat and the Uganda Industrial Research Institute (UIRI). There are three subventions under the programme, namely: the Banana Industrial Research and Development Centre (BIRDC), Kiira Motors Corporation (KMC), and Uganda National Council for Science and Technology (UNCST).

The programme comprises three sub-programmes, namely: Research and Development; Science, Technology and Innovation (STI) Ecosystem Development; and Industrial Value Chain Development. This report presents monitoring findings for the period 1st July 2024 to 30th June 2025.

Overall Programme Performance

The approved budget for the ITDT Programme was US\$ 346.95 billion, which was revised upwards to US\$ 407.361 billion. A total of US\$ 407.339 billion (99.9% of the revised budget) was released, and US\$ 406.152 billion (99.7% of the released funds) were spent by 30th June 2025. The performance under the release is attributed to a supplementary budget under the non-wage component for STI and URSB.

The overall performance of the ITDT Programme was fair, at 69%. The Industrial Value Chain Development Sub-programme had good performance, while the STI Ecosystems Development Sub-programme posted fair performance. The highlights of the achievements under the sub-programmes are as follows:

Industrial Value Chain Development Sub-programme

The sub-programme performance was good, at 75.9%. Five PhD and four master's degree scholarships were given in Space Science studies. One internationally certified ground station operator was trained, and seven engineers were undergoing satellite communication and ground station setup. Six aeronautic innovations were designed and were ready for minimum viable products development. The equipment for a space assembly, integration, and testing was procured, and one space weather-based early warning tool was developed and was undergoing testing and validation.

The pilot and efficacy studies for three vaccines (Subunit, Inactivated, and Adenovector) were undertaken. The review of vaccine clinical trial protocols for the 3 COVID-19 vaccine candidates remained at pre-clinical trials pending the establishment of mini-Good Manufacturing Practice (GMP) facilities for each. The multiplication of the humanised mice to support the challenge studies for the Subunit, Inactivated, and Adenovector vaccines, among others, was achieved, with over 500 mice stocked in the animal house.

The establishment of some of the GMP facilities was underway at Makerere University College of Veterinary Medicine (COVAB). Clearance was obtained from the National Drug Authority (NDA) to construct a pilot GMP plant for human herbal medicines by the Natural Chemotherapeutics Research Institute (NCRI) at Wandegaya. Documentation for remodelling the Biosecurity Laboratory Level 3 (BSL-3) for the recombinant vaccine pilot production platform into the GMP facility at COVAB was finalised, but civil works had not commenced due to procurement delays. It was observed that most of the supported studies depend on students and have no full-time staff, which compromises continuity; moreover, the grants experience intermittent funding.



The in vitro studies of natural therapeutics at the Uganda Virus Research Institute (UVRI) conducted safety and efficacy analysis on several natural products submitted. However, the intermittent funding and lack of reagents affected the handling of some of the products. A platform to support Clinical Trials for Natural Therapeutics (CONAT) at the Makerere University Lung Institute prepared protocols for several products and established a five-bed clinical trials ward at Mulago Hospital. Two products successfully went through the trials and were ready for commercialisation.

The remodelling of the biomarker GMP facility at COVAB was in progress, whereas the development of the Good Laboratory Practice (GLP) platform and office spaces at Busitema University College of Health Sciences, Mbale Campus was completed. The final designs of the Biosciences Park (Pathogen Economy Industrial Park) in Katuugo, Nakasongola District was initiated and the structural and architectural plans for one of the vaccines and therapeutics components of the park was at completion stage. The review of the Polymerase Chain Reaction (PCR) Diagnostics Plant designs by international collaborators was finalised and awaiting ground-breaking.

The selection of grantees for FY 2024/25 to support research and innovation was completed with a focus on the commercialisation of prototypes. A total of 55 proposals were selected and funds disbursed during the period under review; however, none were permitted to spend by the end of June 2025. It should be noted that most of the 67 grantees funded in FY 2023/24 were still under implementation. This was attributed to the late disbursement of funds, delayed issuance of permission to spend funds by the STI Secretariat, and procurement delays arising from the absence of Procurement and Disposal Units (PDUs), approvals from the Solicitor General, and inadequate contractor capacity for science research-related procurements. The grantees pointed out the slow harmonisation of the policies on intellectual property (IP) sharing rights between the innovators, host institutions, and the STI Secretariat as critical impediments.

In FY 2023/24, the Government of Uganda (GoU), through STI, extended funding worth US\$ 720 billion to Dei BioPharma to support the construction and equipment of five state-of-the-art structures for the production of the various categories of human drugs and vaccines. By July 2025, the construction and equipping of the units were in advanced stages. The generic oral solid manufacturing and GLP laboratory were 100% complete, the Nutraceutical Unit at 95%, the Syrup Unit at 95%, the Ointment Unit at 95%, and the mRNA and Inactivated Vaccine Development Unit at 85%. In addition, the company was constructing Penicillin, Cephalosporin, Hormone, Non-Beta-Lactam Antibiotics and Oncology Units. Six generic drugs were being produced and distributed to the Ugandan market during the period under review. The average overall progress on the five units was estimated at 80% pending installation, qualification, and validation of the facilities.

There was a deliberate action to increase investment to boost capacity in research and development under the sub-programme. The Banana Industrial Research and Development Centre (BIRDC) received the Q-mark for all “Tooke” brands and the institution was recommended for ISO 22000:2018 certification by June 2025. The procurement of equipment to upscale and automate the plant to speed up processing registered slow progress. One PhD and two master’s degrees were completed in Tooke-related research during the period under review.

The construction of one out of the five planned collection centres commenced in Shuuku Sub-County, Sheema District, and it was at the foundation excavation level. To manage the supply chain, transport equipment (a truck) to link the plant to farmers for the purpose of collecting raw materials from collecting centres was procured. The BIRDC/PIBID reportedly generated only US\$ 4 billion against a target of US\$ 12 billion during the financial year. The organisational governance structure is yet to be resolved in spite of the expiry and resignation of some of the former board members.



The civil works for the establishment of a tertiary coffee roasting and instant coffee processing facility and the installation of machinery for freeze drying and spray drying at the Africa Coffee Park in Rwashamire, Ntungamo was substantially completed during the year under review. The Factory Acceptance Testing (FAT) and training of local staff was ongoing. The company recruited 40 interns from universities and other tertiary institutions to work with expatriate technicians and engineers as part of the capacity improvement mechanisms and self-reliance.

Several batches of roasted coffee were produced for product validation and the generation of information for certification of both product and plant by the Uganda National Bureau of Standards (UNBS). The plant was, however, experiencing power and water shortages, hindering it from conducting full-scale production, and this especially affected the freeze dryer that required consistent and dedicated high-voltage power for a single production cycle of 18 hours. The digitisation of farmers was ongoing, with a total of 4,122 farmers captured for ease of traceability of raw materials. The company initiated full-scale branding and marketing of coffee in Uganda and the East African Region.

STI Ecosystem Development Sub-programme

The phase one and two constructions, tooling and furnishing of the Kiira Motors Corporation (KMC) Vehicle Plant start-up facilities with a capacity of 2,500 vehicles annually was completed. The corporation completed the production of five out of the planned 10 buses, of which three were of the Kayoola EVS 12 series, designed for mass urban transport. The remaining five buses were expected to be completed by the end of August 2025. The National E-Mobility Strategy was developed and published, and an e-public transport system was piloted in Jinja City with seven buses using a cashless payment system.

The KMC workforce grew from 165 in July 2024 to 269 in June 2025, representing a strategic investment in human capital to support the operations. A total of 336 e-bus operators and three e-bus technicians were trained under the E-Bus Operator Skilling Programme. Under market system development, the corporation secured a pilot opportunity to supply two electric buses to the Dar es Salaam Bus Rapid Transit system, opening avenues for the corporation in East Africa.

According to the National e-Mobility Outlook Report 2024, Uganda's annual electric vehicle production capacity soared to 10,000 units between July 2024 and June 2025, with an impressive local content of up to 40%. This includes electric buses by Kiira Motors Corporation, electric motorcycles by GOGO Electric, Zembo, and Spiro, and electric bicycles by Karaa Africa, eBee, Harakka and Africrooze. The key e-mobility players generated over USD 5 million in revenues in 2024, and have collectively helped avoid over 270,000 metric tonnes (MT) of CO₂ equivalent emissions from 2022 to 2024.

During the financial year, the National Science, Technology, Engineering, Innovation and Skills Enhancement Project (NSTEI-SEP) was transformed from a project phase to the Engineering Development and Innovation Centre (EDIC) subvention under STI. However, EDIC was not fully operational due to lack of funding to recruit the requisite staff. The civil works and machine installation for the NSTEI-SEP was completed for the two centres in Rwebitete and Namanve, and the first group of 120 students from six universities were training in engineering courses. The UNCST was working with the Ministry of Public Service (MoPS) on an appropriate structure to deliver deep tech as a sustainable investment. The 25 engineers who trained in China were



deployed to support the internship and skilling training during the months of June, July and August 2025.

The final draft of the National STI Strategy was completed and the development of the National STI Information Management System database was ongoing. The draft STI Policy, however, was yet to be approved, and the strategy for national STI outreach and advancement had not yet been completed.

Research and Development

The Uganda Industrial Research Institute (UIRI) continued with optimising research and skilling. The UIRI developed environmentally friendly technologies, such as a solar drier for post-harvest handling, and provided training to communities in the use of renewable energy sources, such as briquettes and biogas. Additionally, a concept was developed for producing medical textiles from locally available materials, specifically sanitary towels from locally available fibres. Virtue and in-house incubation were also supported in dairy, textiles, bakery, and cosmetics. UIRI also supported value addition and in-house incubation initiatives in various sectors, including dairy, textiles, bakery, and cosmetics.

In addition, UIRI continued to conduct repairs on the bakery and fruit sections at the Nakawa Incubation Centre and the renovation of the peanut butter processing plant in Lira. Twenty-two new businesses joined the UIRI incubation programme, receiving tailored technical support, thus expanding the incubation footprint.

The pilot development of diagnostic kits for cassava mosaic, potato disease, coffee wilt disease and banana bacterial wilt at Gulu University was completed. However, the commercialisation of the products was pending approval from the STI Secretariat. The project on lithium battery development using locally sourced raw materials at Busitema University stalled due to limited access to mines and procurement delays.

Conclusion

In FY 2024/25, the Innovation, Technology Development, and Transfer (ITDT) Programme made significant progress in strengthening Uganda's science, technology, and innovation ecosystem. Notable achievements included advancements in vaccine research, trials for natural therapeutics, and infrastructure development in the pharmaceutical and electric mobility sectors. Initiatives such as Kiira Motors Corporation and Dei BioPharma achieved tangible milestones in local manufacturing, capacity building, and technology transfer.

However, the programme's overall performance was hindered by systemic challenges, including delayed and intermittent funding, procurement bottlenecks, inadequate staffing, infrastructure constraints – particularly related to power and water – and slow harmonisation of intellectual property policies. Many promising projects remained at the pre-commercialisation stage due to approval delays and weak support systems. Additionally, the inclusion of too many grantees, despite limited resources, led to tokenistic support, making it difficult to meet project targets.

Delays in recruiting staff for the EDIC further impeded progress, while the slow finalisation of operational documents for several interventions affected both non-tax revenue (NTR) generation and commercialisation efforts.



Recommendations

1. The STI Secretariat should enhance timely and predictable funding: Streamline fund disbursement processes to avoid delays that disrupt research and implementation timelines, including the establishment of well-functioning Procurement and Disposal Units (PDUs) within STI institutions.
2. The STI Secretariat should accelerate infrastructure completion and utility provision: Prioritise the completion and operationalisation of GMP, GLP, and other critical research infrastructure. Ensure reliable access to essential utilities like power and water, particularly in high-demand facilities such as the Africa Coffee Park and Dei Bio Pharma.
3. The STI Secretariat should fast-track policy and legal frameworks: Expedite approval of the draft STI Policy, IP sharing agreements, and the STI outreach strategy to create a more enabling environment for innovation commercialisation.
4. The STI Secretariat should support commercialisation of research outputs: Facilitate fast-tracked approval and market entry of innovations that have successfully completed trials, especially in the areas of natural therapeutics, diagnostics kits, and agro-industrial products. The innovators should team with financial analysts, economic analysts and business analysts for ease of cost analysis.
5. The STI Secretariat should encourage better coordination between research institutions, implementing agencies, and the private sector to avoid duplication, improve efficiency, and foster market-driven innovations.
6. The STI Secretariat should invest in outreach and awareness creation to increase public engagement and awareness about STI initiatives to build national buy-in, stimulate youth interest in STEM, and attract private sector investment.



CHAPTER 1: INTRODUCTION

1.1 Background

The mission of the Ministry of Finance, Planning and Economic Development (MoFPED) is: “To formulate sound economic policies, maximise revenue mobilisation, and ensure efficient allocation and accountability for public resources to achieve the most rapid and sustainable economic growth and development”.

MoFPED, through the 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. BMAU work is aligned with budget execution, accountability, and service delivery.

Commencing in FY 2021/22, BMAU began undertaking Programme-Based Monitoring to assess performance against targets and outcomes in the Programme Implementation Action Plans (PIAPs) and Ministerial Policy Statements (MPSs). The semi-annual and annual field monitoring of Government programmes and projects was undertaken to verify the 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-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; Private Sector Development; Sustainable Development of Petroleum Resources; and Sustainable Energy Development.

This report presents findings from monitoring the Innovation, Technology Development and Transfer (ITDT) Programme for the period 1st July 2024 to 30th June 2025.

1.2 Programme Goal and Objectives

The ITDT Programme contributes to objective four of the NDP III, i.e., to enhance the productivity and social well-being of the population. The goal of the ITDT Programme is to increase the application of appropriate technology to the production and service delivery processes through the development of a well-coordinated STI ecosystem.

The objectives of the programme are:

- i. To develop requisite STI infrastructure.
- ii. To build human resource capacity in STI.
- iii. To strengthen research and development (R&D) capacities and applications.
- iv. To increase the development, transfer and adoption of appropriate technologies and innovations.
- v. To improve the legal and regulatory framework.



1.3 Sub-programmes

The ITDT Programme is implemented through the following sub-programmes:

- i. Research and Development (R&D).
- ii. Industrial Value Chains Development.
- iii. STI Ecosystem Development.

1.4 Programme Outcomes

The Third National Development Plan (NDP III) ITDT Programme outcomes are:

- i. Increased innovation in all sectors of the economy.
- ii. Enhanced development of appropriate technologies.
- iii. Increased R&D activities in the economy.
- iv. Increased utilisation of appropriate technologies.
- v. An enabling environment for Science, Technology, Engineering, and Innovation created.

The key targets to be achieved by this programme over the NDP III period include:

- i. Increase the Global Innovation Index from 25.3 to 35.0.
- ii. Increase gross expenditure on R&D as a percentage of Gross Domestic Product (GDP) (GERD) from 0.4 percent to 1 percent.
- iii. Increase business enterprise sector spending on R&D (percent of GDP) from 0.01 percent to 0.21 percent.
- iv. Increase the number of intellectual property rights registered per year from 2 to 50.



CHAPTER 2: METHODOLOGY

2.1 Scope

This monitoring report is based on selected interventions in the ITDT Programme during FY 2024/25. Implementation of the programme is spearheaded by Vote 167: Science, Technology and Innovations (STI), and Vote 110: Uganda Industrial Research Institute (UIRI). The funded subventions under STI include: The Uganda National Council for Science and Technology (UNCST), Kiira Motors Corporation (KMC), and the Banana Industrial Research and Development Centre (BIRDC) Presidential Initiative on Banana Industrial Development (PIBID).

The annual monitoring for FY 2024/25 focused on two votes, i.e., STI and UIRI, as well as three subventions, i.e., KMC, UNCST, and BIRDC.

The monitoring involved analysis and tracking of inputs, activities, processes, outputs and, in some instances, intermediate outcomes as identified in the Programme Implementation Action Plans (PIAPs), MPSs, and quarterly work plans, and progress and performance reports of Ministries, Departments, and Agencies (MDAs).

A total of seven interventions out of 23 under the PIAP were monitored, as indicated in Annex 1. The selection of the interventions to monitor was based on the following criteria:

- i. Their significant contribution to the programme objectives and alignment with national priorities.
- ii. The level of investment, with priority given to interventions that had a substantial allocation of funds.
- iii. Planned outputs whose implementation commenced in the year of review, whether directly financed or not. In some instances, multi-year investments or rolled-over projects were prioritised.
- iv. Interventions that had clearly articulated gender and equity commitments in the policy documents.

2.2 Approach and Methods

Both qualitative and quantitative methods were used in the monitoring exercise. The physical performance of interventions, planned outputs, and intermediate outcomes were assessed by monitoring a range of indicators. The progress reported was linked to the reported expenditure and physical performance.

A combination of random and purposive sampling was used in selecting interventions and outputs from the PIAPs, MPSs, and progress reports of the respective agencies for monitoring. To aid in mapping PIAP interventions against annual planned targets stated in the programme MPSs and quarterly work plans, multi-stage sampling was undertaken at three levels: i) sub-programmes; ii) sub-sub-programmes; and iii) project beneficiaries. Regional representation was considered in the selection of monitored beneficiaries and outputs.

2.3 Data Collection and Analysis

2.3.1 Data Collection

The monitoring team employed both primary and secondary data collection methods. Secondary data collection methods included:

- i) Literature review of key policy documents, including MPSs for FY 2024/25; National and Programme Budget Framework Papers; A Handbook for Implementation of NDP III Gender and Equity Commitments; PIAPs; NDP III; quarterly progress reports and work plans for the respective implementing agencies; quarterly performance reports; the Budget Speech; Public Investment Plans; and approved estimates of revenue and expenditure.
- ii) Review and analysis of data from the Integrated Financial Management System (IFMS) and Programme Budgeting System (PBS) quarterly performance reports.

Primary data collection methods, on the other hand, included:

- i) Consultations and key informant interviews with institutional heads and project/intervention managers.
- ii) Field visits to various institutions for primary data collection, observation, and photography.
- iii) Callbacks in some cases, which were made to triangulate information.

2.3.2 Data Analysis

The data was analysed using both qualitative and quantitative approaches. 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 analysed using advanced Excel tools that aided interpretation.

Comparative analyses were done using percentages, averages, and cross-tabulations of the outputs/interventions. The performance of outputs/interventions and intermediate outcome indicators was rated in percentages according to the level of achievement against the annual targets. The assessment of grants under STI funding was based on the achievement of annual output targets (numbers) and the level of annual budget disbursements. The sub-programme score was determined as the weighted aggregate of the average percentage ratings for the output/intermediate outcomes in the ratio of 65%: 35%, respectively.

The overall programme performance is an average of individual sub-programme scores assessed based on outputs monitored. The performance of the programme and sub-programme was rated based on the criteria set out in Table 2.1. Based on the rating assigned, a BMAU colour-coded system was used to alert policymakers and implementers to whether the interventions were achieved or had very good performance (green), good performance (yellow), fair performance (light gold), or poor performance (red).

Table 2.1: Assessment guide to measure performance in FY 2024/25

Score	Performance Rating	Comment
90% and above	Green	Very Good (Achieved at least 90% of outputs and outcomes)
70% – 89%	Yellow	Good (Achieved at least 70% of outputs and outcomes)
50% – 69%	Light Gold	Fair (Achieved at least 50% of outputs and outcomes)
49% and below	Red	Poor (Achieved below 50% of outputs and outcomes)

Source: Author's Compilation

Ethical Considerations

Introduction letters from the Permanent Secretary/Secretary to the Treasury were issued to the respective MDAs, and beneficiaries were monitored. Entry meetings were conducted with Accounting Officers or delegated officers upon commencement of the monitoring exercise.



Consent was sought from respondents, including programme or project beneficiaries. All information obtained during the budget monitoring exercise was treated with strict confidentiality.

2.4 Limitation

- Lack of reliable and real-time financial data on subventions on the IFMS.
- Misaligned PIAP interventions that do not relate to outputs and sub-programmes in the work plan, which affects performance assessment.

2.5 Structure of the Report

The report is structured into four chapters. These are: Introduction; Methodology; Programme Performance; and Conclusion and Recommendations.

CHAPTER 3: PROGRAMME PERFORMANCE

3.1 Overall Performance

3.1.1 Financial Performance

The approved budget for the ITDT Programme was US\$ 346.95 billion, which was revised upwards to US\$ 407.361 billion. A total of US\$ 407.339 billion (99.9% of the revised budget) was released, and US\$ 406.152¹ billion (99.7% of the released funds) were spent by 30th June 2025 (Table 3.1). The over-performance under the release was attributed to a supplementary budget under the non-wage component for STI and URSB.

The STI Secretariat had the biggest share of the annual budget, at 92.8%, followed by UIRI at 6.4%, while the support to the Uganda Embassy in Moscow and the Ministry of Foreign Affairs (MoFA) had the least budget share, at 0.03% and 0.1%, respectively. The detailed financial performance of the Votes under the programme is presented in Table 3.1.

Table 3.1: Financial performance for the ITDT Programme as at 30th June 2025 (billion US\$)

Vote	Approved Budget	Revised Budget	Released	Spent	%age Budget Released	%age Releases Spent
Science, Technology and Innovation	321.998	381.998	381.998	380.902	118.6	99.7
Uganda Industrial Research Institute	22.367	22.367	22.345	22.328	99	99.9
Uganda Registration Services Bureau	2.096	2.571	2.571	2.498	122.7	97.2
Ministry of Foreign Affairs	0.366	0.366	0.366	0.366	100	100
Uganda Embassy in Russia, Moscow	0.119	0.059	0.059	0.058	50	98.6
Programme Total	346.946	407.361	407.339	406.152	117.4	99.7

Source: Quarter Two PBS Report FY 2024/25

3.1.2 Physical Performance

The overall performance of the ITDT Programme was fair, at 69%. The Industrial Value Chain Development Sub-programme had a good performance, while the STI Ecosystems Development Sub-programme posted fair performance (Table 3.2).

The key infrastructure development outputs, including the National Science, Technology, Engineering, Innovation, and Skills Enhancement Centre (NSTEIC), the Technology and Industrial Business Incubation Centre (TIBIC), the National Products Research and Innovation Centre (NAPRIC) in Mbale, and Kiira Vehicle Plant, were completed and were under defects liability. The construction of the Good Manufacturing Practice (GMP) facility at the Natural Therapeutics Centre in Wandegaya commenced, while the construction of the pathogen park in Nakasongola was commissioned.

The progress of the vaccine studies had slowed down due to the absence of GMP facilities to facilitate the undertaking of the final preclinical trials. The commercialising of the “Tooke” plant registered slow progress, attributed to the lengthy procurement of the required equipment,

¹ This expenditure is inclusive of the funds that were transferred to grantees towards the end of FY 2024/25 but had not yet been spent.



especially the drum drier. However, the research laboratories received additional equipment and were ready for use, save for the inadequate human resource to operate the laboratories.

Table 3.2: ITDT Programme output performance by 30th June 2025

Sub-programme	Physical Performance (%)	Remarks
Industrial Value Chains Development	75.9	Good performance
STI Ecosystems Development	62	Fair performance
Overall Programme Performance	69	Fair performance

Source: Field Findings

Detailed performance of the monitored sub-programmes and interventions is given hereafter:

3.2 Industrial Value Chain Development Sub-programme

The sub-programme aimed to increase development, transfer, and adoption of appropriate technologies and innovations; and development of requisite STI infrastructure. It comprised three interventions, all of which were monitored. The sub-programme achieved good performance with a score of 75.9%. Table 3.3 provides the summary performance of the sub-programme interventions as at 30th June 2025.

Table 3.3: Performance of interventions under the Industrial Value Chain Development Sub-programme by 30th June 2025

No	Intervention	Colour code	Remark
1	Design and implement special programmes for nanotechnology, space exploration, nuclear technology, biosciences, ICT and engineering	77.7	Good performance
2	Strengthen the function of technology acquisition, promotion as well as transfer and adoption	63.6	Fair performance
3	Increase investment in research and development (R&D) in key priority sectors like agriculture, oil and gas, minerals, energy, health, transport	93.2	Good performance

Source: Field Findings

3.2.1 Design and implement special programmes for nanotechnology, space exploration, nuclear technology, biosciences, ICT, and engineering

The intervention aims at building institutional and human resource capacity in STI. The planned output during the FY 2024/25 was technology and innovation. The plan was to train five engineers in aeronautics and space science, operationalise the earth station for satellite communication, set-up an aerospace electronic laboratory (phase one) at Mpoma, install network infrastructure at Mpoma, and create the Space Policy and Strategy.

The overall intervention performance was good, at 77.7%. By 30th June 2025, five PhD and four master's degree scholarships were given in Space Science studies. One internationally certified ground station operator was trained, and seven engineers were undergoing satellite communication and ground station setup. A total of 10 university experimental satellite missions were assessed, adopted, and trademarked, and six aeronautic innovations were designed and were ready for minimum viable products development at the Engineering, Development and Innovation Centre (EDIC) Rwebitete, Kiruhura District.

To operationalise the earth station for satellite communication, an advanced ground station antenna was delivered and was ready for installation. To set-up the aerospace electronic laboratory (phase one) at Mpoma, equipment for a space assembly, integration, and testing



were procured, and one space weather-based early warning tool was developed, and it was undergoing testing and validation. The installation of the network infrastructure equipment for the Northern Corridor Integration Project (NCIP) was scheduled for commencement.

The regional communication and broadcasting satellite project roadmap was completed and presented to the member states of Uganda, Kenya, Rwanda, and South Sudan. This project was implemented in collaboration with the Ministry of Information and Communications Technology and National Guidance (MoICT&NG) and the Uganda Communications Commission (UCC). The draft National Space Act was finalised and ready for approval, with validation processes scheduled for August 2025.

3.2.2 Strengthen the function of technology acquisition, promotion as well as transfer and adoption

The intervention aims at increasing the development, transfer, and adoption of appropriate technologies and innovations. The planned outputs during FY 2024/25 were technology and innovation, research and development, and infrastructure development and management (NSTEIC) undertaken. The intervention performance was fair, at 63.6%. A detailed performance of the planned outputs is presented below:

Technology and innovation: This was implemented under import substitution, Industry 4.0+, infrastructure innovations, and productivity acceleration departments. The plan was, among others, to market shea butter products from domestic producers; purchase and process 1,200,000 kg of fresh matooke into different products; design, produce, and assemble precision tools, components, and industrial systems; develop locally produced raw materials for precision tooling and machining; construct prefabricated low-cost houses; conduct research and development of new coffee products; and complete a tertiary coffee processing hub in Ntungamo. Detailed performance is presented hereunder.

By 30th June 2025, value-added shea butter cosmetic and skincare products were developed by various women-led small-scale enterprises, which included MOHCA Beauty and Skincare Ltd, producing the Sheacare brand, The Shea House, Pelere Group Ltd, and Raw & Organic Investments. A grant was given to The Shea House and Pelere to advance the development of value-added shea butter beauty and cosmetic products for market expansion. The STI Draft Strategy was developed, while the first version of the online exchange centre was being validated.

Kawumu leather tannery: Under the support to the leather tannery function, the leather from the Kawumu leather tannery was used by small-scale leather products manufacturers, such as Jora Shoes, Amagara Leather, and Step Leatherworks, who are producing items like shoes, belts, and bags sold in the local market. Additionally, stakeholders drawn from 11 stakeholder categories were engaged in leather and textile value chain analysis, and identified multiple product pathways for the leather and textile value chains. In addition, the gelatin and collagen produced from cow hides were identified as product pathways that are inputs in the medical and cosmetic value chains, which have high economic potential.

Silicon wafer manufacturing in Uganda: The project was funded through an STI grant, with the objective of conducting a feasibility and viability assessment of converting Uganda's silica sand into wafers, potentially positioning Uganda to tap into the global wafer industry valued at USD 20 billion. The project objectives were: 1) Lab characterisation of Uganda's silica sand; 2) A techno-feasibility study on the sand-to-wafers value chain in Uganda; and 3) An industrial process design for the pilot plant. The project budget was US\$ 0.500 billion, all of which was released to the grantee.

By 30th June 2025, sand samples were collected from 16 sites in different regions in Uganda. The samples were characterised in a lab in Germany and analysed. The results revealed that the silica sand mined from Uganda is of a high grade and quality, with a silica content above 99%, ideal for wafer manufacturing. Analysis was done, and the following reports were completed: market analysis; technical analysis; financial analysis; and regulatory and legal analysis reports. The qualitative and quantitative analysis of the quartz for silicon wafer manufacturing in Uganda was undertaken, and a silicon wafers stakeholder engagement was undertaken to present progress made in building the business case and exploring potential collaborations. The industrial process design for the pilot plant had not commenced.

Under the infrastructure innovations component, the plan was to design, produce, and assemble precision tools, components, and industrial systems, develop locally raw-produced materials for precision tooling and machining, and construct prefabricated low-cost houses. By 30th June 2025, tools and parts were being manufactured, including machine parts, spare parts, and dies, among others. However, the development of locally produced raw materials for precision

tooling and machining was not undertaken because the output required the construction of a forge and foundry, which were planned for FY 2025/26. In addition, the construction of the prefabricated low-cost houses was not undertaken because the Rwebitete Engineering Design and Development Centre (EDIC) was completed late in the financial year.



Some of the equipment in the mechanical workshop at EDIC in Rwebitete, Kiruhura District

Inspire Africa Coffee factory, Ntungamo: To achieve productivity acceleration, the plan was to conduct research and development of new coffee products, complete the tertiary coffee processing hub in Ntungamo, support coffee export enterprises to access global markets, and undertake preliminary designs and studies to inform the construction of the bioscience park, together with land clearance for its development.

By 30th June 2025, eight new coffee products were developed for specialty profiles to meet the Serbian and Saudi Arabia markets, and two new products were added for the Russian and USA markets. The phase one completion of the tertiary coffee processing hub in Ntungamo was estimated at 90%. The freeze-dry and the roastery (with a capacity of 300 kg per batch) were completed. Test production was done, and the coffee products were supplied during the Mustard Seed Events in the last week of May 2025. The administration block was also completed. The ongoing components progressed as follows: cold brew at 95%; spray dry at 90%; stores and silos at 70%; marketing facilities at 60%; research and development facility at 20%; roads at 90% and power stabilisation at 80%.



L-R: A substantially complete 100 MT warehouse and a ready-to-drink coffee production line at Inspire Africa coffee factory at Rwashamire, Ntungamo District

To support coffee export enterprises in accessing global markets, two consignments of roasted coffee were exported to Saudi Arabia and Serbia. Extensive market linkages and surveys for Russia and the USA were ongoing at approximately 50% progress, with data collection ongoing. Two coffee shops were established in Riyadh, Saudi Arabia, for roasted Uganda coffee bean distribution. A holding facility for Uganda-roasted coffee was also secured in Saudi Arabia and Serbia. A total of 25.5 tonnes of roasted coffee was exported in FY 2024/25, with 15 tonnes to Serbia, 7 tonnes to Saudi Arabia, and 3.5 tonnes to the Netherlands. Market creation events, including a coffee marathon and a coffee concert, were conducted for the Africa Coffee Park in Ntungamo.



L-R: An instant coffee packaging machine. A 240 kg coffee roaster installed at Inspire Africa Coffee factory at Rwashamire, Ntungamo district



Research and development: The plan was to support researchers to undertake innovations in various fields. The targets were: complete clinical trials for three selected vaccines, prepare plans for the construction of the pathogen economy industrial park, and provide grants to innovators, among others.

The second clinical trials were not completed for the three vaccines as planned due to the absence of a Good Manufacturing Practice (GMP) facility in the country. However, the remodelling of Biosecurity Laboratory Level 3 (BSL-3) into a pilot GMP was ongoing, in preparation for the manufacture of seed stock for phase one clinical trials of the subunit vaccine. In addition, suitable sites were identified at the College of Veterinary Medicine, Animal Resources and Biosecurity (COVAB), Makerere, for the establishment of Adeno Vector and Inactivated GMP vaccine technology platforms for the production of phase one seed stock. Draft protocols for the clinical trial of 3 COVID-19 candidate vaccines were also developed, and the humanised mice colonies were multiplied to support the vaccine challenge studies.

Under the provision of grants to innovators, a total of 67 grantees were supported in FY 2023/24 to undertake research and innovation in various fields. The project objectives for the various projects for the grantees are given in Annex 2. Whereas funds were released to the grantees, spending permissions were significantly delayed – in some cases, taking up to six months from the time the funds were received.

It was noted that these were innovators whose funding was in the budget for FY 2022/23. However, the funds were disbursed in FY 2023/24, and execution spilt into FY 2024/25. The selection of 55 grantees for FY 2024/25 was completed, and the award letters were given to the successful grantees. It was observed that some grantees under the FY2024/25 funding had received funds but were in the initial stages of implementation due to the late disbursement. All of the grantees who received funds in FY 2024/25 had not been issued permission to spend, while others were yet to receive the funds.

During the period under review, a total of 22 ongoing grants, mainly from the FY2022/23 funding, were reviewed to ascertain progress, and the findings are discussed below:

1. Construction of the Bioscience Park

The STI embarked on establishing a Biosciences Park, as the nation's one-stop centre for research and development (R&D), pilot industrial manufacturing for vaccines, diagnostics, therapeutics, and other inputs targeting human, animal, and plant health. Subsequently, 50 acres of land were provided by the National Enterprise Corporation (NEC) in Nakasongola, and the STI commenced the development of the land. The ground-breaking for the Pathogen Economy Biosciences Park was completed in April 2025. Site clearance and layout for the temporary structures (dormitories, kitchens, and sanitation amenities) as well as the Polymerase Chain Reaction (PCR) facility were completed. Subsequently, civil works for the PCR facility construction commenced, with NEC Works Limited as the contractor.

2. Adeno-vector vaccine: Preclinical immunogenicity assessment and GMP process transfer

The project aimed at developing a SARS-CoV-2 vaccine using an adenovirus vector and viral spike (S-glycoprotein) from Ugandan viral strains. The key objectives are to: 1) Complete immunogenicity studies in humanised mice; and 2) Produce bulk stock for clinical trials under cGMP (current Good Manufacturing Practice) conditions. The project planned outputs included: A Ugandan Non-Human Primate (NHP) adenovirus vector developed, an adeno-vector COVID-19 vaccine developed, and a technical capacity for vaccine production built.



The project budget during FY 2023/24 was US\$ 1 billion, which was all disbursed to the implementer by 30th October 2023 and all spent by 30th June 2025. An additional grant of US\$ 0.70 billion was provided to the follow-up project (Advancing the Novel Adeno-vector COVID-19 Vaccine into Good Manufacturing Practice and Phase 1 Clinical Testing) towards the end of FY 2024/25 to finalise the clinical trials and assessment of the adeno-vector vaccine; however, these funds were not spent due to delayed release and granting of permission to spend, and the absence of a GMP facility in Uganda. This will spill over into FY 2025/26.

During the monitoring, the following cumulative progress was registered under the project: genotypic characterisation of 73 faecal samples collected from chimpanzees was completed; an adeno-vector backbone was generated; three vaccine candidates (A23.1, Delta and Omicron) were generated from deleted adeno-vectors; bulk laboratory stock of both the vaccine and vector were generated; and capacity building of project staff in areas of bioinformatics, next generation sequencing and cytometry flow panels was done. Additionally, a PhD student was recruited with a focus on developing the capacity for multivalent vaccines. Three PhD students were also enrolled in various capacity-building programmes and were at different stages of completion.

The pilot study to evaluate the safety and immunogenicity of the vaccines was completed successfully. Most of the products tested did not have any negative effects on the function of the organs (liver, kidney, heart, brain, spleen, and skeletal muscle) of the mice. The efficacy studies (to assess whether the antibodies neutralise the virus) were also completed.

A request for patent rights for the indigenous vaccine backbone was submitted to the African Regional Intellectual Property Organisation (ARIPO) and was in the final stages of clearance. The project was affected by delayed approval to spend the funds, inadequate resources to pay the project staff, and the absence of a GMP facility.

3. Development and evaluation of recombinant subunit SARS-CoV-2 spike protein-based subunit vaccines

This project developed a candidate COVID-19 vaccine using recombinant vaccine technology. The objectives were to: 1) Produce a vaccine under the good manufacturing practices to enable testing in human beings (volunteers); 2) Complete the efficacy studies in the humanised mice to ensure safety and efficacy; 3) Develop a phase 1 clinical trial protocol for evaluation of the vaccine for safety and tolerability in human volunteers; and 4) Establish a cGMP for pilot production of the subunit vaccine.

The budget for FY 2023/24 was US\$ 1.5 billion, all of which was disbursed, and US\$ 1.15 billion spent by 30th June 2025. The remaining US\$ 0.248 billion was committed to the procurement of French press and antigen purification equipment.

During the first phase of funding, the Delta and Omicron spike antigen was successfully cloned and expressed, and the safety and immunogenicity studies were completed. The conversion to the BSL-3 progressed to 30%, with the facility plans and bills of quantities (BOQs) generated following the support of GMP experts from Cuba. Additionally, the manufacturing methods were optimised and a patent was applied for. The funds for the GMP were also released, and implementation

Sample vaccines were produced for clinical trials, and the preliminary processes were being undertaken to have the vaccine approved by all the required agencies. The phase one clinical trial protocols were developed, and the procurement of equipment such as the HVAC-HEPA filters, biosafety cabinets, and bioreactor for protein expression to carry out the clinical trial was ongoing. The manufacturing methods were also optimised, the vaccine was characterised

to 80%, and the application for the patent was submitted. Additionally, efficiency studies in humanised mice were undertaken.



Some of the equipment in the laboratory at the College of Veterinary Medicine, Animal Resources and Biosecurity, Makerere University

The project was behind schedule due to the delayed approval to spend the funds by the STI Secretariat and the change of facility from a cGMP to a BSL-3 lab for the production of the vaccine, following the production partner's (M/s Alfasan) lack of some equipment to manufacture human vaccines.

4. Preclinical studies and GMP production for inactivated vaccine

This is one of the pioneer human vaccine projects utilising inactivated vaccine technology. The project has two objectives: 1) Completing the animal trials-preclinical immunogenicity assessment; and 2) Production of bulk stock for clinical trials in a cGMP facility.

The project budget was US\$ 1 billion, all of which was released and over 90% expended by 30th June 2025. The project was granted an additional US\$ 0.5 billion towards the end of FY 2024/25 to finalise the clinical trials; however, this did not happen due to delayed release of the funds, delayed granting of permission to spend by the STI, and absence of a GMP facility.

Inactivation and purification, and the pilot animal trials in Swiss mice were completed. The results from the initial trials indicated no significant safety concerns or adverse effects. Analysis of the data and pilot optimisation of the collection of the cellular specimen before conducting the full preclinical trials on humanised mice for safety and immunogenicity were completed. The absence of a GMP facility for pilot bulk production of seed stock and GMP stock was a hindrance to the progress of the project.

Under the capacity-building output, three team members completed their master's degrees in different areas related to the project, three were in their final year, while two had enrolled for

master's degrees. The capacity building was intended to bridge the gap in the insufficiently immunology-skilled workforce.

The project was delayed by the lack of GMP facilities in Uganda for the production of GMP-certified products for use in human clinical trials, a discontinuous funding structure, limited access to high-containment laboratories (BSL-3) in Uganda, and an insufficient immunology-skilled workforce.

5. Preclinical evaluation and standardisation of antidiabetic herbal prototypes – GLUCOTAK Project

This project builds on earlier preliminary research that aimed at developing a natural anti-diabetic therapeutic through the reformulation of an existing product. The key project objectives were to: 1) Evaluate the anti-hyperglycaemic and antidiabetic potential of the formulated prototypes using animal models; 2) Assess the toxicity profiles of the most efficacious formulated antidiabetic prototype in cell lines and animal models; 3) Analyse the phytochemical composition and contaminants of the most efficacious formulated prototype; 4) Assess and optimise the pharmaceutical properties of the of the most efficacious formulated antidiabetic prototype; and 5) Establish a Good Laboratory Practice (GLP) facility to support preclinical evaluation of natural therapeutics in Uganda.

The budget for the project was US\$ 1.3 billion, all of which was disbursed to the grantee, and 99.99% was spent by 30th June 2025. The project has two components, which are research and infrastructure development.



The research component progressed to 99%. Samples were collected, and a permutation of the five plants (*Tamarindus indica*, *Aloe vera*, *Erythrina abyssinica*, *Kigelia Africana*, and *Entada abyssinica*) that were identified at the prototype stage was undertaken. This was to enable optimisation of a few without losing the purpose and content. Four prototypes were formulated, and one was prioritised because of its good physicochemical and organoleptic properties.

A benchmarking visit to China was undertaken, and the formulation of 100 doses of the chosen prototype-GTK04 and the preclinical safety and efficacy studies were completed. The validation of efficacy, toxicity, and analysis of the phytochemical composition and contaminants of prototypes was completed. The pharmaceutical analysis and branding were completed, and the product was submitted to CONAT for clinical trials.

The infrastructure component (construction of a GLP) also progressed to 100%, with an additional two floors completed. The facility was occupied, although it was not fully equipped because the funding scope did not include equipping the centre. The lack of clarity in IP sharing between the STI, the host institution, and the innovators was also still of concern to parties and derailed the submission of an IP application. The delayed approval to spend affected the timely



implementation. There is a need for the STI Secretariat to harmonise IP rights sharing between the researcher/grantee, host institution, and the funder.

6. Formulation and preclinical evaluation of herbal toothpaste/mouthwash for management of oral diseases

This project was a joint venture between Busitema University and CDH Herbal Solution Limited. The focus was on the development of herbal toothpaste for complete dental healing. The project objectives were to: 1) Formulate a herbal toothpaste/mouthwash from extracts of selected plants for the management of oral disease; 2) Evaluate the organoleptic and physical properties of the formulated herbal toothpaste/mouthwash as per specified standards; 3) Evaluate the antimicrobial activity of the formulated herbal remedy against selected oral pathogens, *Streptococcus mutans* and *Staphylococcus aureus*; and 4) Produce and undertake field testing of one batch of the fully tested herbal remedy.

The project budget was US\$ 500 million, all of which was released and US\$ 419 million spent. The product formulation was at 99%, with one prototype and 20 doses developed. Preclinical studies were conducted on the extracts, where phytochemical and microbial analysis was at 99%. Studies on organoleptic and physical properties were also undertaken.

Antimicrobial and susceptibility tests progressed to 100%, while one IP asset was identified and filed. The data analysis and the drafting of one manuscript progressed to 30%. Capacity building was ongoing, with one intern recruited and eight team members undergoing continuous professional development.

The timely completion of the project was affected by delays in spending approval, as well as a shortage of essential equipment, including the Liquid Chromatography-Mass Spectrometry (LC-MS) to undertake certain tests and bulk production equipment.

7. Space Weather Science and Education Project for Disaster Management and Preparedness

This project intends to develop earth observation products using satellite and geospatial data towards disaster prediction (drought, weather, and landslides, among others). It is intended to yield the premier product from the Aeronautics and Space Bureau. The objectives of the project are to: 1) Develop a space weather-based early warning tool; 2) Design and prototype requisite instrumentation and equipment; and 3) Develop human resource capacity in space science and technology.

The project budget was US\$ 2 billion, of which US\$ 0.855 billion was spent by 30th June 2025. A total of US\$ 0.402 billion was committed to items under procurement, while US\$ 0.549 billion was committed to tuition for the research students who were enrolled on the project.

By 30th June 2025, all critical staff were identified and recruited, the renovation of the test bed room was completed, and five PhDs and four master's students were recruited. The prediction model (CLIMSAV) was developed and refined to 100%. It obtains data from the interface project coordinated by World Climate Models (CMIP6 MPIESM) using machine learning. The launching of the tool (with four models, namely: a foundational weather model, a rainfall prediction model, a landslide prediction model, and a rainfall-induced landslide model) progressed to over 75%, and validation of the prototype was ongoing.

The installation of weather equipment was behind schedule since the procurement was slow, arising from the inadequate capacity of the University Procurement and Disposal Unit (PDU), while data collection and cleaning was ongoing. The project was affected by the delayed



approval to spend by the STI Secretariat, inadequate capacity of some contractors, and price variation from the original budget, which necessitated scaling down the required equipment.

8. Laboratory-scale production of beta propiolactone from cassava for application in the pharmaceutical industrial value chains

This project aimed to study the chemical conversion of ethanol from cassava to produce a more valuable product, beta-propiolactone (BPL), which is an essential ingredient in vaccine development. The key objectives of the projects were to: 1) Optimise the production process for beta propiolactone; 2) Synthesise the intermediate chemicals (ethanol, ethylene, and ethylene oxide) required for BPL production; 3) Produce beta-propiolactone at laboratory scale for inactivation of viruses during vaccine development; and 4) Determine the quality profile of the synthesised BPL.

The project budget was US\$ 0.450 billion, and all was released. The renovation and set-up of the laboratory, involving benchmarking on the production line, was complete, and the production of the intermediate chemicals and catalysts (yeast) was ongoing. The procurement of equipment and material sourcing/material supply system was substantially complete.

Other achievements were: a solar drying shade for cassava was established; a catalytic reactor was fabricated locally; and four Master of Science students were partially supported to undertake further studies (three at Busitema University and one at Makerere University). The project was behind schedule due to delayed disbursement, procurement delays, and price variations for some equipment above the budget.

9. Animal research services for enhancing shared efficiency and effectiveness

The project is to act as a common user laboratory animal facility to support animal studies for vaccine and therapeutics research. The project objectives are: 1) Continuous breeding and maintenance of humanised ACE2 mice; 2) Designing humanised mice for diseases of interest (cancer and malaria, among others); 3) Complete refurbishment of the laboratory animal house facility into a Biosecurity Level 3 (BSL-3) facility; and 4) Conducting animal studies for COVID vaccines. The project is housed at the College of Veterinary Medicine, Animal Resources and Biosecurity (COVAB).

The budget was US\$ 1 billion, all of which was released and US\$ 0.944 billion (94.5%) spent by 30th June 2025. The facility continued the breeding of over 500 mice. A curriculum for the preclinical trials at the facility was designed and approved by the university. A total of five staff were trained in the various aspects of pre-clinical trials, including animal management, animal feeding and animal feed-making, animal experimental testing procedures, and animal ethics. The Standard Operating Procedures (SOPs) for the BSL-3 and BSL-2 facilities were also developed.

The refurbishment and transformation of the laboratory animal house into a Biosecurity Level 3 (BSL-3) laboratory was ongoing, with the air conditioning and incinerator completed, tested, and handed over. The installation of five airtight doors was completed, and the five aluminium doors with glazed glass progressed to 80%. The installation of a Heating, Ventilation, and Air Conditioning (HVAC) system was completed. A total of three products were tested in the BSL-2 facility, including Pombe Guard, Crimean Congo haemorrhagic fever (CCHF), and thiocyanate.

The procurement of a class three biosafety cabinet, a key equipment for efficacy studies on vaccines, was initiated and was awaiting delivery. The project was affected by the delayed approval to spend, delayed procurement, especially by the University Estates Department,



delayed acquisition of inputs and lab consumables due to price changes, and lack of the infrastructure for producing genetically modified animal models.

10. Establishment of a biomarker research facility

The aim was to put in place a common user facility to support the identification and isolation of biological molecules found in body fluids or tissues that are signs of a normal or abnormal process, or of a condition or disease. These molecules are used in the development of drugs, diagnostics, and other biotechnology products.

The project is a continuation from the first phase of funding under the Presidential Scientific Initiative on Epidemics (PRESIDE), where the project acquired equipment for the Biosecurity Level 2 (BSL-2) laboratory for biomarker discovery, developed a biomarker panel for Rapid Diagnostic Tests (RDT), generated a lateral flow prototype, and expressed antigens and monoclonal antibodies.

The project budget was US\$ 1.5 billion, all of which was released and US\$ 1.42 billion (92%) spent by 30th June 2025. During the second year of the project, some pieces of equipment, such as the High-Performance Liquid Chromatography (HPLC), were procured but not installed owing to the unavailability of the required facility. Space for the biomarker facility at the Centre for Global Health and Biosecurity had been allocated, the architectural plan and a BOQ were acquired, and solicitation of bids for the remodelling of the facility was ongoing. A manuscript had been developed and was awaiting the guidance of the STI Secretariat to enable the registration of the intellectual property. An evaluation of the biomarker was ongoing to test its validity, stability, and usability.

The key objectives for the third year (FY 2024/25) of funding were to: 1) Finalise the establishment of the biomarker research facility at Makerere University; 2) Evaluate the stability and usability of the newly assembled lateral flow immunochromatographic assay prognostic/diagnostic kit under different conditions (temperature, humidity and life span stability); 3) Scale up the production of the SARS-COV-2 lateral flow assay kit prototype for detecting/predicting severe SARS- COV-2 patients; and 4) Clinically validate the performance (sensitivity and specificity) of the newly assembled lateral flow immunochromatographic assay prognostic/diagnostic test for monitoring SARS-COV-2 cases from Mulago, Jinja and Mbarara Hospitals in Uganda.

By 30th June 2025, various pieces of equipment² were procured and installed, although the facility was not yet remodelled for its intended purpose. The procurement of a contractor for the remodelling of the facility was constrained by Makerere University's delay in verifying the bank guarantee of the contractor to receive 30% advance payment. To build capacity, eight laboratory staff at the Centre for Biosecurity and Global Health (CeBiGH), Makerere, were trained on the use of lateral flow equipment.

The validation of the newly assembled lateral flow assay kit for predicting/detecting severe SARS-CoV-2 patients progressed to 80%, with positive results. The evaluation of the assembled lateral flow kit for stability and usability was undertaken, with stability optimised at 25 degrees. The scale-up for the production of the SARS-COV-2 lateral flow assay kit prototype had not commenced due to the delayed delivery of some equipment and kit materials. The clinical validation of the performance (sensitivity and specificity) of the assay was behind schedule, awaiting the mass production of the kits.

² Lateral flow dispenser, strip cutter, lateral flow printer and Liquid Chromatography-Mass Spectroscopy (LC-MS/MS).

Due to a reduction in the reported cases of COVID-19, the researcher was exploring the repurposing of the assay kit targeting four tests. These were: Rapid bovine pregnancy test, which was at prototype level; human African trypanosomiasis, which was awaiting clinical trials; malaria urine strip, which was at prototype validation level; and a prostate cancer screening Prostate Specific Antigen (PSA) rapid kit, which was at biomarker validation.

The project was behind schedule, arising from the delayed finalisation of procurement of a contractor to remodel the biomarker facility and the delayed mass production of the lateral flow assay kit, which, in turn, affected progress of the clinical tests. The absence of a budget for the sustainability of the activities through equipment maintenance and personnel after the project posed a risk of equipment breakdown after the project period.

11. Developing a national network of STI excellence as a foundry for transformative human capital development

This project aimed at developing national human capital for STI by identifying, nurturing, skilling and deploying industrial scientists. The project is being implemented in phases, and phase one was completed. The project objectives under phase two are to: i) Establish an efficient aggregator mechanism for transforming traditional research and science into internationally acclaimed industrial science and technology; ii) Provide a sustainable mechanism for nurturing internationally acclaimed industrial scientists and associated workforce for developing Uganda's niche industrial value chains; and iii) Promote science development and support network for STI establishments in the provision of transformative STI services for sustainable socio-economic transformation.

The project budget for phases one and two is US\$ 2 billion. By 30th June 2025, a total of 1.87 billion (93.7%) was spent. The highest expenditure is on stipends for protégé scientists, followed by training (nurturing industrial scientists). As part of the preparation processes, the entity was registered with the Uganda Registration Services Bureau (URSB), a board of directors was established, and a situation analysis was undertaken.

Under objective 1, a draft framework agreement was developed, and the legal and regulatory processes were finalised, and the framework was operational. In addition, training modules in the areas of good laboratory practices, bio-risk management, mass spectrophotometry, and research laboratory animal handling were developed and piloted. A vaccinology curriculum and other working documents were being developed. The establishment and furnishing of an office for Fonds pour la Science, la Technologie et l'Innovation (FONSTI) did not happen due to funding shortfalls but FONSTI is currently housed at COVAB. The FONSTI colloquium was not finalised due to the delayed meeting of the board.

For objective 2, the development of a sustainable mechanism for training internationally accredited scientists was halted due to the merging of BTVET and TVET into the Directorate of Industrial Training (DIT), which were critical in developing the curriculum. Tools for training, including manuals and assessment tools, were developed, and a website was set up. Consequently, a total of 22 protégés were enrolled for training to increase the STI critical mass, and eight facilitators, as well as several on-site/industry-based trainers were recruited. The protégés were attached to the field and were generating reports from their work. An online tool was developed to capture the protégés' learning progress.

Under the third objective, FONSTI mediated collaborative capacity building between Makerere University and St. Andrew's University (UK). This collaboration was to start with one PhD student upon the finalisation of the collaboration agreement. In addition, a Project Implementation and Action Plan (PIAP) was established, and training materials for product evaluation and clinical trials were obtained from the United States of America. In addition, a



draft business strategy was developed and presented to the FONSTI Board, which, in turn, provided comments. A brand manual was developed, but it was yet to be registered with the URSB. The project was affected by inadequate staff at the secretariat.

12. Productivity acceleration support service

The project aimed at developing a sustainable solution to household productivity through capacity gap diagnosis and empowerment of households to produce efficiently. This would lead to the transitioning of subsistence households into the cash economy with or without PDM funding. The project objectives were to: 1) Develop the productivity acceleration support service; 2) Develop a distribution model for the productivity acceleration support service; and 3) Establish a cooperation that will drive the commercialisation of the productivity acceleration support service.

The project's annual budget was US\$ 2.4 billion, all of which was disbursed, and nearly 97% of the funds was spent by 30th June 2025. The bigger percentage of the budget was on training and nurturing (56.5%), followed by allowances (20%). Five districts were selected as a pilot for the project, and these were: Kamuli, Butebo, Budaka, Kakumiro, and Nakapiripirit. However, due to security challenges in accessing Nakapiripirit, it was replaced with Kapelebyong.

By 30th June 2025, a total of 600 enterprises in Busoga, 1,200 in Bukedi, 400 in Bunyoro, 500 in Teso, 350 in Kapelebyong, 281 in Kamuli, 243 in Budaka, 236 in Butaleja, and 273 in Kakumiro were documented. There was knowledge transfer in the areas of goat, poultry, and dairy farming within the beneficiary districts. The transfer of technologies in enterprise management was reported, such as artificial insemination, feed management, and pasture agronomy.

Over 200 participants enrolled, trained and obtained knowledge in synchronised hatching and laying of local chickens to increase animal population; vaccination in groups; dairy farming; pasture preservation; and conservation technologies; other skills included knowledge to undertake the vaccination and treatment of animals; improved varieties of pastures; and pasture conservation for use during the scarcity period.

The project faced challenges due to the limited timeframe, as it attempted to implement a multi-year intervention within a one-year model. Consequently, key outcome indicators at the household level could not be achieved within the short duration. Additionally, the prevailing mindset among some farmers – shaped by a dependence on government support and expectations of free handouts – hampered the effective realisation of project results. Political interference further compounded these challenges. Moreover, the selection of pilot beneficiary districts lacked adequate regional representation, which affected the project's inclusiveness and overall impact.

13. ICT Platform for the Pathogen Economy Project

The focus of the project is to develop Artificial Intelligence (AI)-enabled diagnostic tools for cancer, and support for AI-in-health incubation for the ecosystem. The key project objectives are to: i) Develop and support the commercialisation of three AI-driven platforms for screening diseases of national priority, i.e., cervical cancer, tuberculosis (TB), and one project selected through open calls; and ii) Establish AI in the Healthcare Research and Innovation Hub.

The one-year project budget was US\$ 1.150 billion, of which US\$ 0.178 billion was released and expended by 30th June 2025. Implementation started late in September 2024, owing to the delayed approval to spend by the STI Secretariat. Despite the delayed commencement, implementation was halted by STI in December 2024 until June 2025 to review and harmonise



the objectives of this project with another project under the Industry 4.0+ Bureau within the STI. At the time of halting operations, the development of the cervical cancer and TB screening platforms was underway. There were no changes to the progress as of 30th June 2025. The following achievements had been registered:

The gathering of system requirements and documentation, business development training and co-creation sessions, as well as a market development strategy for both the cancer and TB screening platforms, were completed. Customer engagement for the TB screening platform progressed to 50%. However, the market field visit and the customer engagement for cancer screening were not done. Under the selection and onboarding of the third AI-for-Health Project, a total of 38 applications were received, and three applicants had been selected before the project was halted by the Science, Technology, and Innovation-Office of the President (STI-OP).

The project was affected by foreign exchange loss arising from currency conversion from the Ugandan shilling to the US dollar. Whereas the project is funded in Ugandan shillings, the account at the College of Engineering, Design, Art and Technology (CEDAT) into which funds are deposited is in US dollars. CEDAT should either provide a Ugandan shilling account for the funds or the funds should be deposited into a Ugandan shilling account at the College of Computing and Information Technology (CoCIS), where the project is housed.

14. In vitro Studies of Natural Therapeutics of Uganda Program (INVONAT)

The project started in FY 2020/21 with a goal of evaluating the in vitro (conducted in laboratory/test tube setting) anti-bacterial, anti-fungal, and anti-viral capacity of natural therapeutic products in Uganda, and for effective compounds to evaluate the related mechanisms of control. The project was conceptualised as a common user facility for in vivo (in living organisms) studies for natural therapeutics as well as vaccines. The key objective during the period under review was to take at least 15 experimental drugs through in vivo studies (safety and efficacy).

The project budget in FY 2023/24 was US\$ 0.9 billion, which was all received in October 2023, but the researcher received permission to spend from the STI in April 2024. The funds were all spent by 30th June 2025. In May 2025, this project was given another grant of US\$ 1.059 billion to support the in vitro studies for the pathogen economy, but the STI secretariat had not permitted the use of the funds. The monitoring, therefore, focused on the previous funding whose implementation spilt over into FY2024/25.

By 30th June 2024, the following had been achieved: One comprehensive and amended protocol for in vitro studies was developed and submitted to the Research and Ethics Council (REC), which approved it as guided by the novel assays. Standard Operating Procedures (SOPs) were developed for 6/6 new assays, which are currently undergoing standardisation. Sterility testing was done for all 19 products received since January 2024 (3 anti-dental products from DAMA, 7 products from AMIREC (2 anti-cancer, 2 anti-diabetes, 2 anti-sickle cell, and 1 for haemorrhoids), 2 from CONAT, 3 Rukararwe 1st submission, 3 Rukararwe 2nd submission, and 1 from Mwecodex).

Four more products (anti-brucella) were received from Kabale University, pending sterility testing. Cytotoxicity assays were completed for 16/19 products received since January 2024. Two out of the 19 did not need cytotoxicity assays. One out of 19 did not qualify. Results were generated and reports disseminated. Fourteen products were identified as cytotoxic; two of these were anti-cancer, and one, anti-haemorrhoids. Two were being assessed for the possibility



of doing efficacy studies (2 anti-diabetes). Eight out of 14 products passed this stage and are ready for the next (efficacy assays), plus two anti-cancer and one anti-haemorrhoids.

The project was affected by the delayed approval to spend, lack of control over some of the facilities being used in the studies, and intermittent funding, which led to delayed procurement, payments, and implementation of planned outputs. Given the nature of the intervention (support platform for other innovators) and mode of financing, it was observed that it would be best financed under regular programming for continuity and achievement of objectives as compared to one-year project mode financing. This will reduce the delays in delivering on the test results that inform other processes of therapeutic development by the natural therapeutic products innovators.

15. Clinical Trials for Natural Therapeutics (CONAT)

The project was set-up to act as a platform to support clinical trials for natural therapeutics at no cost to the innovators. The platform runs multiple experimental drugs through the protocols. To qualify, the drugs must be notified by NDA and go through the in vitro study stage. The key objective was to assess the safety, pharmacokinetics, and preliminary efficacy of herbal products for the treatment of common illnesses in Uganda

The project budget was US\$ 5 billion, all of which was released and spent by 30th June 2025. The project received an additional grant of US\$ 6.6 billion to support the clinical trials for the natural therapeutics. These funds were yet to be spent by 30th June 2025. The monitoring, therefore, focused on the previous funds whose expenditure spilt into FY 2024/25, and the achievements are presented hereunder:

Part of the funds were used to renovate a ward in Mulago National Referral Hospital (NRH) into the clinical trials unit with a five-bed capacity (four high-dependency unit beds and one intensive care unit bed). The ward was also provided with the necessary equipment to monitor, observe, and manage patients, as well as a laboratory and a pharmacy. Outpatient clinical rooms with a patient waiting area were also provided. Two laboratory technicians, one sample runner, and one laboratory fellow were recruited.

CONAT determined the preliminary safety and efficacy of UBV-01N (a medicinal investigational product from NCRI). A total of 128 adult Ugandan patients with SARS-CoV-2 who had symptoms of COVID-19 were enrolled. A CONAT Acute Respiratory Viral Infection (ARVI) Pharmacokinetics sub-study was undertaken to study basic absorption and elimination biomarker (Quercetin) in the study product. A total of 36 participants were admitted to the clinical trial unit for 24 hours during the ARVI trial, and samples were successfully collected during admission.

A total of nine drugs (two for respiratory viral infections, five for diabetes mellitus, and one for malaria) were undergoing clinical trials and at varying stages of progress. Two drugs, namely TazCoV and Vidicine, meant for the treatment of acute respiratory viral infections, including SARS-CoV-2, RSV, and influenza A/B, in Uganda had significantly progressed and were at the stage of preparing final data for the Data Safety and Monitoring Board.

In April 2024, a study involving five drugs for diabetes mellitus to evaluate their preliminary safety and effectiveness in adult patients commenced. Another study was initiated on malaria drugs to be able to document an inventory and determine the safety and efficacy of herbal medicinal products used for malaria prophylaxis and treatment in Uganda among children aged 8 to 15. The studies on diabetes mellitus and malaria were nearly complete by 30th June 2025.

CONAT analysed Pombe Guard, received from DGAL, to identify the phytochemicals present in the product before a clinical trial. The product was also sent to UVRI for in vitro analysis

and COVAB for the preclinical analysis, awaiting results from both institutions by 30th June 2025. Additionally, four research fellows were enrolled in the pharmacological, laboratory, and clinical fields. These were taking part in protocol research and preparation, contributing to the scientific vetting of study protocols, and writing scientific papers based on study findings.

The project was affected by the delayed disbursement of funds and approval to spend, delayed approval of protocols by the NDA, hesitancy by indigenous scientists to share information about their drugs, slow participant accrual, and inconsistency in the investigated projects. It was observed that the mode of funding the platform as a project instead of a recurrent intervention was affecting the continuity and completion of trials since funds were not available at some critical times of the studies.

16. Laboratory scale production of beta propiolactone (BPL) from cassava for application in pharmaceutical industrial value chains

This project aimed to study the chemical conversion of ethanol from cassava to produce a more valuable product, beta propiolactone (BPL), which is an essential ingredient in vaccine development. The key objectives of the projects were: 1) Optimising the production process for beta propiolactone; 2) Synthesising the intermediate chemicals (ethanol, ethylene, and ethylene oxide) required for BPL production; 3) Producing beta propiolactone at laboratory scale for inactivation of viruses during vaccine development; and 4) Determining the quality profile of the synthesised BPL.

The project budget was US\$ 0.450 billion, all of which was disbursed by 30th June 2025. The project achieved the following: benchmarking visits were made to China, Kakira Sugar Works, and Lugazi Sugar Corporation alcohol distillation units. Renovation and partitioning of the laboratory were completed. The laboratory equipment (fermentation unit, high-pressure reactor, and ethanol distillation unit) was delivered, and the laboratory set-up was at 80%. Solar drying sheds were established, and the production of intermediate chemicals commenced, and some of the required equipment was fabricated. To build capacity in research, four Master of Science students (three at Busitema University and one at Makerere University) were partially supported to complete their studies. The project was behind schedule due to delayed disbursement, procurement delays, price variations for some equipment, and loss of human resources due to limited facilitation arising from the lengthy implementation period which went beyond the funding period.

17. Enhancing learning outcomes through principle and project-based delivery methods in higher secondary schools (Piloting an Activity-Based Learning and Teaching Approach for Advanced-Level Science Students)

This project targeted the development of a synergistic capacity development for Science, Technology, and Innovation (STI) among A-level students to simplify how science education is delivered with minimal materials. The project had two objectives, namely: 1) Develop tools for capacity development and practical skilling among A-level science students; and 2) Pilot the tools for capacity development and practical skilling among A-level science students. The project expected outputs were: a principle-project-based curriculum for Advanced Level science subjects developed; training materials and resources developed; a group of students trained in a designated secondary school; and educators trained.

The project budget was US\$ 0.199 billion, which was all released, and US\$ 0.013 billion spent by the end of FY 2024/25. The study was piloted at Petete Secondary School in Budaka District. By 30th June 2025, science teachers at the pilot school were trained on the developed curriculum and 30 students were enrolled. Through the project, the ICT Building was renovated



and equipped with micro-fuse computers and furniture. The implementor participated in a career fair and also attended an exhibition at St Andrew's High School Petete, in Budaka District, where they provided awareness about the curriculum. The project, however, had a mismatch in some of the objectives and outputs that were in the STI documents.

18. Strengthening the orange-fleshed sweet potato value chain in Uganda through an Agro-Science Park at Busitema University

This project aimed at establishing a facility that could create an interface between communities and the university. This was to increase the offtake of locally produced agro-products as raw materials for high-end processing. The facility was to develop research-based solutions that support efficient productivity by communities. The key project objectives were: 1) Establish the suitability of the Arapai Campus for the Agro-Science Park; 2) Profile basic information to guide the product development for all the crops; 3) Develop the Agro-Science Park project proposal (feasibility study, business plan (10 years), financial model (10 years), pitch deck); 4) Profile the technology for local development and transfer; and 5) Develop the prerequisite human capital for the Agro-Science Park.

The project budget was US\$ 0.3 billion, all of which was released, and US\$ 0.232 billion spent by 30th June 2025. Two MOUs with two co-partners in product development, marketing, and establishment of the park were signed. Datasets on sweet potato demographics, production, market, and products, among others, in the Teso sub-region were generated. Key stakeholders and actors in the sweet potato market chain were engaged. A report on the status of the soils on the over 670-acre land at Arapai, Soroti District was generated.

The following pieces of equipment were procured under the project to facilitate implementation: 10 data collection tablets/gadgets; five soil augers; 30 core soil samplers; one GPS gadget; one HP printer; a flip board; two office fans; three laptop computers; assorted office stationery; and three sets of office furniture (with 3 executive office tables with drawers and a side table, and three executive office chairs).

A Special Purpose Vehicle (SPV) for the Agro-Science Park under Busitema University Holdings was developed, discussed, and passed by the Busitema University Senate, awaiting a Council resolution. The research team demonstrated various technologies and sweet potato products in various forums and exhibitions. The project was affected by financial constraints, leading to the postponement of activities, the absence of the orange-fleshed sweet potato (OFSP) in the local market either in the processed or raw form, and procurement delays.

19. Development of a rapid, low-cost point-of-care nucleic acid diagnostic tools for banana *Xanthomonas wilt (BXW)*, cassava mosaic (CMD), and sweet potato viruses (SPVD)

The goal was to develop, test, and market simple, low-cost paper-based assays suited for resource-limited rural settings for effective banana, cassava, and sweet potato disease management and control. The project planned outputs are a paper-based lateral flow assay for the detection of BXW, CMD, and SPVD, developed and optimised; an optimised prototype of multiple lateral flow paper-based assays developed; and a business plan for commercialisation and dissemination of the developed assays established.

The project budget was US\$ 0.502 billion, which was all released and all spent by 30th June 2025. The progress was achieved as follows: training of project staff and graduate students on field sweet potato virus, banana and cassava disease symptoms identification, scoring and sampling procedures; designing of 20 pairs of primers and probes for BXW, CMD and SPVD was completed; 445 samples of infected banana, cassava and sweet potato were collected and laboratory tests and analysis was completed; and fabrication of the incubators, paper channels and cassettes was completed. A business plan for the commercialisation and dissemination of an assay targeting the Parish Development Model (PDM) was being developed.



Sample of the packaged coffee, sweet potato, and cassava disease testing kit at Gulu University

A total of four prototypes for sweet potato disease, banana wilt, cassava mosaic virus, and coffee wilt disease were developed and tested. The products were to be used by farmers, mass producers (seed producers), and NARO, among others, to enable them to make the correct decisions with scientific evidence that plants are disease-free or virus-free. The mass production of the kits was affected by the lack of mass production capacity at Gulu University. Intellectual property filing was ongoing.

20. Identification of medicinal plants used in Northern Uganda for sickle cell disease and its complications (Medicinal Plants for Sickle Cell Disease and Respiratory Tract Disorders).

This project was intended to yield a prototype for sickle cell disease from ethno-medicinal plants in Northern Uganda. The key objectives were to: 1) Conduct an ethnobotanical survey; 2) Formulate a prototype against sickle cell; 3) Perform phytochemical analysis; and 4) Undertake toxicity analysis of the promising prototype.

The project budget was US\$ 0.35 billion, and the funds were received in October 2023; however, the permission to spend was granted by the end of June 2024 (eight months after). It was reported that the use of funds was not granted because there were disparities between the STI Secretariat and the researcher on the project title, objectives, and approach to implementation. Eventually, the permission was granted to spend, and the project progressed to approximately 35.7%. The following were achieved by 30th June 2025:

The literature review was completed, and the data collection tools were developed. The ethnobotanical surveys of most of the districts, including Nwoya, Agago, Alebtong, and Otuke, were completed. The geo-mapping and spatial signatures were completed, pending phytochemical analysis for all the districts. The researcher was in the process of picking the best 10 medicines to carry out detailed phytochemical analysis for the formulation and standardisation of medicines. The Principal Investigator (PI) was working with STI, NARO, and COVAB on several studies, including clinical trials.

Preliminary findings from the communities (knowledgeable in sickle cell disease) indicated that the textbook (documented) and community classification of sickle cell differed. The PI planned to design medicines that fit four different types identified in the communities. This required the key informants to come together for a seminar to get detailed information to understand the way forward and identify cross-cutting issues.

The project is behind schedule, partly because the PI faced a setback when the Research and Ethics Committee (REC) suspended the project due to claims that the PI was marketing/selling the medicine before it had gone through the clearing process. Additionally, the delayed approval to spend and the delayed reconciliation of project title and objectives between the grantee and the STI also contributed to the performance. The STI should grant the project a no-cost extension to complete the pending project activities.

21. Improved indigenous chicken line

This project aims to identify and preserve the best-performing local chicken breed lines in the country. This was intended to develop a commercial dual-purpose chicken breed line from locally indigenous chicken. The objectives were to: 1) evaluate on-farm performance of the improved indigenous chicken line; 2) stabilise and mass produce the improved chicken line; and 3) set up a market-oriented supply chain platform for the improved indigenous chicken line.

The project budget was US\$ 0.2 billion. The project started with the selection of a stock of improved local chicken breeds at different stages of growth. These were multiplied to over 300 chickens after incubation, brooding, selection, and breed fixation. Some chickens were later distributed to the neighbouring community after an on-farm performance evaluation of the improved indigenous chicken line with selected and evaluated host farmers. The selected farmers were trained, and Animal Production Officers were engaged to actualise the set-up of market-oriented platforms for the improved indigenous chicken line. The farmers were organised into village groups working with Production Officers in Gulu and Amuru Districts.

The study findings indicated that the chickens laid 30 eggs in a single hatch, and could weigh 2 kg. At the time of monitoring (August 2025), a total of 70 good hens and 10 cocks were



Indigenous Chicken laying eggs at the project facility, Gulu University

maintained as parent stock. The project was expected to procure two incubators with both solar and power supply systems and conduct market supply chains. However, the procurement process was delayed because no suppliers responded to the call for quotations (spent one year in procurement), and the process is being

repeated. The project was affected by the procurement delays and the lack of incubator technicians in the region to repair incubators when they break down, which interrupted breeding.

22. Operationalising the cassava processing plant business in Gulu University

The focus was on amplifying the efforts to develop the high-end value-added products from the cassava value chain, aimed at reducing imports of wheat into the country. The project objectives were to:

(1) Streamline the commercialisation process to articulate the roles of the different operational staff independent of academic duties and responsibilities; (2) Fix and operationalise the existing infrastructure utilising the existing capacity of about 4,000 kg per day to commercialise starch and high-quality cassava flour (HQCF); (3) Develop a realistic business plan for cassava processing based on prevailing economic conditions and parameters; and (4) Extend the value chain to make laboratory grade ethanol, animal feeds, cassava/millet and cassava/sorghum composite flours, briquettes and blended foods using the existing equipment, packaging and funding generated from proceeds of scaled production to generate income and create jobs without additional funding.

The STI funding builds on support from the African Development Bank (AfDB) through the Ministry of Education and Sports (MoES) (2018–2020) that procured equipment before the COVID-19 lockdown in 2020. However, the equipment was never commissioned or utilised, and the business plan expired. The STI Secretariat, in partnership with the Uganda Development Bank (UDB), supported the university to revamp this facility through a matching grant worth US\$ 580 million that was to be released in four equal tranches. The first and only released funds were US\$ 0.109 billion, which was disbursed in August 2024, and all had been utilised.



Part of the cassava processing equipment at the processing plant at Gulu University

Because of the delay, the venture leader retired before financing was received, and it took the university four months to identify a new venture leader. Subsequently, the critical project staff (6) were recruited and the infrastructure was fixed following a contract that was awarded in April 2025 and completed in July 2025. The missing components on the equipment were ordered from China and fixed.



The facility was able to produce high-quality cassava flour (HQCF), but with dull colour due to delays in the de-watering stage. The flash dryer was able to convert a fresh tuber to HQCF in 24 hours. The four-step process includes: peel, grate, dewater, dry, and mill before packing. During testing, a snag was identified between grating and de-watering, which is manually done and can only achieve 100 kg of dewatering every six hours. Following this snag, a higher speed de-watering machine with a capacity to achieve 400 kg – 600 kg per hour was identified but not yet procured. The feasibility study to establish the commercialisation requirements had not been made. The Venture Lead (VL) recommends the acquisition of the dewatering machine instead of purchasing a truck.

Support for Dei BioPharma

Dei BioPharma is a private pharmaceutical company whose mission is to be a globally recognised pharmaceutical company, producing a diverse range of vaccines and affordable medicines to combat widespread diseases. It specialises in messenger ribonucleic acid (mRNA) vaccines, oncology treatments, insulin, monoclonal antibodies, and generics, ensuring affordable and high-quality healthcare solutions. The project aims to address critical medical challenges and will contribute to the advancement of healthcare through innovative pharmaceutical solutions.

In FY 2023/24, the Government of Uganda (GoU), through the STI, extended funding worth US\$ 720 billion to Dei BioPharma, which was all disbursed. However, the detailed expenditure was not made available. The funds were to support the construction of approximately 15 state-of-the-art structures for the production of the various categories of human drugs and vaccines. The facilities are generic oral solid manufacturing, GLP laboratory, nutraceutical, syrup and ointment, mRNA vaccine, penicillin, cephalosporin, hormone, non-beta-lactum, medical diagnostic, biotech, oncology, injectables, double deep warehouse, psychotropic, and cosmetology.

By July 2025, the generics facility was fully completed, and production of antibiotics and drugs was ongoing, with six products already available on the market. The vaccine facility, designed for inactivated viruses, was also completed, incorporating design modifications to meet the standards of the US Food and Drug Administration (FDA) and the European Medicines Agency (EMA). The majority of the equipment for the vaccine facility had been shipped, with installation pending the arrival of the remaining components. To reduce reliance on imported raw materials such as pharmaceutical-grade starch, a starch manufacturing plant was established in Namasagali, Kamuli District, to produce sucrose, maltose, fructose, and glucose.

The construction of the nutraceutical facility was 95% complete, pending installation of equipment, which was in the final stages of validation and qualification. The syrup facility (oral liquid dosage) was at 95%, and the ointment facility was 95% complete, pending installation, qualification, and validation. Civil works for the foot-and-mouth disease (FMD) plant (universal FMD vaccine facility) were at 45% progress. The in vitro diagnostics (IVD) manufacturing testing kits facility was at 90%. The civil works for the second antibiotics facility (penicillin, cephalosporin, oncology) were 75%. The equipment for nutraceutical, syrup, IVD, vaccine, and generics were procured.

Dei BioPharma also provided a mentorship programme for graduate training to eight students and internship opportunities to 20 university students in the fields of chemistry, biochemistry, pharmacy, and biotechnology. The company was being affected by an unstable power supply to run the facilities. The company requires 10 MW of power to run all the facilities/operations at the moment. At full production capacity, the facility shall require a dedicated 40 MW of power.



L-R: Hormone facility under construction at Dei BioPharma in Matugga. A purified water treatment system at Dei BioPharma in Matugga, Wakiso District

3.2.3 Increase investment in research and development in key priority sectors like agriculture, oil and gas, minerals, energy, health, and transport

The intervention contributes to the objective of strengthening research and development capacities and applications. The planned outputs for FY 2024/25 included infrastructure development and management, and technology and innovation.

The plan was to support the banana pilot plant in Bushenyi, the Banana Industrial Research and Development Centre (BIRDC), previously called the Presidential Initiative on Banana Industrial Development (PIBID). The objective was to upscale and automate the primary processing for commercialisation to increase daily output from 1.4 metric tonnes to 14 metric tonnes. It also planned to operationalise the banana value chain through franchising, establishing a business and enterprise development framework, and processing bananas into “Tooke” products. Others were: to equip the laboratory to undertake research; market access to generate revenue; and to support the establishment of community processing hubs.

The performance of the intervention was good, at 93%. The approved budget for the BIRDC in FY 2024/2 was US\$ 71.646 billion (inclusive of US\$ 9.883 billion carried forward from the previous financial year and US\$ 12 billion from product sales). By 30th June 2025, US\$ 49.6 billion was released and US\$ 30.2 billion spent.

The BIRDC purchased 1,211,218 kg of fresh matooke and processed it into “Tooke” products. This was above the annual target of 1,200,000 kg, representing a 109% target achievement. The “Tooke” products, reportedly sold to local and international markets, generated revenue of US\$ 4.101 billion. This represented 34.2% of the annual target (US\$ 12 billion) of revenue. Engagements with the potential international markets were reportedly ongoing in the markets of the USA, Italy, South Africa, South Korea, Japan, and the United Kingdom.

Five (41.7%) out of the planned 12 new “Tooke” products were generated through research and development for the market. Phase two and three laboratory equipment was procured and installed. This included a protein analyser, an automatic fat extraction system, an oven and incubator, a muffle furnace, a waring commercial blender, and an ultrasonic bath. Others items were data loggers, a dry block heater, a cabinet descanner, and a magnetic heating block. The water systems at Katonya and Nyaruzinga were renovated. In spite of these acquisitions, the human resource to operate the equipment was still inadequate.

The drum dryer was in transit with an expected delivery month of July 2025, while the procurement of upscaling and automation equipment, together with the expansion of the warehousing facility, were at the Solicitor General’s Office for review. The final designs for

the cold room warehousing and the Jinja mini-bakery were concluded, and the construction of one out of the planned five collecting centres for Greater Bushenyi to support the supply chain had commenced in Shuuku and progressed to foundation level.

The contract for the expansion of the pilot processing plant and the Bumbaire Irrigation Water Scheme was at the Solicitor General for approval. In order to support the local market expansion for the processed products, approximating 450 acres of land were acquired at Nshara in Sanga, Kiruhura District. A consultant was procured to develop a master plan and a final draft report was compiled, awaiting review and comments by BIRDC.



L-R: Stacked tray of green bananas awaiting peeling and processing at Nyaruzinga-Bushenyi District. Foundation works for the Shuuku collection centre in Sheema District

The BIRDC secured the ISO quality marks (product certification and systems certification) for 13 products, and the whole system was audited and certified in January 2025. The BIRDC received the Q-mark for all “Tooke” biscuit brands, bread, queen cakes, and crisps. The second ISO audit indicated that all the corrective actions from the first audit were rectified and the institution was recommended for the granting of ISO 22000:2018 by June 2025. Systems have been put in place to ensure consistency of products and risk management to mitigate risks for products and processes as a foundation for world-class manufacturing. The plant produces 13 products, all having Q-marks. More products from product development were undergoing accreditation.

Under research and development for the period under review, one PhD was completed, and the other two PhD students progressed to 90% and 50%, respectively. A student completed a master’s degree on the modification of banana breakfast flour in collaboration with Kyambogo University. Another master’s student on research on banana starch submitted the thesis to his university and was expected to graduate as soon as it is approved. In addition, a researchers’ workshop was held for students to present concepts for funding in the subsequent period. Three students on biogas research at master’s level were ongoing.

Under cooperatives training and management, the task was to establish the organisational capacity of communities into cooperatives to have an orderly supply. By 30th June 2025, a cumulative total of 24 cooperatives were registered suppliers to the plant; however, only 15 supplied during the financial year. All 24 are properly coded to ensure compatibility with ISO standards, and the farmers were trained in quality compliance to meet the specifications required by the pilot plant. A training facility at TBI has been constructed to support the compliance.



The delayed approval by Cabinet of the institutional framework that was developed by the defunct Ministry of Science, Technology, and Innovation (MoSTI) was affecting the effective operationalisation of the BIRDC model. Table 3.4 shows the performance of the Industrial Value Chain Sub-programme monitored outputs.



Table 3.4: Performance of the Industrial Value Chain Development Sub-programme as at 30th June 2025

Outputs Performance								Remark
Intervention	Output	Financial Performance			Physical Performance			
		Annual Budget (US\$)	% of Budget Received	% of Budget Spent	Annual Target	Cum. Achieved Quantity	Physical Performance Score (%)	
Design and implement special programmes for nanotechnology, space exploration, nuclear technology, biosciences, ICT and engineering	Technology and innovation	8,250,000,000	100.0	100	100	78	77.7	Five PhD and four master's scholarships were given in Space Science studies.
								Ten University experimental satellite missions were assessed, adopted, and trademarked
								Six aeronautics innovations were designed.
Strengthen the function of technology acquisition, promotion as well as transfer and adoption	Research and development	78,653,463,000	100.0	100	100	62	62	The second clinical trials were not completed for the three vaccines as planned due to the absence of a Good Manufacturing Practice (GMP) facility in the country.
	Technology and innovation	152,770,137,000	100.0	100	100	46	45.5	Value-added shea butter cosmetic and skincare products were developed by various women-led small-scale enterprises.
								The phase one completion of the tertiary coffee processing hub in Ntungamo was estimated at 90%.
								Silicon wafer samples were collected and characterised.



Outputs Performance								Remark
Intervention	Output	Financial Performance			Physical Performance			
		Annual Budget (USh)	% of Budget Received	% of Budget Spent	Annual Target	Cum. Achieved Quantity	Physical Performance Score (%)	
Increase investment in R &D in key priority sectors like; agriculture, oil & gas, minerals, energy, health, & transport	Model value addition services	32,600,000,000	100.0	100	100	83	83.3	Infrastructure at NESTEIC was completed, and the project transitioned into EDIC
	Infrastructure development and management	2,998,100,000	100.0	100	100	95	95.0	
	Technology and innovation	69,562,131,735	100.0	97	100	91	91.3	Phase one and two of the Kiira vehicle plant was completed, and 5 out of the 10 planned buses were assembled.
	Total	344,833,831,735					75.8	
Average Outputs Performance								75.8
Outcomes Performance								
Outcome Indicator		Annual Target	Achieved	Score (%)	Remark			
No. of firms graduating from incubators		10	3	30				
No. of new technologies adopted		5	5	100				
Percentage of firms using innovative technologies		5	5	100				
Percentage of new technologies or research results commercialised		2	2	100				
Business enterprise sector spending on R&D (% of GDP)		0.1	0.05	50				
Average Outcomes Performance				76.0				
Overall Sub-programme Performance				75.9	Good performance			

Source: Field Findings



Sub-programme challenges

1. Poor planning and coordination at the STI Secretariat as demonstrated by disbursement of funds and permission to utilise them being issued after several months and changes in grant objectives.
2. Discontinuous funding structure: The mode of funding, often disbursed once to grantees, disrupts project continuity; on the other hand, quarterly releases for subventions interrupt critical processes, delay milestones, ignore staffing considerations, and increase the risk of project overruns.
3. Lack of facilities to aid research development such as Good Manufacturing Practices (GMP) for producing certified production for human clinical trials and High-Containment Laboratories (BSL-3) for vaccine development.
4. Insufficient immunology-skilled workforce: The limited skilled workforce hampers the speed and quality of vaccine development efforts, necessitating additional training and capacity building.
5. Procurement difficulties, especially for some sensitive equipment and reagents that required certain international clearances and institutional bureaucracies in procurement also delayed research.
6. Delayed finalisation of the agreement on sharing intellectual property proceeds by the funders, host institutions, and innovators.

Conclusion

The overall sub-programme performance was good, at 75.9%. The supported grantees made steps towards finalisation of their projects. However, the low capacity of procurement units, especially in universities, delayed the completion of projects hosted in those institutions. The laboratories at BIRDC were equipped but lacked sufficient human resource to maximise the operation. The National Science Technology Engineering Innovation Centre (NSTEIC) was completed and metamorphosed into EDIC. However, the absence of funds to recruit staff delayed its operationalisation. The clinical trials registered slow progress due to the absence of GMP facilities in the country. Most of the infrastructural projects achieved good progress.

3.3 STI Ecosystems Development Sub-programme

The sub-programme contributes to the five objectives of the ITDT Programme and aims to transform the innovation landscape by promoting a coordinated, inclusive, and sustainable Science, Technology, and Innovation (STI) ecosystem. It comprises 19 interventions, of which four were funded and monitored. Overall, the sub-programme's performance was rated as fair, with an achievement level of 61.9% (Table 3.6).

Among the monitored interventions, the development of a framework to promote multi-sectoral and multilateral collaborations, as well as the support for establishing and operating technology and business incubators and technology transfer centres, showed good performance. In contrast, the intervention aimed at designing and conducting practical skills development programmes recorded poor performance. A summary of the performance of the monitored interventions is presented in Table 3.5.

Table 3.5: Performance of interventions under the STI Ecosystem Development Sub-programme by 30th June 2025

No.	Intervention	Colour Code	Remark
1	Support the establishment and operations of technology and business incubators and technology transfer centres.	70.9	Good performance
2	Increase investment in research and development in key priority sectors like agriculture, oil and gas, minerals, energy, health, and transport.	44	Poor performance
3	Develop a framework for the promotion of multi-sectoral and multilateral collaborations.	71.3	Good performance
4	Design and conduct practical skills development programs.	40	Poor performance

Source: Authors' Compilation

The detailed performance of the sub-programme interventions and outputs is presented here under:

3.3.1 Support the establishment and operations of technology and business incubators and technology transfer centres

The intervention contributes to the ITDT Programme's objective: develop the requisite STI infrastructure. The planned and monitored budgeted outputs for FY 2024/25 under the interventions were: a) Infrastructure development and management; and b) Industrial skills development. The intervention performance was good, at 70.9%. Detailed performance is presented below:

Infrastructure development and management: Under UIRI, the plan was to deploy at least two additional essential technologies for the operationalisation of Namanve, and purchase at least two laboratory equipment used in analysis. By 30th June 2025, a motorised groundnut sheller was fabricated for increased efficiency in groundnut processing. A multi-purpose thresher was developed and tested for use across multiple grain types. An industrial-scale essential oil extraction machine was installed in Lira to support large-scale aromatics processing. A fruit pulper and motorised cassava chipper were built to enhance agro-processing and reduce post-harvest losses.

Other equipment fabricated include stainless steel soap cutting worktops and mixing tanks, which were fabricated for improved hygiene in cosmetics and soap production. A laundry bar soap-making machine was developed to support SME manufacturing. Table looms and jack looms were fabricated to strengthen local weaving and textile training. A submersible pump and a digital weighing scale were designed for industrial and commercial applications.

The upgrade and renovation of Lira and Nakawa Incubation Centres was ongoing, both at approximately 70% completion. The renovation included replacing the pipes, supplying additional new equipment, replacement of doors, partitioning, repairing the perimeter wall, and recasting building walls. The planned two pieces of laboratory equipment used in the analysis were not procured.

Industrial skills development: The National Science, Technology, Engineering and Innovation-Skills Enhancement Project (NSTEI-SEP) was completed and transitioned into the Engineering Development and Innovation Centres (EDIC) in Namanve and Rwebitete. The purpose is to develop the engineering capacity of Uganda in seven critical areas: Industrial Technology; Metallurgy; Electrical and Electronics; Civil Engineering; Automotive Technology; Agricultural Mechanisation; and Construction Machinery.



The planned activities for FY 2024/25 as part of the EDIC operationalisation were: a) design, production, and assembly of precision tools, components, and industrial systems; b) development of locally produced raw materials for precision tooling and machining; and c) construction of prefabricated low-cost houses. By 30th June 2025, the Engineering Development and Innovation Centres in Rwebitete and Namanve were completed and commissioned. Recruitment of the first cohort of trainees took place in June 2025 for the EDIC in Rwebitete, and training was ongoing. The centre in Namanve was also completed, and three incubatees were enrolled, including Lwera Electronics, Innovex Limited, and a deep-tech centre.

3.3.2 Increase investment in research and development in key priority sectors like agriculture, oil and gas, minerals, energy, health, and transport

The intervention contributes to the objective of strengthening research and development (R&D) capacities and applications. The planned outputs for FY 2024/25 included research and development and model value addition. The performance of the intervention was poor, at 44%.

Research and development: UIRI planned to analyse 1,200 products for quality assurance by microbiology and chemistry laboratories, revitalise the textile unit by operationalising two concepts and R&D, conduct demand-driven research in food processing, engineering, and value addition on at least five products, and establish four research collaborations at local, regional, and international levels.

By 30th June 2025, the chemistry and microbiology laboratories analysed 1,680 edible and non-edible samples above the annual target of 1,200 samples. One out of the two planned concepts on research and development was developed. The concept was the development of medical textiles from locally available materials. The cocoa processing project commenced in June 2025, with UIRI partnering with Canaan and Kijami Table to establish a cocoa processing facility in Koboko for the Cocoa Farmers' Association.

UIRI promoted the use of local materials in electronics through the fabrication of 50 eco-friendly radio casings from bamboo, thereby reducing dependence on plastic and boosting green manufacturing. UIRI also developed a shelf-stable beef snack; diversified products from duck and rabbit, including sausages, burgers, frankfurters, marinated meats, and mince in support of Buy Uganda, Build Uganda (BUBU), through import substitution; and promoted product innovation.

Model value addition services: UIRI planned to refurbish one pilot production plant and physical infrastructure for two analytical laboratories. By 30th June 2025, the bakery and the fruit section were undergoing repairs, including replacement of water pipes, floor repairs, and painting. UIRI, through the incubation hubs, developed six value-added dairy products with incubatees: the products include Furaha pure whey protein concentrate (mass gainer), Furaha slimming whey powder for weight loss, probiotic flavoured whey-based beverages (turmeric, mint, mango, vanilla), omega 3 yoghurt, aloe vera yoghurt, and turmeric-fortified yoghurt. Also, through product innovation, local beverages were developed as alternatives to imported beverages, in addition to healthy juices such as detox juices, beetroot drink, rosemary ginger drink, soursop juice, and hibiscus drink.

Industrial skills development: The plan was to make ready the land for the construction of the automotive park, have 50 buses produced at the Kiira Vehicle Plant, acquire land, and complete designs for the STI Park, undertake R&D work with two academic institutions in identified STI areas, conduct two R&D surveys by UNCST, and complete the vehicle plant in Jinja and make it operational.

By 30th June 2025, an investor pack was developed for the Automotive Industrial and Technology Park (AITP), and it was presented to potential investors (South Korea, AfDB, UDB). In addition, a project concept was developed and submitted to MoFPED for review and processing into a bankable project for the Public Investment Plan (PIP). In the area of research and development, four research-based products (Freza Nanotech Uganda, Field Eyes, Mat Water Solutions, and Virtual Labs) were registered with the URSB as companies, and a market validation and refinement of the research-based products was carried out.

Kiira Vehicle Manufacturing Plant: Since FY 2018/19, a total of US\$ 412.5 billion has been invested in the Kiira Motors Corporation (KMC), against a funding requirement of US\$ 745.5 billion. To this effect, the full operationalisation of the KMC suffers a funding gap of US\$ 347 billion. This, however, has not deterred progress towards having a fully constructed vehicle manufacturing plant. The progress is presented below:

The phase one and two constructions, tooling, and furnishing of the Kiira Motors Corporation (KMC) Vehicle Plant start-up facilities with a capacity of 2,500 vehicles annually, were completed. The corporation completed the production of five out of the planned 10 buses, of which three were of the Kayoola EVS 12 series, designed for mass urban transport with features such as infotainment systems, CCTV, and access ramps. Two of the five buses already produced are part of the premium Kayoola e-Coach 12 with a range of 500 km per charge, and one was delivered to the Uganda Civil Aviation Authority (UCAA). The remaining five buses were expected to be completed by the end of August 2025.



An assembled Kayoola EV-Coach for the Uganda Civil Aviation Authority at the Kiira Vehicle Plant in Jinja

The KMC workforce grew from 165 in July 2024 to 269 in June 2025, representing a strategic investment in human capital to support the operations. In addition, a total of 127 employees attained professional membership of diverse national and international bodies, which enhanced the institutional capacity, credibility, and alignment with best global practices. Under the Graduate Research Associateship (GRA), the KMC employed 30 graduate associates. The National E-Mobility Strategy was developed and published, and an e-public transport system was piloted in Jinja City with seven buses using a cashless payment system.



Under the KMC E-Bus Operator Skilling Programme, a total of 336 e-bus operators and three e-bus technicians were trained to ensure safe operations and build local capacity for e-mobility transition. The curriculum covered electric vehicle architecture and system basics, e-bus handling on-road and off-road, charging systems, electric vehicle maintenance, and customer experience, care, and incident management. Some of the trained e-bus operators were employed by the KMC. A team of 26 staff completed a strategic industrial placement on bus production, skilling, and training at the technology partner's premises in China. The training provided hands-on knowledge at the body shop, paint shop, chassis line, and production planning, among others.

Under market system development, the corporation secured a pilot opportunity to supply two electric buses to the Dar es Salem Bus Rapid Transit system, opening up avenues for the corporation in East Africa. The KMC continued to engage prospective partners, including an offtake market engagement in Nigeria and an agreement with Scaba Scuba Ltd for fifty 7-metre buses and two 8-metre buses.

The E-Bus Xpress Venture was launched on 24th November 2024, operating along the Iganga–Jinja–Mbiiko route. It marked Uganda's first all-electric and fully cashless public transport system. The revenue generation from the E-Bus Xpress Venture increased from USh 3,540,000 in September 2024 (pilot phase September and October) to USh 40,260,000 in June 2025.

According to the National e-Mobility Outlook Report 2024, Uganda's annual electric vehicle production capacity soared to 10,000 units between July 2024 and June 2025, with an impressive local content of up to 40%. This includes electric buses by Kiira Motors Corporation, electric motorcycles by GOGO Electric, Zembo and Spiro, and electric bicycles by Karaa Africa, eBee, Harakka, and AfricroozE. The key e-mobility players generated over USD 5 million in revenues in 2024, and have collectively helped avoid over 270,000 metric tonnes of CO₂ equivalent emissions from 2022 to 2024.

The performance of the Kiira Vehicle Plant activities was affected by manpower shortages³ for the initial production stage, coupled with high turnover as the trained workers left for greener pastures. In addition, delays in fund disbursement have derailed the implementation of planned activities, leading to cost overruns and disruption of the supply chains.

3.3.3 Develop a framework for the promotion of multi-sectoral and multilateral collaborations

The intervention performance was good, at 71.3%. The planned output for FY 2024/25 was administrative and support services. The performance of the planned output is presented below:

Administrative and support services. The plan was to establish three Science, Technology, Engineering, and Innovation (STEI) think tanks, establish two partnerships to increase the collaboration in Science Technology and Telecommunication (ST&T) activities in the country, and undertake outreach to four schools and institutions of higher learning. By 30th June 2025, a cumulative total of eight think tanks were established and operational at the STI Secretariat, including Mobility, Pathogen Economy, Industry 4.0, Engineering, and Aerospace.

To establish partnerships to increase the collaboration in ST&T activities in the country at different levels, the STI initiated the development of an open data exchange platform, and work was ongoing. The development of Uganda's foundational Artificial Intelligence (AI) models was ongoing. In addition, Uganda's Deep Technology Strategy was developed, and the Deep

³ There are 202 workers (37 are female), against the required 900 for the initial production phase of 2,500 buses per year.



Tech Summit was hosted. The STI also reached out to 100 schools to support the raising of STI human resources.

3.3.4 Design and conduct practical skills development programmes

The planned outputs under the intervention were policies, regulations, and standards and industrial skills development. The intervention performance was poor at 40%.

Policies, regulations and standards: The plan was to develop the national strategy for integration of Science, Technology and Innovation (ST&I), develop an STI outreach and advancement strategy, amend Acts for UIRI and UNCST and a national STI law in place, and develop a functional STI information management system.

By 30th June 2025, the first phase of the database for the STI information management system was developed; however, due to the need to capture all parameters and aspects that will support the new STI strategic direction, the development was halted. The amendment of the UIRI and UNCST, and a national STI law, was halted to enable the completion of the STI strategy, which will inform the proper direction for the new policies and laws. The STI advancement strategy was not finalised.

UIRI also trained 550 individuals in paper and briquette production, cosmetics, and soap making. In addition, 172 (80% women, 70% youth) individuals were trained in bakery skills, and 451 participants (269 women, 182 men) were trained in ICT and entrepreneurship.

3.3.5 Support academia and research institutions to acquire research and development infrastructure

The intervention aims to support academia and research institutions to acquire research and development infrastructure, including laboratory renovations and laboratory equipment. It also targets supporting researchers to acquire the necessary approval to undertake scientific research and the empowerment of Research and Ethics Committees in institutions. The FY 2024/25 planned outputs were industrial skills development and industrial and technological incubation. The achievements by 30th June 2025 are presented hereunder:

Industrial skills development: During the period under review, existing research projects in universities were catalogued. The Academia to Business Working Group was fully constituted with 10 members from the universities of Makerere, Kyambogo, Busitema, Nkumba, and the Islamic University in Uganda (IUIU). The R&D survey was undertaken, and the draft report was reviewed by the UNCST, and the comments were being addressed. The innovation survey was also undertaken, and the report was being compiled. A total of 36 meetings of the Scientific Research Review Ethics Committee were held as planned.

In addition, members of Institutional Ethics Committees (IECs) and scientists received short-term training (five days) designed to boost their capacity to review and approve research proposals so that they can meet ethical standards. An analysis was made for PhD research that generates new knowledge and deepens understanding in specialised fields. All these studies were anticipated to lead to innovative ideas, products, and technologies that can address pressing societal challenges, improve industries, and enhance the quality of life.

Industrial and technological incubation: The plan was to upscale the Nakawa incubation centre to accommodate the rising demand for incubation services, and continue supporting 70 virtual and in-house incubatees in dairy, textiles, bakery, engineering, and cosmetics. By 30th June 2025, a total of 22 new businesses joined the UIRI incubation programme, receiving tailored technical support, thus expanding the incubation footprint. UIRI also supported 104 virtual and in-house incubatees in dairy, textiles, bakery, engineering, and cosmetics. One



incubatee in dairy (Lockstock and Barrow) graduated from the incubator after successfully setting up their own premises. The upscaling of the Nakawa Incubation Centre to accommodate the rising demand for incubation services was deferred to the next quarter due to funding.

Table 3.6 shows the overall sub-programme performance.

Table 3.6: Performance of the STI Ecosystem Development Sub-programme as at 30th June 2025

Outputs Performance								Remark
Intervention	Output	Financial Performance			Physical Performance			
		Annual Budget (US\$)	% of Budget Received	% of Budget Spent	Annual Target	Cum. Achieved Quantity	Physical Performance Score (%)	
Support the establishment and operations of technology & business incubators and technology transfer centres	Industrial and technological incubation	650,000,000	100.0	100	100	80	80	Good performance
	Industrial skills development	500,000,000	100.0	100	100	99	99	Recruitment of the first cohort of trainees took place in June 2025 for the EDIC in Rwebitete, and training was ongoing.
	Infrastructure development and management	2,915,289,877	99.2	100	100	33	33.6	An industrial-scale essential oil extraction machine was installed in Lira to support large-scale aromatics processing
Increase investment in R&D in key priority sectors like agriculture, oil & gas, minerals, energy, health, & transport.	Model value addition services	500,000,000	100.0	99	100	0	0	Poor performance. Funds under the UIRI were spent on activities outside the plan.
	Administrative and support services	31,874,974,761	100.0	100	100	93	93.0	Very good performance



Outputs Performance								Remark
Intervention	Output	Financial Performance			Physical Performance			
		Annual Budget (US\$)	% of Budget Received	% of Budget Spent	Annual Target	Cum. Achieved Quantity	Physical Performance Score (%)	
	Research and development	637,875,929	100.0	100	100	33	33.0	Poor performance
	Technology and innovation	270,694,000	100.0	100	100	50	50.0	Fair performance.
Support the establishment and operations of technology & business incubators and technology transfer.	Industrial skills development	40,500,000,000	100.0	100	100	71	71.3	Good performance. Uganda's annual electric vehicle production capacity soared to 10,000 units between July 2024 and June 2025, with an impressive local content of up to 40%.
Design and conduct practical skills development programmes (STI)	Policies, regulations and standards	400,000,000	100.0	100	100	40	40.0	Poor performance and a number of policies and strategies were not finalised.
	Total	78,248,834,567						
Average Outputs Performance							55.5	
Outcomes Performance								
Outcome Indicator				Annual Target	Achieved		Score (%)	Remark
Proportion of the population using appropriate technologies (%)				10	8		80	
No. of laboratories/ R&D facilities improved or established				1	1		100	
No. of ST&I laws and regulations drafted and submitted to Cabinet/Parliament				1	0		0	
Percentage of inspected entities that are compliant to ST&I regulations				5	0		0	
Global Innovation Index (%)				31	31		100	
Gross expenditure on R&D (GERD) as a % of GDP				0.6	0.5		83	
Number of applications for IP protections per annum				4000	4230		100	
Researchers in R&D (per million people)				50	50		100	



Outputs Performance								Remark	
Intervention	Output	Financial Performance			Physical Performance				
		Annual Budget (US\$)	% of Budget Received	% of Budget Spent	Annual Target	Cum. Achieved Quantity	Physical Performance Score (%)		
Technicians in R&D (per million people)					60	62		100	
Average Outcomes Performance								73.7	
Overall Sub-programme Performance								61.9	Fair performance

Source: Field Findings

Sub-programme challenge

There was no budget allocated under NSTEI-SEP for the operations and maintenance of equipment under the Technology Support Unit (TSU), or for the operationalisation of the EDIC.

Conclusion

The overall performance of the sub-programme was rated as fair, with an achievement level of 61.9%. The construction and equipment installation for phases one and two at the Kiira Vehicle Plant were completed and handed over. Designs for the 2025 buses were finalised, and five out of the planned 10 buses were assembled, with one bus delivered to the Uganda Civil Aviation Authority (UCAA). A total of 336 e-bus drivers were trained under the Electric Bus Operator Skilling Programme. The e-mobility mass transit system was also piloted, with seven buses operating along the Iganga–Mbikoko route via Jinja City. The upgrade and renovation of the Lira and Nakawa Incubation Centres for agricultural produce were ongoing, at varying stages of completion. Additionally, industrial training was provided to intern students by UIRI, and the development of the National STI Information Management System database was in progress. The draft STI policy was developed; however, it had not yet been approved.

3.4. NDP III outcome indicators performance for the Innovation, Technology Development and Transfer Programme

The NDP III outcome indicator performance was poor. Three out of the twenty NDP III outcome indicators were achieved. These were: 1) Gross Expenditure on R&D (GERD) as a percentage of GDP, 2) Proportion of the population using appropriate technologies (percentage), and 3) Number of applications for IP protection per annum. A total of ten were not achieved, while seven were not reported on. Table 3.7 presents the achievement of the NDP III outcome indicator targets as at 30th June 2025. Some of the indicators were not achieved because they depended on other complementary indicators; for example, registration of Intellectual Property (IP) rights relied on the harmonization of the IP laws of the STI stakeholders, such as the innovators, STI secretariat, and the host institutions.

Table 3.7: NDP III (FY2020/21-2024/25) outcome indicator performance for the ITDT programme as at 30th June 2025

Indicators	Baseline FY2017/18	FY2020/21 target	FY2024/25 target	FY2024/25 achieved	Status
No. of firms graduating from incubators	0	10	75	3	Not achieved
No. of new technologies adopted	0	0	10	5	Not achieved
Percentage of firms using innovative technologies	0	5	25	5	Not achieved
Percentage of new technologies or research results commercialized	0	1	6	2	Not achieved
Business enterprise sector spending on R&D (% of GDP)	0.01	0.05	0.21	0.05	Not achieved
Proportion of the population using appropriate technologies (%)	0	0.1	0.3	8	Achieved
No. of laboratories/ R&D facilities improved or established	0	4	5	1	Not achieved
No. of ST&I Laws and Regulations drafted and submitted to the cabinet/parliament	1	2	3	0	Not achieved
Percentage of inspected entities that are compliant to ST&I regulations	0	0	60	0	Not achieved
Global Innovation Index (%)	25.32	27	35	31	Not achieved
Gross Expenditure on R&D (GERD) as a % of GDP	0.4	0.5	1	0.5	Achieved
Number of applications for IP protection per annum	200	400	1,800	4,230	Achieved
Researchers in R&D (per million people)	50	100	600	50	Not achieved
Technicians in R&D (per million people)	20	40	120	62	Not achieved
No of IPs registered	2	6	22		Not reported on
No. of technology transfer centres established and operationalized	0	5	25		Not reported on
No. of Science and Technology Parks established and operationalized	0	0	1		Not reported on
No. of incubators established and operationalized	2	4	8		Not reported on
No. of firms graduating to S&T parks	0	0	15		Not reported on
Value of International payments for the use of intellectual property (2/1) dropped	1.8	5	46.6		Not reported on

Source: Innovation Technology Development and Transfer PIAPs and reports (FY2020/21-FY2024/25)



CHAPTER 4: CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

The overall performance of the Innovation, Technology Development, and Transfer (ITDT) Programme in FY 2024/25 stood at 69%, indicating a fair outcome. The Industrial Value Chain Development Sub-programme registered good performance, while the STI Ecosystems Development sub-programme performed fairly. The ITDT Programme made notable progress in strengthening Uganda's Science, Technology, and Innovation (STI) ecosystem. Key achievements included advancements in vaccine research, clinical trials for natural therapeutics, and infrastructure development in the pharmaceutical and electric mobility industries. Initiatives such as Kiira Motors Corporation, BIRDC, and Dei BioPharma recorded tangible milestones in local manufacturing, capacity building, and technology transfer.

Implementation of research and development (R&D) grants lagged behind due to continued delays in fund authorisation and challenges in procuring essential equipment, resulting in project and funding spill-over into subsequent financial years. Over-subscription of grantees in the face of limited resources led to inadequate funding for some projects, resulting in token support and unmet targets. Arrangements to improve the STI human resource capacity advanced with the recruitment of protégés and enrolment of postgraduate students across various research projects. However, delays in finalising policies, regulations, and strategies affected the development of the legal and regulatory framework.

Despite these successes, several systemic challenges impeded optimal performance. These included intermittent and delayed funding, procurement bottlenecks, inadequate staffing, infrastructure limitations (especially power and water), and the slow harmonisation of policies on intellectual property rights. Furthermore, many promising initiatives remained at pre-commercialisation stages due to delays in approvals and insufficient support structures. Besides, the STI was taking on many grantees in spite of inadequate resources, leading to tokenism for some grantees, and was, therefore, unable to achieve the intended targets within the project period.

The continued delay in recruiting staff for EDIC hindered the achievement of the project objectives and the delayed finalisation of operational documents affected non-tax revenue generation and commercialisation. The misalignment between the Programme Implementation Action Plan (PIAP) and the Annual Work Plan further impeded performance. By addressing these key areas, the ITDT Programme can significantly increase its impact and contribute to Uganda's goal of becoming a leader in technological innovation and industrial development in the region.

4.2 Recommendations

1. The STI Secretariat should enhance timely and predictable funding: Streamline fund disbursement processes to avoid delays that disrupt research and implementation timelines, including the establishment of well-functioning Procurement and Disposal Units (PDUs) within STI institutions.
2. The STI Secretariat should accelerate infrastructure completion and utility provision: Prioritise completion and operationalisation of GMP, GLP, and other critical research infrastructure. Ensure reliable access to essential utilities like power and water, particularly in high-demand facilities such as Africa Coffee Park and Dei Bio Pharma.
3. The STI Secretariat should fast-track policy and legal frameworks: Expedite approval of the draft STI Policy, IP sharing agreements, and the STI outreach strategy to create a more enabling environment for innovation commercialisation.



4. The STI Secretariat should support commercialisation of research outputs: Facilitate fast-tracked approval and market entry for innovations that have completed trials, especially in the areas of natural therapeutics, diagnostics kits, and agro-industrial products. The innovators should team up with financial analysts, economic analysts and business analysts for ease of cost analysis.
5. The STI Secretariat should encourage better coordination between research institutions, implementing agencies, and the private sector to avoid duplication, improve efficiency, and foster market-driven innovations.
6. The STI Secretariat should invest in outreach and awareness creation to increase public engagement and awareness about STI initiatives to build national buy-in, stimulate youth interest in STEM, and attract private sector investment.



REFERENCES

1. Government of Uganda (2020). National Development Plan III, FY 2020/21 to FY 2024/25 (NDPIII). National Planning Authority, Kampala.
2. National Planning Authority (2021). National Development Plan Programme Implementation Action Plan, Kampala.
3. Project Implementation Progress Reports (Q1-Q4), for FY 2024/25 for The National Science Technology Engineering Innovation-Skills Enhancement Project.
4. Science Technology and Innovation (2024/2025). Vote 167: Annual and Quarterly Work Plans FY 2024/25.
5. Science Technology and Innovation (2025). Vote 167: Quarterly Performance Reports (Q1-Q4) FY 2024/25.
6. Uganda Industrial Research Institute Annual and Quarterly Work Plans FY 2024/25.
7. Uganda Industrial Research Institute (2025). Quarterly Performance Reports (Q4) FY 2024/25.

**Annex 1: List of interventions monitored during the first half of FY 2024/25**

Sub programme	Intervention
Industrial Value Chain Development Sub-programme	Design and implement special programmes for nanotechnology, space exploration, nuclear technology, biosciences, ICT and engineering
	Strengthen the function of technology acquisition, promotion as well as transfer and adoption
	Increase investment in R&D in key priority sectors like agriculture, oil and gas, minerals, energy, health, transport
STI Ecosystems Development Sub-programme	Support the establishment and operations of technology & business incubators and technology transfer centres
	Increase investment in R&D in key priority sectors like; agriculture, oil & gas, minerals, energy, health, transport
	Develop a framework for promotion of multi-sectoral and multilateral collaborations
	Design and conduct practical skills development programmes
	Support academia and research institutions to acquire research and development infrastructure

Source: Author's Compilation



Annex 2: List of grantees funded by STI during the FY 2023/24 (implementation was in FY 2024/25)

Venture Title/Project	Grant Amount (US\$)	Brief Description of Grant and Key Objectives
Establishment of a Common User Packaging Facility	2,700,000,000	This project will establish a Government-owned common user facility for packaging at NSTEI-SEP, Namanve targeting value-added food products. This will address lack of affordable and quality packaging materials for our food manufacturing ecosystem. Objectives: 1) To conduct value chain mapping and analysis of the flexible packaging value chains; 2) To develop prototypes and manufacturing processes for flexible packages; and 3) To set-up and commercialise a packaging manufacturing facility for affordable and quality flexible packages.
Direct Reduction Technology for Metallisation of Ugandan Iron Ore	800,000,000	This project aims to establish capacity for value addition to our iron ore using eco-friendly gas reduction technology. The first level is a prototype with capacity of 1 tonne per cycle. Objectives: 1) Process design; 2) Prototype fabrication; and 3) Prototype testing and validation
Fabrication of Lithium and Sodium Ion Batteries for Electric Vehicle and Rechargeable Batteries for Energy Storage Using Locally Available Materials in Uganda	1,750,000,000	This project will demonstrate the potential for developing electric vehicle batteries from our lithium and graphite. Objectives: 1) To characterise the composition of local lithium and graphite ores; 2) To establish a small-scale process for purification of lithium and graphite from the ores on laboratory-scale; 3) To purify the raw lithium and graphite to battery grade materials and test for physical and chemical properties; and 4) To evaluate the purified lithium and graphite materials for energy storage ability.
Development of a Solar Water Pump	600,000,000	This project will result in local manufacture a solar-powered water pump through reverse engineering. Objectives: 1) To design pump components and systems; 2) To assemble the pump component into working prototypes; 3) To undertake field validation studies to assess pump performance.
Development of Technology for Application of Iron Oxide Nanoparticles in Wastewater and Drinking Water Treatment	350,000,000	This project aims to develop novel technology for treatment of industrial effluent and domestic water using nanoparticles. It is being funded for a second year. Objectives: 1) To optimise the performance of the water treatment system based on IONPS; 2) To design a water treatment system that uses iron oxide nanoparticles (IONPs) as treatment medium; and 3) To develop scaling plan for mass production of IONPs based water treatment systems.
Solar-powered Egg Incubator	250,503,600	This project will fabricate high-quality, high-capacity solar-powered egg incubators for commercial poultry farming. Objectives: 1) To fabricate an engineering prototype; 2) To establish a production line for the egg incubators; 3) To produce three (3) 120 egg incubators and three (3) 240 egg incubators; and 4) Field validation.



Venture Title/Project	Grant Amount (USh)	Brief Description of Grant and Key Objectives
Transforming Uganda into a Global Electronics Powerhouse	899,000,000	This project will establish a state-of-the-art SMT manufacturing line for electronics, which will provide subsidized services to the local electronics development ecosystem. Objectives: 1) To establish infrastructure for a world standard local Surface Mount Technology (SMT) facility in Uganda with a capacity of 2,000 units a month; 2) To undertake contract manufacturing for other players in the electronics development industry in Uganda and across the region; and 3) To undertake research and development targeting niche products such as Electronic Control Units (ECUs).
Local Electronics Design and Hardware Enterprise Incubation	1,153,470,000	This project will support local electronics innovators to develop electronics products such as those used in consumer, industrial, medical, avionic, and automotive applications, by designing, prototyping, testing, and assisting in certification. Objectives: 1) Establish electronics design facility; 2) Provide seed funding for prototyping; and 3) Human capital development for local electronics design and prototyping ecosystem.
Silicon Wafer Manufacturing in Uganda	500,000,000	The project will conduct a feasibility and viability assessment of converting Uganda's silica sand into wafers, potentially tapping into the global USD 20 billion wafer industry. Objectives: 1) Lab characterisation of Uganda's silica sand; 2) Techno-feasibility study for the sand to wafers value chain in Uganda; and 3) Industrial process design for pilot plant.
The MDA Technology Support Project	600,000,000	The project will establish human capital and enterprise competitiveness for local technology companies to develop software solutions for Government MDAs. Objectives: 1) Needs assessment for 2 MDAs; 2) Identify competent tech companies to undertake development; and 3) Develop and pilot the software.
Commercialisation of Academic Research Initiative	300,040,000	The project will create a pathway for prototypes in universities to enter the market by providing technical and business support to budding innovators, thus addressing the limited translation of research into commercial products. Objectives: a) Characterise Uganda's Science, Technology and Innovation (STI) ecosystem for incubating academic research products/services into viable businesses; b) Sensitise universities on policies, processes and commercial benefits of commercialising research and innovation outputs; c) Support commercialisation of at least five (5) research-based products or services deploying fourth industrial revolution technologies in agriculture and education; and d) Document the experiences and lessons learnt from the support of the five enterprises to guide larger scale national programmes in the translation of academia to business research.
Enhancing the Efficiency and Accessibility of Public Transportation through the Deployment of Contactless Card Payment Technology	433,000,000	The project aims to develop and deploy Uganda's first cashless ticketing system for mass transit. This will lead to formalisation of the public transport sector with streamlined ticketing and revenue collection mechanisms; Enhanced efficiency and accessibility of public transportation and improved revenues from public transport. Objectives: 1) Develop a secure contactless ticketing and payment system for public transportation in Uganda, to facilitate revenue sharing among key stakeholders and minimize cash transactions; and 2) Pilot the contactless ticketing and payment system on the Kayoola EVS buses.
Productivity Acceleration Support Service	2,400,000,000	The project aims at developing a sustainable solution to household productivity through capacity gap diagnosis and empowerment of households to produce efficiently. This will lead to the transitioning of subsistence households into the cash economy with or



Venture Title/Project	Grant Amount (US\$)	Brief Description of Grant and Key Objectives
		without PDM funding. Objectives: 1) Develop the Productivity Acceleration Support Service; 2) Develop a distribution model for the Productivity Acceleration Support Service; and 3) Establish a cooperation that will drive the commercialisation of the Productivity Acceleration Support Service.
Developing Sustainable Mushroom Agribusiness Support Services (MASS) for Improving Livelihoods and Sparking Competitive Agro-Industrialisation in Bukedi Sub-region	900,000,000	The project aims at developing a least-cost substrate combination for the growing of mushrooms. This will improve access to optimal substrate/medium for mushroom growing. This will reduce the importation of cotton seed cake for mushroom growing. Objectives: 1) Develop a product of the mushroom agribusiness support-based substrate for mushroom growing; 2) Develop a distribution model for the mushroom agribusiness support-based substrate for mushroom growing; and 3) Establish a cooperation that will drive the commercialisation of the mushroom agribusiness support-based substrate for mushroom growing.
Production and Commercialisation of Mosquito Repellent Lotions from Ethnomedicinal Plant Oils and Shea Butter	500,000,000	This project aims at utilising the shea butter as a base for the plant extract mosquito repellent. This will contribute to the reduction of imported petroleum-based mosquito repellents into the country. It will also contribute to the increased access of mosquito repellents, hence preventing malaria in the country. Objective: 1) To obtain all the necessary licensing and certification for production of mosquito repellents before the viable products are introduced to the market; 2) Trial sales of the viable mosquito repellent products; and 3) To carry out supply chain analysis and optimisation.
Improved Indigenous Chicken Line	200,000,000	This project aims at identifying and preserving the best performing local chicken breed lines in the country. This will lead to the development of a commercial dual-purpose chicken breed line from our indigenous chickens. The objectives: 1) To evaluate on-farm performance of the improved indigenous chicken line; 2) Stabilising and mass production of the improved chicken line; and 3) Market-oriented supply chain platform for the improved indigenous chicken line set-up.
Sweet Potato Value Chain Development through Technology Transfer and Promotion	1,500,000,000	This project is focused on developing the sweet potato value chain by developing high-value products out of the sweet potato plant parts. This will lead to a replacement for wheat for breads. Objectives: 1) To support the development of a supply chain and support the activities of producing bread, sanitiser and spirit, breakfast cereal, beef and chicken-flavoured puffed snacks, and baby foods; 2) To establish a central processing plant and satellite hubs for piloting the primary activities of the bread, sanitiser and spirit, breakfast cereal, beef and chicken-flavoured puffed snack, and baby food value chains; and 3) Develop a distribution model for the sweet potato high-end value-added products.
Piloting an Activity-Based Learning and Teaching Approach for Advanced Level Science Students	199,509,910	This project targets the development of a synergistic capacity development for Science, Technology and Innovation (STI) among A-level students. This will simplify how science education is delivered with minimal materials. Objective: 1) Develop tools for capacity development and practical skilling among A-level science students; and 2) Pilot the tools for capacity development and practical skilling among A-level science students.

Venture Title/Project	Grant Amount (US\$)	Brief Description of Grant and Key Objectives
Establishment of BU Agro-Science Park	300,000,000	This project aims at establishing a facility that can create an interface between communities and the university. This will increase offtake of locally produced agro-products as raw materials for high-end processing. The facility will develop research-based solutions that support the efficient productivity by communities. Objectives: 1) Establish the suitability of Arapai Campus for the Agro-Science Park; 2) Profile basic information to guide on the products development for all the crops; 3) Develop the Agro-Science Park project proposal (feasibility study, business plan (10 years), financial model (10 years), pitch deck); 4) Profile technology for local development and transfer; and 5) Develop the prerequisite human capital for the Agro-Science Park.
Science Laboratory Reagents Project (SLaRP)	450,000,000	This project will develop science laboratory reagents from our local minerals and other inputs. It has high potential for import substitution. Objectives: 1) Map/profile local sources of raw materials for production of school chemicals and reagents; 2) Test, select and optimise appropriate methods-protocols and procedures for productions of products; and 3) Produce prototypes of chemical and reagents (NaOH, H ₂ SO ₄ and HNO ₃).
Incubating Mbarara ZARDI Prototype Starter Cultures for Enhancing Productivity and Safety of Fermented Milk Products In Cottage Industries In Uganda	250,000,000	This project will yield locally developed starter cultures for the milk industry, with potential for import substitution and export. Objectives: 1) Determine the properties of the four (4) starter cultures developed by NARO - Mbarara ZARD; 2) Assess the potential of the developed starter cultures in improving the quality and quantity of fermented dairy products in the cottage industries; 3) Evaluate the effects of the Mbarara ZARDI developed probiotic starter culture on the ulcer causing <i>Helicobacter pylori</i> and diarrhoea-causing <i>Escherichia coli</i> ; 4) Incubate the production of the prototype into commercialisable local starter cultures.
Pearl Breakfast Cereal	150,000,000	This project will develop and validate a breakfast cereal from Ugandan crops. Objectives: 1) Produce recipes for nutritious instant breakfast cereal from composites of maize, cassava and Amaranthus; 2) Evaluate the consumer preference of the formulated recipes of breakfast cereals from composites of maize, cassava and Amaranthus; 3) Produce pearl cereals from maize, cassava and Amaranthus for test marketing; 4) Develop a marketing strategy for market entry of Pearl Breakfast Cereal brand as an alternative Ugandan-made breakfast cereal; and 5) Conduct a baseline study for the mass production facility of Pearl Breakfast Cereal brand as an alternative Ugandan-made breakfast cereal.
Development of Canned Matoke and Gonja in Retort Pouches: A Proof of Concept for Sustainable and Convenient Agricultural Innovation	600,000,000	This project focuses on value addition to matoke and gonja, our heritage crops. Novel products for that are ready to eat and packed in retort pouches/cans as well as vacuum-sealed matoke shall be explored. Objectives: 1) Characterisation of matoke/ gonja products; 2) Optimise ingredient and processing conditions for canned matoke/gonja; 3) Evaluate product quality and safety; and 4) Assess market potential and consumer acceptance



Venture Title/Project	Grant Amount (US\$)	Brief Description of Grant and Key Objectives
Space Weather Science and Education Project for Disaster Management and Preparedness	2,000,000,000	This project will develop earth observation products using satellite and geospatial data towards disaster prediction (drought, weather, landslides etc.). It will yield the premier product from our Aeronautics and Space Bureau. Objectives: 1) Requirements analysis for 2 earth observation products; 2) Product design; 3) Product development; and 4) Validation in support of PDM.
Laboratory-scale Production of Beta Propiolactone (BPL) from Cassava for application in the Pharmaceutical Industrial Value Chains	450,000,000	This project will study the chemical conversion of ethanol from cassava to produce a more valuable product, beta propiolactone (BPL), which is an essential ingredient in vaccine development. Objectives: 1) Optimise production process for beta propiolactone; 2) Synthesise the intermediate chemicals (ethanol, ethylene and ethylene oxide) required for BPL production; 3) Produce beta propiolactone at laboratory-scale for inactivation of viruses during vaccine development; and 4) Determine the quality profile of the synthesised BPL.
Preclinical Evaluation and Standardisation of Herbal Antidiabetic Prototypes – GLUCOKAT PROJECT	1,300,000,000	This project aims to develop a natural anti-diabetic therapeutic through reformulation of an existing product. Objectives: 1) Evaluate the antihyperglycemic and antidiabetic potential of the formulated prototypes using animal models; 2) Assess the toxicity profiles of the most efficacious formulated antidiabetic prototype in cell lines and animal models; 3) Analyse the phytochemical composition and contaminants of the most efficacious formulated prototype; 4) Assess and optimise the pharmaceutical properties of the of the most efficacious formulated antidiabetic prototype; and 5) Establish a GLP facility to support preclinical evaluation of natural therapeutics in Uganda.
Multiple-Function Neonatal Intensive Care Units (Baby Incubator)	250,000,000	This project will build a reproducible 10-unit neonatal incubator, building on the success of an existing prototype. Objectives: 1) Develop a fully functional neonatal intensive care unit; 2) Design and document the manufacturing process; and 3) Undertake clinical validation.
Improved UBV-01N Product for Management of Viral Respiratory Infections	1,000,000,000	This project will establish a Good Manufacturing Practices Pilot Plant for Natural Therapeutics at NCRI and support reformulation of UBV-01 for viability as an anti-breast cancer natural therapeutic. Objectives: 1) cGMP establishment; and 2) Reformulation of UBV-01 as an anti-carcinogen.
Innovative Re-Usable Unisex Sanitary Pads and Protective Gear for Salt Miners: Addressing Community Health-Related Challenges in Katwe-Kababoro Town Council, Kasese District, Uganda	300,000,000	The project will yield a unisex pad that reduces occupational health hazards among salt miners. Objectives: 1) Needs assessment; 2) Product design and prototyping; 3) Lab validation; and 4) Field validation.



Venture Title/Project	Grant Amount (US\$)	Brief Description of Grant and Key Objectives
Medicinal Plants for Sickle Cell Disease and Respiratory Tract Disorders	350,000,000	This project will yield a prototype for sickle cell disease from ethnomedicinal plants in Northern Uganda. Objectives: 1) Conduct an ethnobotanical survey; 2) Formulate a prototype against sickle cell; 3) Phytochemical analysis; and 4) Undertake toxicity analysis of promising prototype.
Animal Research Services for Enhancing Shared Efficiency and Effectiveness	1,000,000,000	This project is in the context of a common user laboratory animal facility to support animal studies for vaccine and therapeutics research. Objectives: 1) Continuous breeding and maintenance of humanised ACE2 mice; 2) Design humanised mice for diseases of interest (cancer, malaria etc.); 3) Complete refurbishment of lab animal house facility into a BSL-3 facility; and 4) Conduct animal studies for COVID vaccines.
Establishment of a Biomarker Research Facility	1,500,000,000	This is a common user facility that supports the identification and isolation of biological molecules found in body fluids or tissues that are signs of a normal or abnormal process, or of a condition or disease. These molecules are used in development of drugs, diagnostics and other biotechnology products. Objectives: 1) Finalise the establishment of the biomarker research facility at Makerere University; 2) Make in-house monoclonal antibodies against the biomarker antigens to be used in lateral flow assay testing; 3) Clinically evaluate the performance of the newly assembled rapid diagnostic test prototype for monitoring SARS-COV-2 patients; and 4) Evaluate the stability and usability of the newly assembled diagnostic test for monitoring SARS-COV-2 patients.
Evaluation of Nanoscale Materials as Adjuvants and Delivery Systems for Vaccines	200,000,000	This project is developing a nano-adjuvant for vaccine delivery, but with potential for drug delivery, e.g., targeted cancer therapy. Objectives: 1) Formulate a lipid nano-adjuvant delivery system-SARS-CoV-2-complex; 2) Determine the loading and release efficiencies of the delivery system; and 3) Determine the immunogenicity (cytokine profiles) induced after vaccination with the lipid nano-adjuvant delivery system-SARS-CoV-2 complex.
Smart Post-Partum Haemorrhage Volumetric Drape	200,000,000	Focus is on the development of a minimum viable product and clinical validation of a Smart Postpartum Haemorrhage Volumetric Drape (SMART-PVD) for early detection of postpartum haemorrhage during childbirth. Objectives: 1) Evaluate the usability and acceptability of the SMART-PVD; 2) Develop the Minimum Viable Product of the SMART PVD; and 3) Undertake clinical validation for the device.
Baby Saver Device for Affordable Neonatal Resuscitation with Intact Umbilical Cord at Birth in Uganda	350,000,000	Focus is on developing a baby saver device: a mobile resuscitation unit that can help every new-born breathe at birth, within the golden minute before clamping the umbilical cord. In Uganda, 1 new-born in every 5 births does not cry immediately at birth (Ditai et al., 2023, in press) and is at risk of hypoxic-ischaemic encephalopathy, intrapartum-related death, morbidity, and neurological sequelae (cerebral palsy) in life. Objectives: 1) Develop a minimum viable device; 2) Clinically validate device; and 3) Take device through regulatory pathway.
Vitamin D as a Therapy for Chronic Conditions	300,000,000	The project has previously shown that the majority of persons in Uganda are Vitamin D deficient. Next step is to build capacity for Vitamin D research, and manufacturing. Objectives: 1) Build and enhance human capacity for vitamin D research and its



Venture Title/Project	Grant Amount (US\$)	Brief Description of Grant and Key Objectives
		applications; 2) Build capacity for clinical work on vitamin D; 3) To build capacity for pharmaceutical manufacturing and dosage formulation of vitamin D as preventative and treatment therapy.
Local Research and Production of a Dual Vaccine for Lumpy Skin Disease and Foot and Mouth Disease in Uganda	175,000,000	Focus is on development of a dual vaccine for Lumpy skin disease and foot-and mouth disease in Uganda. Objectives: 1) Collection of new outbreak viruses for both foot-and-mouth disease (FMD) and lumpy skin disease (LSD) in Uganda for virus bank establishment; 2) Sequencing and molecular genotyping of the collected outbreak LSD and FMD viruses to determine alterations in genome sequences; 3) Creation of LSD virus vectors to shuttle and deliver protective proteins of foot-and-mouth disease viruses; 4) Conduct in vitro laboratory testing of the LSD-FMD vaccine candidates for protective vaccine properties; and 5) Conduct in vivo testing of the LSD-FMD vaccine candidates for vaccine candidate efficacy properties.
Preclinical Studies and GMP Production for Inactivated Vaccine	1,000,000,000	This is one of the pioneer human vaccine projects utilising inactivated vaccine technology. Objectives: 1) Complete animal trials – preclinical immunogenicity assessment; and 2) Produce bulk stock for clinical trials in a cGMP facility.
Investigating the Anti-Cancer Properties of Wild <i>Ganoderma lucidum</i> Mushroom Species	200,000,000	The project aims to develop an anti-cancer therapy from wild <i>Ganoderma</i> mushrooms. Objectives: 1) Develop prototype; 2) Undertake phytochemical analysis; and 3) Undertake preliminary efficacy and safety studies.
Formulation and Preclinical Evaluation of Herbal Toothpaste for Management of Oral Diseases	500,000,000	Focus is on the development of a herbal toothpaste for complete dental healing. Objectives: 1) Formulate herbal toothpaste/mouthwash from extracts of selected plants for management of oral disease; 2) Evaluate the organoleptic and physical properties of the formulated herbal toothpaste/mouthwash as per specified standards; 3) Evaluate the antimicrobial activity of the formulated herbal remedy against selected oral pathogens, <i>Streptococcus mutans</i> and <i>Staphylococcus aureus</i> ; and 4) Produce and undertake field testing of one batch of the fully tested herbal remedy.
Ethnobotanical Survey of Medicinal Plants Used in the Treatment of Diseases in the Greater Bushenye Region	200,000,000	This project aims to conserve common medicinal plants in the Greater Ankole area, and formulate prototypes for clinical trials. Objectives: 1) Propagate seedlings for commonly used and extinct medicinal plant species; and 2) Formulate two prototypes for preclinical and clinical trials.
ICT Platform for the Pathogen Economy	1,150,000,000	Focus is on the development of AI-enabled diagnostic tools for cancer, and support for AI-in-health incubation for the ecosystem. Objectives: 1) Clinical validation of cervical cancer screening platform; 2) Establish common user facilities and resources (data, compute resources etc.); and 3) Develop a framework to support incubation.

Venture Title/Project	Grant Amount (US\$)	Brief Description of Grant and Key Objectives
Development and Evaluation of Nanobody Based Point-of-Care Diagnostic Kit for Detection of COVID-19 in Saliva	400,000,000	Focus is on the development of a rapid diagnostic test for COVID-19 utilising saliva. Objectives: 1) Generation of virus-specific nanobodies; 2) Develop and evaluate saliva antigen lateral flow assay; 3) Develop and evaluate antibody capture lateral flow assay strip for the detection of antibodies in COVID-19; and 4) Develop and evaluate repurposed lateral flow assay strip for the detection of pneumonia causing pathogens (<i>Strep pneumoniae/H. influenza</i>).
In Vitro Studies of Natural Therapeutics of Uganda of Uganda (INVONAT Programme)	900,000,000	This is a common user facility for in vivo studies for natural therapeutics as well as vaccines. Objective: Take at least 15 experimental drugs through in vivo studies (safety, efficacy).
Herbal Extract Larvicide	300,000,000	Focus is on the development of a herbal extract larvicide for malaria control. Objectives: 1) Analyse the phytochemical and pharmaceutical properties of the formulated mosquito larvicide products; 2) Assess the larvicidal activities of the formulated larvicide to kill the mosquito larvae (Anopheles, Culex, Aegypti, Mansonia and Ades); 3) Assess the toxicity profiles and purity of the formulated herbal extract larvicide; and 4) Conduct the larviciding trial using the formulated herbal extract larvicide in Arocha Division, Apac District.
Clinical Trials for Natural Therapeutics	5,000,000,000	A platform to support clinical trials for natural therapeutics at no cost to the innovator. The platform can run multiple experimental drugs at the same time through the protocol. To qualify, the drugs must be notified by NDA and go through in vitro studies.
Commercialisation of <i>Phytolacca dodecandra</i> Powder – Snailtox	200,000,000	This project aims to standardise <i>Phytolacca dodecandra</i> (Snailtox). Objectives: 1) Conduct phytochemical analysis; 2) Undertake in vitro studies (bacterial/fungal sterility, in vitro cytotoxicity); 3) Animal studies (in vivo toxicity testing); and 4) Aqua ecological safety studies.
Formulation of Herbal Products for Treatment of Brucellosis and Osteomyelitis from Profiled Plants in Kigezi Region	250,000,000	This project will formulate a natural therapeutic against brucellosis. Objectives: 1) Cross-sectional ethnobotanical survey and document traditional medicinal plants used in the management of brucellosis within the cattle corridor of Uganda; 2) Determine the phytochemical constituents of selected medicinal plants used in the management of brucellosis within the cattle corridor of Uganda; 3) Evaluate the in vitro efficacy of extracts and phytocompounds from traditional medicinal plants used in the management of brucellosis in the cattle corridor of Uganda; 4) Formulate and develop a pharmaceutical grade herbal product for treatment of brucellosis; and 5) Assess and establish the acute and repeated dose toxicities of the formulated product in the treatment of brucellosis.
Adenovector Vaccine: Predclinical Immunogenicity Assessment and GMP Process Transfer	1,000,000,000	This project developed a candidate COVID vaccine using the adeno-virus technology. We developed our own indigenous vaccine backbone which we have patented and shall use for other vaccines. Objectives: 1) Complete immunogenicity studies in humanised mice; and 2) Produce bulk stock for clinical trials under cGMP conditions.



Venture Title/Project	Grant Amount (US\$)	Brief Description of Grant and Key Objectives
Development and Evaluation of Recombinant Sub-Unit SARS-COV-2 Spike Protein-Based Sub-Unit Vaccines	1,500,000,000	This project developed a candidate COVID vaccine using recombinant vaccine technology. Objectives: 1) Establish cGMP for pilot production of subunit vaccine; and 2) Produce vaccine for clinical trials.
Development of a Telemetric Shunt System for Hydrocephalus Treatment	200,000,000	Focus is on the development of a telemetric shunt for treatment of hydrocephalus. Objectives: 1) Design and prototype; 2) Take device through regulatory approvals; and 3) Undertake clinical validation.
COVID-19 Biobank	300,000,000	Aims to establish and maintain a biobank for COVID-19 bio-samples to support drug, vaccine and diagnostics development. Objectives: 1) Support the continued running of the COV-BANK, including replenishment of COVID-19 biospecimen stocks as well as continued specimen distribution to qualifying researchers and research groups in Uganda's pathogen economy; 2) Position the biobank's human resources and infrastructure to test and evaluate new biotechnology innovations, prototypes and products in support of accelerated regulatory approvals and commercialisation in Uganda and the regional market; and 3) Position the biorepository's preparedness to efficiently respond to re-emerging epidemics and pandemics, including communicable and non-communicable diseases.
Establishing a Two-in-One Pharmaceutical and Vaccine Factory in Uganda	2,000,000,000	This is a partnership with the private sector (Alfasan, Government, Makerere) to establish the first cGMP facility for vaccine production in Uganda, to manufacture anti-tick vaccine and other locally developed vaccines. Objectives: 1) Infrastructural upgrade (civil, electrical) for full certification by NDA as cGMP; and 2) Complete anti-tick vaccine production line.
PCR and Antibody Diagnostic Kits Factory	7,000,000,000	The focus is on R&D, pilot production and commercialisation of PCR and Antibody Diagnostic Kits. Objective: Construct and equip pilot plant for production.
Development of a Uganda-Single-Origin High Altitude Grown and Roasted Coffee Product for International Market through Coffee Processing Hub System	3,700,000,000	The project focuses on amplifying efforts towards coffee value addition from earning just USD 2.5 to up to USD 15 dollars per kilo. This will improve incomes from coffee beans. Objectives: 1) Strengthen the management of coffee eco-hub-system under the Coffee Investment Consortium Uganda by 2024; 2) Empower CICU members to process and aggregate at least 1,147,236 kg of medium- to high-quality green coffee beans annually by the end of 2024; 3) Establish a tertiary hub for making Standardised Quality Uganda Single Source Origin High-altitude roasted coffee products at the Ntungamo hub under Inspire Africa Coffee Limited by the end of 2024; 4) Promote the Uganda Single Source Origin High-altitude roasted coffee products on the international market by the end of 2024; and 5) To support the innovation process for chocolate coffee, ready-to-drink coffee and coffee dispensing machine.



Venture Title/Project	Grant Amount (US\$)	Brief Description of Grant and Key Objectives
Growing and Value Addition of Mange Tout, Sugar Snaps, Baby Leaks, Baby Corn, Asparagus	330,600,000	This project aimed at developing an export system for flowers into the Eastern Europe region. This would create a reproducible system to be used by other exporters of flowers and other produce outside Uganda. Objectives: 1) Develop protocols for the multiplication and packaging of the mange tout, sugar snaps, baby leaks, baby corn, asparagus flowers; and 2) Develop an export system for the transportation and distribution of fresh flowers to Eastern Europe.
Infolistic Ankole Long-horned Beef Branding for Export of High-Value Beef Products and Tourism	798,000,000	This project focuses on developing an export-grade beef product from the Ankole long-horned cattle. This will elevate Ankole long-horned cattle from just being local cattle to a tourist attraction. Objective: 1) Develop an infolistic Ankole long-horned beef value-added products brand; 2) Develop an Ankole long-horned beef value-added product; and 3) establish an Ankole long-horned beef value-added products on the Serbian market.
Establishment of Brand-Based Traceability System for Export Using a Case of Fresh Vegetable and Fruit Exports	771,401,500	This project aims at developing a protocol for a traceability system for fresh produce to meet export demands. This will provide knowledge on how to export fresh produce into sophisticated markets. Objectives: 1) Develop an appropriate traceability system using vegetables and fruits as a case study in international market; and 2) Validate the effectiveness of the developed traceability system using vegetables and fruits as a case study in the international market.
Biodegradable Banana Fibre Hair Extensions for Hairdressing	450,000,000	This project is undertaking R&D in development of biodegradable hair from banana fibre. Prototype products are promising. Objectives: 1) Undertake product optimization; 2) Perform manufacturing process optimisation; 3) Establish a pilot plant for manufacturing; and 4) Market validation of products.
Local Manufacturing of High-Quality Shoe Brushes from Cow Tail Hair	300,000,000	Undertaking R&D in the development of high-quality shoe brushes from cow tail hair. Objectives: 1) Construction of the production area and storage room; 2) Establish production infrastructure; and 3) Undertake business development towards scaling on the market.
Operationalising the Cassava Processing Plant Business in Gulu University	588,000,000	This project focuses on amplifying the efforts to develop the high-end value addition products from cassava value chain. This will reduce imports for wheat into the country. Objectives: (1) Streamline the commercialisation process to articulate the roles of the different operational staff independent of academic duties and responsibilities. This will strengthen the capacity of the University in operationalising the business incubation centre to complement research and training; (2) Fix and operationalise the existing infrastructure utilising the existing capacity of about 4,000 kg per day to commercialise starch and high-quality cassava flour (HQCF); (3) Develop a realistic business plan for cassava processing based on prevailing economic conditions and parameters; and (4) Extend the value chain to make laboratory grade ethanol, animal feeds, cassava/millet and cassava/sorghum composite flours, briquettes and blended foods using the existing equipment, packaging and funding generated from proceeds of scaled production to generate income and create jobs without additional funding.



Venture Title/Project	Grant Amount (US\$)	Brief Description of Grant and Key Objectives
Silkworm Egg Production Unit in Uganda	1,671,846,667	This project intends to make available affordable silkworm eggs which are locally produced and viable. This will increase access to viable silkworm eggs in the country and save cocoon producers a lot of losses. Objectives: 1) Establish silkworm egg producing facility; and 2) Distribute viable silkworm eggs to cocoon producers in the country.
Developing a Medicinal Product for Relief of Hangover, Alcohol Poisoning and Pain	881,800,000	The team has developed a natural remedy for hangover, with potential for analgesia. Objectives: 1) Undertake In vivo studies; 2) Establish cGMP pilot production line; 3) Undertake market validation studies (as food supplement); and 4) Undertake clinical trials to prove analgesic properties.
Apokor Cassava Value Addition Project (ACAVAP)	300,000,000	This project focuses on amplifying the efforts to develop the high-end value addition products from the cassava value chain. This will reduce imports for wheat into the country. Objectives: 1) Develop cassava products brands such as HQCF, and starch, among others; and 2) Develop a distribution model for the cassava products brands.
Developing a National Network of STI Excellence as a Foundry for Transformative Human Capital Development	2,000,000,000	This project aims to develop national human capital for STI, by identifying, nurturing, skilling and deploying industrial scientists. Objectives: 1) Establish institutional framework for a national network; 2) Develop training curricula; and 3) Train 18 protégé scientists.





Plot 2 -12 Apollo Kaggwa Road
P. O. Box 8147, Kampala - Uganda
www.finance.go.ug