



**UGANDA INSTITUTE OF INFORMATION AND  
COMMUNICATIONS TECHNOLOGY**

**FINAL REPORT**

***Prepared by:***

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October, 2022

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## 1.0 OVERVIEW OF THE ASSIGNMENT

Uganda Institute of Information and Communications Technology (UICT) is a Public Tertiary Institution established by Statutory Instrument No. 79 of October 2005 under Ministry of Education and Sports (MoES) and is regulated by National Council for Higher Education (UNHE) under Universities and Other Tertiary Institutions Act (UOTIA) 2001 as amended 2003, 2006. The Institute's mandate is to provide high quality market-driven and skills-based training, research, innovation, pre-incubation and consultancy services that support a knowledge society. The Institute is managed and operated by Uganda Communications Commission (UCC) as provided for by Section 5 (W) of Uganda Communications Act 2013, which mandates UCC to manage and operate UICT.

Currently, UCC is spearheading the transformation of the Institute into a world-class centre of excellence in ICT skills-based training/learning, research, innovation, pre-incubation and consultancy. It is worth noting that, Information and Communications Technology (ICT) is a key pillar in actualization of efficient and effective service delivery for Uganda. Thus, UICT is positioned as an advisory centre to direct and advise the stakeholder both in private and public sectors on matters relating to ICT trends, applied research and relevant education programmes.

In November 2021, UICT (hereinafter referred to as “the Client”) contracted Empower Consult (hereinafter referred to as “the Consultant”) under Procurement Reference No. UICT/CONS/20-21/00009 to undertake ICT Skills and Training Needs Assessment (STA) to identify key technical and functional capacity gaps at the Institute and develop ICT Skills and Training Action Plan (STAP) to guide Management in implementing a turnaround strategy aimed at transforming UICT into a regional centre of excellence in ICT human capacity development, research and consultancy.

The overall objective of the assignment was to establish the UICT market ecosystem status and develop a roadmap to enable UICT develop and promote market driven training programmes and services in areas of ICT skills development, Research and Consultancy. The specific objectives of the assignment were to:

- i) Conduct an AS-IS Landscape Assessment (ICT HR Capacity) of ICT professionals' competencies (knowledge, skills possessed and behaviours) specific to specialized sectors of Education, Agriculture, Oil and Gas, Manufacturing, Health, ICT, among others;
- ii) Establish the desired TO-BE State of ICT skill sets for both ICT and Non-ICT professionals in the target sectors;
- iii) Establish UICT academic staff capacity and relevancy of the training programmes from the perspective of students and alumni;
- iv) Identify priority ICT training programmes and other capacity building interventions targeting UICT staff so as to enable UICT deliver the identified recommendations; and
- v) Develop an ICT Skilling Training Action plan with its associated implementation framework for implementing recommendations arrived during the gap analysis.

In order to achieve the objectives of the assignment, the Consultant undertook the following key activities:

- i) Conducted extensive desk review on best-practice frameworks and implementations such as the Skills Framework for the Information Age (SFIA), ICDL, Skills Framework for Information Communications Technology (ICT), the UNESCO Digital Skills Framework and the Fourth Industrial Revolution for the Earth and the Skills Portal among others as means of identified desired skills for knowledge based digital economy workforces. Also, a number of reports and documents were reviewed including UICT strategy plan, UICT turnaround strategy among others.
- ii) Conducted a benchmarking study on institutions on the continent with similar mandate and aspiration like UICT so as to learn best practices of running a sustainable ICT skills development institution that is responsive to market forces.
- iii) Conducted extensive stakeholder consultations using a number of methods including; key informant interviews, focus group discussions, enumerated survey questionnaire among others.
- iv) Held a number of knowledge co-creation workshops with the team and stakeholders to visualise the future of ICT skills demand and supply patterns.
- v) Prepared a number of outputs in line with the terms of reference for the assignment.
- vi) Prepared the Assignment Completion Report (**This document as the final deliverable**).

Therefore, this Final Report is submitted to the Client as the last deliverable in line with the Contract. The report provides a systematic account of the assignment execution process, the results, challenges encountered during implementation, lessons learnt and provides recommendations to the Client as part of institutional learning and organization memory.

## **2.0 THE EXECUTION TEAM**

As detailed in our proposal and later in our inception report, the Consultant deployed a multi-disciplinary team with a reinforcing blend of knowledge and expertise on the subject matter to undertake the assignment. The core team was composed of the following experts;

- i) Frederick Anyine- Project Manager and Institutional Development Specialist
- ii) Joreme Ojulun- Senior HR Capacity Building Expert and Team Leader
- iii) Henry Tumusiime- Manpower Planning Expert
- iv) Dr Drake Patrick Mirembe- ICT Expert and Data Scientist

The core team utilized services of back-office support staff, who provided secretarial services, coordination support and quality assurance of the assignment deliverables.

### **3.0 ASSIGNMENT EXECUTION APPROACH AND METHODOLOGY**

The assignment was executed using participatory and consultative approach that involved relevant stakeholders at each phase of execution. This was purposed to ensure consensus, facilitate knowledge transfer and ownership of the final output. The Consultant executed the assignment through four main phases: Phase1-Inception; Phase 2- ICT skills and training needs assessment; Phase 3 ICT Skills Action Plan and phase 4- Assignment Completion. Below is a detailed description of each Phase.

#### **Phase 1: Inception**

This Phase of assignment execution involved the following key activities:

**Entry Meetings:** Upon receiving the signed Contract from the Client, the Consultant held entry meetings with the Client to get consensus on the scope of work, stakeholders to be consulted, available documents for review, methodology and work plan for the assignment, list of documents needed from UICT, delivery timelines, assignment risk register, quality control, obligations of each party, among others.

**Desk review** After the entry meetings, background documents were reviewed to provide an appropriate context for the assignment, upon which the inception report was developed. The documents provided by the Client were reviewed to enhance the Study's situation analysis of the organization. The documents included Ministerial Policy Statements, Strategic Plans, Annual Reports and Staff Establishment Reports.

**Stakeholder Mapping:** From the entry meetings and preliminary document reviews, key stakeholders to be consulted during the execution of the assignment were identified and the Strategy of engaging them was developed. A stakeholder mapping and engagement matrix was developed.

**Development of data collection tools development:** Data collection instruments were developed, tested, and validated and structures of all deliverables designed.

**Assignment team mobilization and orientation:** the assignment execution team was mobilized and oriented on the task.

**Inception report:** A draft inception report describing the Consultant's understanding of the assignment, the agreed completion schedule and the associated work plan, staffing, coordination plans and approach for the stakeholder consultation was prepared and presented to the Client's Contract Management Team for review and guidance as standard procedure. The comments from the Client were incorporated into the final approved inception report. The deliverable from this Phase was an acceptable **Inception Report (Appendix 1)**.

## Phase 2: ICT Skills and Training Needs Assessment (STA)

The Consultant conducted the ICT Skills Training Assessment (STA) and established institutional digital skills capacity gaps in all the selected sectors of Education, Agriculture, Oil and Gas, Manufacturing, Health and ICT (telecom, consulting and research firms, system developers, among others), involving both public and private sector organizations. The team deployed mixed methods research approach, which involved both qualitative and quantitative methods of data collection and analysis. In analyzing the ecosystem, the Consultant used Force field analysis technique and Scenario planning to establish gaps in the existing ecosystem. During this phase of the assignment execution, the following key activities were undertaken:

**Organizational Assessment:** The organizational assessment exercise was conducted to establish the current state of ICT skills and associated ICT skills development practices among the participating organizations. Specific information captured included; ICT skills development programs offered to employees (both ICT and non-ICT professionals), the skills that new ICT and non-ICT professional employees possessed, the ICT skills lacking among employees and the sources of ICT professionals, the preferred training delivery mode, length for ICT training programs and the desired ICT knowledge and skills needs per level of responsibility among both ICT and non-ICT professionals.

In addition, the Consultant undertook a tracer study on UICT alumni (primary beneficiaries) and captured views on students' motivation to take a course at UICT, benefit of the courses attended, level of satisfaction with the training infrastructure. Other views captured were on program delivery approaches, curriculum quality and implementation, curriculum design methods, learning experiences and students' opinions on how best UICT could improve their management skills and training. The study further captured opinions of ICT sector experts with extensive knowledge about the sector and ICT dynamics surrounding target organizations. From this target group, the study specifically established the current trends in ICT skills demand and supply in both public and private sectors.

**Occupational Assessment:** At occupational level, the study targeted persons at various levels of responsibility within the target organizations, that is, strategic leadership (Boards/Governing Councils), management level (CEOs and Managers), Non-ICT professional staff (for example, Accountants, Human Resource Officers, Auditors) and ICT technical staff. From these, information was captured on; staffing levels, the kind of skill ICT development trainings offered to staff, the preferred mode of training, sufficiency of ICT skills in the organizations, the ICT skills and knowledge desired by the organizations, and where the organizations sourced their ICT experts from, among others.

**Individual Self-Assessment:** The study administered survey tools at individual self-assessment level and established the current approach used in ICT skills development and other associated gaps. From the officers (both ICT and non-ICT professional staff of target institutions) information was captured on; their level of awareness and understanding of an enabling environment, level of proficiency in office productivity digital skills, knowledge and day today workplace ICT behavior patterns. Others were; level of ICT skills needed, preferred means of delivery, incentives for acquiring ICT skills, cost and affordability among others. The categories of respondents who participated in Individual Self-Assessment, included the ICT professionals, Human Resource Officers, ICT

Officers in MDAs, System Administrators, Researchers and Academicians got from across institutions within the specialized sectors of Education, Agriculture, Oil and Gas, Manufacturing, Health and ICT (telecom, consulting and research firms, systems developers), among others.

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**Desk Review:** Under this task, the Consultant undertook extensive review of literature covering recent studies on ICT skills and training needs in the country, ICT Policies, National Development Plans, strategic plans for relevant sectors, UICT turnaround strategy, UICT market assessment report, East African Community (EAC) development strategy and Africa development strategy. Other literature reviewed were; the World Bank's Digital Economy for Africa (DE4A), African Union's Digital Transformation Strategy for Africa, the UNESCO Digital Skills Framework and the Fourth Industrial Revolution for the Earth, the UNESCO Digital Literacy Global Framework (DLGF), Skills for Information Age (SFIA) and the Technology Industrial Revolution reports, among others. The desk review exercise facilitated identification of the ICT trends in Africa and in Uganda, Internet connectivity and access, ICT supply and demand trends and ICT skills competency challenges, among other parameters. Skills for Information Age and the Digital literacy Global Framework were used to benchmark on the desired ICT skills of ICT and Non-ICT professionals in a knowledge based digital economy.

**International Benchmarking:** The Consultant reviewed a number of institutions in Africa based on their similarities with UICT in terms of mandate, sector ecosystem, recognition and reputation and availability of information on their operations. The institutions were drawn from Kenya, Ghana, South Africa, Tanzania and Nigeria. The ecosystem characteristics studied comprised; rankings on international indices, namely: E-Government Development Index (EDI), International Telecommunications Union (ITU), ICT Development Index (IDI) and Global Innovation Index (GII), among others. The benchmarking exercise helped to establish the best practices and experiences in terms of ICT human capacity development and types of programs and services offered by the institutions studied. It also facilitated generation of industry ecosystem comparative matrix covering the countries studied and Uganda in terms of the social economic conditions

**UICT Human Resource Gap Analysis:** with the help of the Human Resources Gap analysis Tool, the Consultant undertook an ICT skills capacity assessment of all categories of UICT staff and established the staffing levels in terms of establishment, staff in post and the desired staffing levels. Through this exercise, the Consultant also captured the existing knowledge and skills gaps among UICT staff.

**Skills Training Assessment (STA) Report:** The Consultant prepared the STA report and presented the draft to the Client's validation team for review and guidance as standard procedure. The comments from the Client team were incorporated into the final approved report. The deliverable from this Phase was an approved **ICT STA Report (Appendix 2)**.

### **Phase 3: ICT Skills and Training Action Plan (STAP)**

In line with the Terms of Reference, the Consultant developed ICT Skills and Training Action (STAP), which operationalized the recommendations of the ICT STA Report. The

overall objective of ICT STAP was to define priority ICT training programs for both formal and informal sectors as well as define UICT staff capacity development initiatives.

In developing ICT STAP, the study undertook the following activities:

**Workforce profile analysis:** This helped to establish key market drivers affecting the future supply and demand for ICT skills in the country. The workforce profiling was achieved through SWOT and PESTEL analysis of both internal and external environments of UICT. The SWOT and PESTEL analysis enabled the identification of key ICT workforce segments critical to achieving the visions and missions of target institutions and UICT in specific. Others were the behaviors and skill characteristics required by the targeted sectors/ market segments, assumptions about future demand for ICT services in the country and the key segments of the ICT workforce that would be most critical to individual organizations.

**Forecast of future ICT skill and knowledge needs:** This exercise facilitated the identification of the ICT knowledge and skill sets, required by the future workforce (from both government and private sectors) to deliver the organizations' future ICT mission and work requirements. By far and large, the study heavily employed the following techniques to achieve the desired ICT forecast; Literature review, Key Informant Interviews and Focus Group Discussion (FGD).

**Scenario planning:** The Consultant employed scenario planning to generate narrative statements of the possible future for the ICT skills demand in all the study target sectors. The scenario planning facilitated the capture of key ICT professionals critical to the achievement of the visions and missions of the target sectors and the knowledge, skills and behaviours desired of future workforce in a knowledge based digital economy.

**Development of strategies:** The Consultant developed strategies that were used to address the identified ICT skill and knowledge gaps and linked the same to the ICT knowledge and skill requirements as contained in the manpower plans of targeted institutions. Visioning and strategizing techniques were employed in coming up with comprehensive and responsive strategies.

**Development of ICT Skills and Training Action Plan (STAP):** The Consultant through knowledge co-creation seminars, write-shops and peer co-working approaches drafted ICT STAP and submitted it to the Client for validation and input. The ICT STAP was drafted using a combination of data from the situation analysis, stakeholder analysis, international best practices, workforce profile; future ICT workforce needs forecast, gap analysis and the visioning and strategy as contained in the ICT STA Report. The draft of the ICT STAP was submitted to the Client's contract management team for review and guidance as standard procedure. The comments from the Client team were incorporated into the final approved version. The deliverable from this Phase was an approved **ICT STAP (Appendix 3)**.

#### **Phase 4: Assignment completion**

In line with the Terms of Reference and the signed contract, the Consultant has prepared this Final Report.



### 3.1 Assignment Deliverables

From the assignment execution, the following deliverables were produced and submitted to the Client:

- i) An Inception Report. This was approved and submitted on 19<sup>th</sup> January 2022.
- ii) Final STA Report. This was approved and submitted on 26<sup>th</sup> May 2022.
- iii) Final ICT STAP. This was approved and submitted on 5<sup>th</sup> October 2022.
- iv) Final Report (**this report**). This will be submitted and approved before the terminal date of the Contract.

### 4.0 CHALLENGES

Like any other assignment of this nature, execution of ICT STA and STAP experienced some challenges and limitations that made it difficult to deliver this report within the agreed timelines or provide a holistic picture of the sector.

- i) Some of the Accounting Officers that received introductory letters for the study delegated the activity to Heads of ICT Units, yet participation would have demonstrated the strategic relevance of ICT skills and training particularly in the Uganda Public Sector. Nevertheless, the Heads of ICT Units were very knowledgeable on the ICT skills in their organizations and employed consultative approach in providing responses.
- ii) The study was only limited within the specialized sectors of Education, Agriculture, Oil and Gas, Manufacturing, Health and ICT (telecom, consulting and research firms, system developers, among others). This number was not representative of all the Government Sectors and the vast number of private sector organizations.
- iii) There was low response from UICT staff on individual self-assessment as demonstrated by fewer responses recorded. This might undermine the validity and the legitimacy of the feedback provided on key human resource gap analysis of ICT staff.
- iv) There was generally low appreciation of the digital enabled self-assessment method used on stakeholder consultations, which resulted in delayed responses and numerous reminders (both electronic and physical visits). This led to delayed completion of stakeholder consultations and caused overlaps in the delivery schedule.
- v) There was slow feedback by the client after submission of draft for each deliverable. This led to delayed submission of the final copies of the deliverables.
- vi) Respondents' slow response and participation led to late provision of data. The Study made nearly 100% contact with the identified stakeholders. However, it took an average of 5 reminders (physical site visits, phone calls and email reminders) to get responses from stakeholders.

- vii) There was limited availability of official information in print or websites of respondent institutions, such as strategic plans, annual work plans, budgets, annual performance reports, approved staff establishments, staffing levels, among others. This made data collection, sorting, analysis and presentation of valid and accurate institutional data a tall order.

## **5.0 LESSONS LEARNT**

A few lessons were learnt during this consultancy as listed below:

- i) Social networks are critical enablers in executing successful assignment of this nature as formal communications are slow and often do not lead to access to information.
- ii) Senior executives are more comfortable with short 15-20 minutes online interviews than physical meetings.
- iii) Effective communication involving, constant reminders using various media, is paramount for remote (online) studies.
- iv) The visibility of UICT brand among stakeholders was low. A good number of organisations who received the introductory letters did hardly acted on them, not until the consultant had to make a sustained follow up.
- v) Most government institutions are not publishing critical information such as annual reports, strategic plans etc on their websites
- vi) Private section actors were more guarded on revealing internal operational environment information such as staff recruitment plans etc.
- vii) Senior management staff in a number of organizations delegated the assignment to heads of ICT units and in some cases, systems administrators. In some cases, these delegates might have not had organization wide strategic view of the institutions.

## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 Conclusions**

Arising out of the stakeholders' consultation, the STA and the STAP processes the following conclusions are hereby drawn for the attention of the client:

- i) The institute lacks an internal quality assurance framework to guide tracking of curriculum delivery and the management of supportive learning infrastructure such as ICT specialized laboratories and software
- ii) There is massive inadequacy of continuous professional development for employees in both public and private sector. This situation extended to Local governments and other institutions operating outside Kampala. Associated with this was the massive preference for a combination of short-term online and face-to-face training approaches by employees across the target organizations.

- iii) By majority, both ICT and non-ICT professionals across all the sectors have the will to acquire ICT skills if sponsored.
- iv) All the ICT training institutions did not have a specific 'hands-on' training program targeted at supporting the current effort of government to go e-government for all public services.
- v) Across all the study institutions, there was inadequacy of Knowledge Management practices. This was characterized by lack of knowledge work systems, intelligent techniques, and enterprise-wide knowledge management systems.
- vi) There is low participation of key stakeholders (especially the industry) in ICT curriculum development processes in most ICT training institutions, including UICT. This means, the hands-on needs of the industry were not taken care of at curriculum design level, leading to most graduates from such institutions not being work-ready.
- vii) UICT lacked a policy mandating all employees to compulsorily attend ICT Continuous Professional Development (CPD). Most of the UICT staff hadn't attended any professional training in their areas of specialization to enhance their capacity.
- viii) The current ICT curriculum of UICT has weak alignment to the international Digital Literacy Skills Framework, Digital Transformation Program and the National Development Agenda
- ix) Given the volatile environment of a rapidly developing ICT sector, the current (existing) partnerships horizon for UICT is quite narrowed. There is need to expand bilateral collaborations with renown institutions regionally and internationally
- x) The current ICT infrastructure (computers and 24-hour fast internet) provisions at UICT are inadequate, given the massive need for the same by staff and students
- xi) The current UICT curriculum implementation lacks industry touch; a critical requirement for enhanced academic performance
- xii) The current learning approaches used at UICT are quite generic and provoke little challenge to students.
- xiii) The staffing level of only 31% at UICT has serious implications on the institutional performance capacity of the institute
- xiv) Staff across the study organizations i.e. strategic leadership, senior management and ICT professional levels, had inadequate skills to effectively perform their mandates.
- xv) The research function at UICT is still low. The institute lacks experienced staff to spearhead the research function.
- xvi) UICT lacks specialists in emerging areas of 4IR e.g. cloud computing, robotics, artificial intelligence, data science and big data analytics, research and innovation management, among others.
- xvii) UICT staff have insufficient digital pedagogy knowledge and skills to support the new normal of technology mediated teaching and learning approaches.

## 6.2 Recommendations

Based on the challenges above, the Study made the following recommendations for the attention of UICT Management:

No	Issues to address	Action/Recommendation	Actor	Priority
1	Insufficiency of some specific ICT professionals to drive the country's economy in both private and public sectors (artificial intelligence, cyber security, data science, Software Developers, cloud computing and virtualization, complex system development, animations and graphics, mobile and web development, CCTV, Network Administrators and wireless technologies and internet, IT strategy management and Internet of things)	<ul style="list-style-type: none"> <li>Recruit, develop and retain a critical team of teaching professionals in the specific skills areas.</li> <li>Design flexible and practical curricula inclusive of short and long courses targeting in-service and pre-service trainees, career transitionists, etc.</li> <li>Adopt flexible delivery approaches involving online and face to face training.</li> <li>Sustain and upscale the current (ongoing academic programs) in the Institute.</li> <li>Franchise some of the readily available international certification programs especially in areas of BPO, data science, cyber security, among others.</li> </ul>	UICT Governing Council & Management	High
2	ICT training quality assurance	<ul style="list-style-type: none"> <li>UICT should ensure that all academic programs have appropriate ICT infrastructure such as specialized laboratories to deliver the proposed curricula.</li> <li>Keep the specialized training labs updated with relevant infrastructure and software to the current market demand</li> <li>Both the infrastructure and curriculum should be subjected to a 5-year mandatory curriculum review to ascertain the functionality of the infrastructure to support continued teaching of the approved curriculum, given the backdrop that technology continually improves and the fact that most ICT equipment has a 3-year lifespan.</li> <li>Develop Quality assurance framework.</li> <li>Train Staff on the current policies such as ICT policies, among others.</li> </ul>	UICT Management	Medium

No	Issues to address	Action/Recommendation	Actor	Priority
		<ul style="list-style-type: none"> <li>Should Stock the current existing specialized labs with most needed equipment's to enhance IT training requirements in the market world.</li> </ul>		
3	Massive need for continuous professional development by employees in both public and private sector and preference for a combination of online and face-to-face training not exceeding 5 days	<ul style="list-style-type: none"> <li>UICT to develop tailor made short courses (combining online and face to face training approaches), targeted at the various levels of employees in organization (strategic leadership, senior management, ICT and non-ICT professionals).</li> <li>UICT should partner with both private and public institutions focused on provision of ICT skills to deliver some of these programs to government employees.</li> <li>FastTrack adoption and implementation of courses contained in the ITU-Digital Transformation Centre (DTU) Training Catalogue (2021).</li> </ul>	UICT Governing Council and Management	High
4	Local governments and other institutions operating outside Kampala have the same level needs as far as ICT skills and training needs are concerned.	<ul style="list-style-type: none"> <li>Establish satellite training centers in strategic locations in the country to cater for the massive need on the ground.</li> <li>Restructure the staffing structure to cater for the expansion (satellite centers).</li> <li>Engage in strong marketing strategy, such as district to district approach, Institution to Institutions arrangement, etc.</li> <li>Lobbying through Ministries for IT capacity building in their sectors.</li> </ul>	UICT Governing Council and Management	Medium
5	Existing willingness to acquire ICT skills by majority of both ICT and non-ICT professionals if sponsored	<ul style="list-style-type: none"> <li>Lobby for increased government sponsorship budget especially targeting priority sectors of government employees.</li> <li>Expand partnership horizon to include willing scholarship partners such as Enabel and UNESCO who have focus on digital literacy skills development.</li> <li>Establish institute scholarship fund targeting best performing applicants and special interest groups like Refugees.</li> </ul>	UICT Governing Council	High

No	Issues to address	Action/Recommendation	Actor	Priority
		<ul style="list-style-type: none"> <li>• UICT, should set up online training programs for various government agencies in areas where capacity gaps have been identified.</li> </ul>		
6	Support governing digitalization processes	<ul style="list-style-type: none"> <li>• Develop an e-government curriculum aiming at accelerating update of government digital services.</li> </ul>	UICT Management	High
7	Demand driven curriculum development (Low participation of stakeholder in curriculum development or delivery)	<ul style="list-style-type: none"> <li>• Conduct regular curriculum review in consultation with stakeholders.</li> <li>• Alignment UICT curriculum development and delivery with industry demands.</li> <li>• Incorporate industry experts in program delivery on per cohort basis.</li> </ul>	UICT Governing Council and Management	High
8	Mandatory ICT Continuous Professional Development (CPD) for UICT staff	<ul style="list-style-type: none"> <li>• All employees of UICT should complete a minimum of 40 hours of ICT CPD annually. The institute should set up an online tracking portal for this CPD on each individual staff.</li> </ul>	UICT Human Resource Manager	Lower
		<ul style="list-style-type: none"> <li>• Provide Training in the areas of Consultancy skills, Online Pedagogy, Social media and brand development, team building and professional development</li> <li>• UICT needs to promote and encourage staff to undertake graduate studies especially at PHD level to improve their research and consultancy capacity</li> </ul>	UICT Human Resource Manager	Medium
9	Digital Literacy Skills Framework	<ul style="list-style-type: none"> <li>• UICT should develop and mainstream into all curricula align to key international Digital Literacy Skills Framework which incorporates best practices from the different international frameworks such as ICDL and the National Local Context Policy.</li> </ul>	UICT Management	Medium
10	Alignment of academic programmes with Digital Transformation Programme and National Development Agenda	<ul style="list-style-type: none"> <li>• As a good practice, all ICT academic programs developed by UICT should be aligned to NDP III and Digital Uganda Vision.</li> </ul>	UICT Management	High

No	Issues to address	Action/Recommendation	Actor	Priority
11	Continuous benchmarking and learning	<ul style="list-style-type: none"> <li>• UICT management and staff should regularly conduct research about best practices in other countries and develop appropriate interventions.</li> <li>• UICT should continuously establish bilateral collaborations with renown institutions with the same mandate as UICT within the African Region and globally.</li> </ul>	UICT Management	Medium
12	Providing enabling infrastructure	<ul style="list-style-type: none"> <li>• UICT management should provide the basic enabling ICT facilities especially, computers and 24-hour fast internet, to all her employees and students.</li> </ul>	UICT Management	High
13	UICT- Industry partnership for enhanced academic performance	<ul style="list-style-type: none"> <li>• UICT should involve (incorporate) professionals from industry to provide regular socialized training sessions to students on selected areas of interest.</li> <li>• Establish and consolidate strategic partnerships with related institutions in the region in order to deliver on demand specialized programs in Telecommunications, Broadcasting, Postal, Radio, Creative Industry, Multimedia, and Communication Officers among others.</li> </ul>	UICT Management	High
		<ul style="list-style-type: none"> <li>• UICT should encourage their staff to acquire industrial certification to improve their knowledge and skills of developing and delivering market demanded training content.</li> <li>• UICT management should involve industry in Curriculum development, professional development, Internship Placement, Research and Innovation</li> </ul>	UICT Management	Low
14	Promoting student-centered problem-based learning	<ul style="list-style-type: none"> <li>• UICT should focus student centered problem-based learning to promote skills development. Also, they should promote practical or competence based academic progression assessment as opposed to theoretical examinations.</li> </ul>	UICT Management	High
15	Production of work ready graduates	<ul style="list-style-type: none"> <li>• UICT should improve management and supervision of student field attachment to ensure meaningful engagement of students in their respective fields of study.</li> </ul>	UICT Management	High

No	Issues to address	Action/Recommendation	Actor	Priority
16	Under staffing at UICT and Inadequacy of Knowledge Management practices across MDAs	<ul style="list-style-type: none"> <li>On a gradual (annual basis), raise the staffing gap from the current 31% to at least 85% over 2-3 years</li> <li>Recruit, develop and retain a critical team of professionals in the specific skills areas.</li> <li>FastTrack implementation of targeted training interventions for the various categories of staff as provided in the UICT Organizational Restructuring, Job Evaluation and Job Grading Report (2021, Sec.11.6).</li> <li>UICT should mainstream into its curriculum a certificate in Knowledge Management as a short course. This can be achieved in affiliation with the Association for Intelligent Information Management (AIIM) for certification in knowledge management</li> <li>Ensure regular capacity building of staff through the use of cross cutting management courses to benefit all categories; Administrative, academic and part-time staff.</li> </ul>	UICT Management	High
17	UICT Priority Training Programs	<p>For the institutional strategic leaders and managers, the following are key recommended priority training programs UICT needs to include in the new curriculum:</p> <ul style="list-style-type: none"> <li>IT strategy and project management</li> <li>Internet and web technologies</li> <li>Cyber security and data protection</li> <li>Report writing and presentation</li> <li>Office productivity applications and domain specific systems, e.g. teacher management information system, URA portal, etc.</li> </ul>	UICT Management	High
		<p>For the non-ICT professionals, the following are the key priority training programs UICT needs to include in the new curriculum:</p> <ul style="list-style-type: none"> <li>Research methods and data analysis</li> <li>Internet and web technologies</li> <li>Cyber security and data protection</li> </ul>	UICT Management	High



No	Issues to address	Action/Recommendation	Actor	Priority
		<ul style="list-style-type: none"> <li>▪ Report writing and presentation</li> <li>▪ Advance office productivity applications</li> <li>▪ Domain specific systems, e.g. teacher management information system, IPPS, oracle, URA portal, etc.</li> </ul>		
		<p>For the ICT practicing professionals, the following are the key priority training programs UICT needs to include in the new curriculum:</p> <ul style="list-style-type: none"> <li>▪ Research methods and data analysis</li> <li>▪ Cloud computing and virtualization</li> <li>▪ BPO certification</li> <li>▪ Enterprise software development</li> <li>▪ Business processing engineering</li> <li>▪ Software security and software testing</li> <li>▪ Data science and data analytics</li> <li>▪ Wireless network technologies and internet of things</li> <li>▪ Embedded systems design</li> <li>▪ Cyber security</li> <li>▪ Systems administration and network security</li> <li>▪ Mobile and web applications development</li> <li>▪ IT strategy and project management</li> <li>▪ Report writing and presentation</li> </ul>	UICT Management	High
	Current learning approaches used at UICT	<ul style="list-style-type: none"> <li>• A adopt current leaners centered learning approaches.</li> <li>• Provide staff capacity building in the areas of online Pedagogy.</li> <li>• Do further benchmarking with institutions with similar mandates within and without the region,</li> </ul>	UICT Management	High
	Research function at UICT is still low	<ul style="list-style-type: none"> <li>• Promote and encourage staff to undertake graduate studies especially at PHD level to improve their research capacity.</li> <li>• Provide staff capacity building in the areas of research and consultancy skills, Online Pedagogy, Social media and brand development, team building and professional development.</li> </ul>	UICT Management	High



## **APPENDICES**

## **Appendix I: Acceptable Inception Report**

## **Appendix II: Approved ICT STA Report**

## **Appendix III: Approved ICT STAP**