Makerere University

COLLEGE OF COMPUTING AND INFORMATION SCIENCES (COCIS)

Unlocking the Potential of COCIS to meet emerging Development Challenges

Draft Strategic Plan 2020-2030 – 2029/30

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FOREWORD

The College of Computing and Information Sciences (COCIS) is comprised of two schools; the East African School of Library and Information Science (EASLIS) and the School of Computing and Informatics Technology (SCIT). The College Strategic Plan for the period 2011 – 2018 came in at the time the College was implementing the new governance structure after Makerere University Council approved the merger of the former Faculty of Computing and Informatics Technology (CIT) and the East African School of Library and Information Science (EASLIS) on the 13th December, 2010.

The strategic plan for 2011-2018, covered various strategic areas in the domains of teaching and learning, research and outreach according to each institution's strategic direction. A number of achievements were registered in the schools including revision and introduction of new programmes, development of a research culture through establishment of different research groups, enhancement of international linkages and collaboration among others through memorandum of understanding (MOU) and winning of research grants. One major achievement was in the area of the governance where the two institutions have successfully worked together in the collegiate system.

This College Strategic Plan 2020-2030 aims at consolidating and positioning COCIS within Makerere University and beyond while meeting emerging developmental challenges.

During the preparation and formulation of this plan, both Schools participated jointly to define the future direction of the College. The approach used was an all-inclusive consultative process involving staff of the College. It is envisaged that the outcome of this process will be a Strategic Plan fully owned by the key stakeholders. This Plan articulates the vision, mission, goals, core values and strategic areas of COCIS within Makerere University.

1 Section I – Background Information

1.1 Strategic Planning at COCIS

The College of Computing and Information Sciences (COCIS) is comprised of two schools; the East African School of Library and Information Science (EASLIS) and the School of Computing and Informatics Technology (SCIT). The College Strategic Plan for the period 2011 – 2018 came in at the time the College was implementing the new governance structure after being formed in December, 2010. The new strategic plan 2020-2030 lays ground for enhanced performance that is premised on sound determination of vision, mission, goals, objectives and strategies and is in line with the University strategic plan framework. While the outgoing strategic plan was more focused on processes, the new plan will target quality outputs and outcomes. The strategic focus over the next 10 years will be hinged on three anchors for all the activities to drive the core and support functions of the university. These are **the Institution**; the **Human Resource** and the **Makerere University Graduate** to drive university outputs. It is further meant to serve the following three basic purposes: -

(i) Stimulating forward thinking and establishing future direction
(ii) Enhancing teamwork and motivation.
(iii) A tool for resource mobilization and stakeholder support.

1.2 Approach

To ensure that the College's future is worthy the desired greatness, it is essential that a Strategic Plan recognizes the extraordinary challenges facing higher education, the opportunities presented by an expanding national and international marketplace for higher education and training, and the parallel challenges of an environment characterized by decreasing government funding for higher education and increasing competition in the sector. The Plan was therefore developed with these challenges in mind and in accordance with the recommended Strategic Planning Framework by the University. The Plan reflects efforts directed towards contributions and aspirations of COCIS to create a brilliant future for Makerere University. Care was taken in ensuring that the Plan is consistent with and contributes to the achievement of Makerere University's overall strategic goals and thrusts, which are contained in Makerere University Strategic Plan – 2020-2030.

COCIS Strategic Plan reflects high (but reasonably achievable) aspirations as well as demonstrates creativity and innovation. Consideration was made of the fact that the future of the COCIS will be built upon the legacy of success provided by generations of leaders, students, staff, and other key stakeholders who work towards attainment of well thought out goals and objectives.

1.3 The need for the Strategic Plan

The Strategic Plan covers the period 2020 - 2030 and endeavours to tackle key cross cutting issues such as quality assurance, ICT, laboratory infrastructure, innovation, human resource development, library services and physical infrastructure and gender mainstreaming. The College runs programmes both in EASLIS and SCIT. More programmes will be introduced in future.

Some benefits that have been realized within the college. The two schools EASLIS and SCIT have opportunities to share equipment, courses and staff. There are also many cross cutting courses among the units, which are delivered by staff from the more specialized units leading to better delivery. Many research foci in the schools are related. The College can therefore host stronger multi-disciplinary research themes to increase overall productivity and ability to compete for research grants. There are also many infrastructural benefits such as the sharing and optimal usage of resources in terms of lecture space, general computer labs, specialized computer labs and others. It is from the above introduction that the Strategic Plan for the College has been revised and is presented.

1.4 Capability Profile

To meet the increasing demand for computing and ICT services in Uganda in particular and the African region in general, SCIT was established with four academic Departments in which different programmes were housed. The four departments are the Department of Computer Science; the Department of Information Systems; the Department of Information Technology; and the Department of Networks. The Faculty became the School of Computing and Informatics Technology (SCIT), and is offering both undergraduate and postgraduate programmes through the already existing departments. The School is at the forefront of delivering specialized training in different professional certifications within the field of Computing.

The East African School of Library and Information Science (EASLIS) is continuing to expand its programmes, and its intake has extended beyond Eastern Africa. Currently, EASLIS boasts of having trained librarians and information workers at Certificate, Diploma, Bachelors, Masters and PhD Levels from all English speaking countries of Eastern, Central and Southern Africa; the majority of whom are from Uganda, Tanzania and Kenya. Other graduates have come from the United States of America, Rwanda and the Democratic Republic of Congo, Ethiopia and Eritrea.

The College (through SCIT and EASLIS) has adequate number of highly qualified human resource to enable COCIS embark on an ambitious research programme that will help to make a positive contribution to policy and general development knowledge in Uganda and beyond.

1.5 Organizational Structure

COCIS is comprised of two schools, i.e. the School of Computing and Informatics Technology (CIT) and the East African School of Library and Information Science (EASLIS). An administrative team led by a College Principal assisted by a Deputy Principal manages the College. Each School is headed by a Dean. The School of Computing and Informatics Technology (SCIT) has four academic departments and the East African School of Library and Information Science (EASLIS) has two academic departments.

The College has an academic staff establishment of about 300 members, of which about 30% of the positions are currently filled. The student numbers are in the range of 3,500 - 3,800 enrolled in 25 programmes in the College.

1.6 Administrative Structure

Management of the College follows the recommended administrative structure contained in the College Statute (2006). The College Registrar, College Bursar, College Human Resource Manager, and College Librarian support the Office of the Principal. Appropriate staffing levels in delivering their respective administrative mandates support each of these units. There are other administrative positions under the office of the College Principal, which are: the College Procurement Officer, the College Quality Assurance Officer, the College Corporate Relations Officer, the College Resource Mobilization Officer and the College E-learning Officer. Departments are headed by a Chair/Head of department.

2 Section II – Environmental Scan

2.1 Introduction

To chart a way forward for the College in terms of a range of feasible strategic directions, it was important for the College to review its performance in relation to the strategic plan for the period 2011-2018 as well as perform a SWOT analysis and scan its environment to identify opportunities and challenges facing the College and Makerere University as a whole. This was done to help the College respond strategically and effectively to the rapidly changing environment in which the College operates. While the lists are by no means exhaustive, they provide a useful context for refinement of the Strategic Plan.

2.2 Review Performance of the Strategic Plan for COCIS for the period 2011-2018

The table below provides a summary of the achievements and failures during the period 2011-2018.

Table 1: Review Performance of the Teaching and Learning for period 2011-2018

Teaching and Learning	**Achievements** a. The teacher-student ratio improved from 1:75 (100 academic staff /7500 students) to 1:44 (84 academic staff /3700 students). b. There is active participation in the students' evaluation of the effectiveness of the lecturer's teaching supported by the Directorate of Quality Assurance. c. All timetables for teaching and learning (lectures, tests and examination) are available online and are accessible to all. d. Many of the courses running in COCIS are available on the e-Learning platform (MUELE). e. New bachelor and post graduate programmes were developed and are currently running (Bachelor of Information Systems (BIST), Masters in Records and Archives Management (MRAM), Masters in E-Governance) f. Majority of the existing programmes have been revised awaiting approval by National Council for Higher Education. g. Majority of lecturers use advanced technologies in teaching and learning. h. All students are supervised by field and academic supervisors during field attachment. **Failures** a. Facilities for teaching and learning especially computer laboratories continue to remain inadequate (only 2 laboratories are still in use out of 14 that were available in 2013). b. Low graduate completion rate 16%. c. Poor sanitation resulting from overuse of toilet facilities due to student numbers hosted in COCIS premises. d. Deteriorating condition of buildings resulting in poor teaching and learning environment. e. Inadequate staff in one of schools heavily relying on part time teaching staff which is very costly.

Table 2: Performance - Research and Innovation for period 2011-2018

Research and Innovation	**Achievements** a. Created a Grants Office which has recently been strengthened into Research and Innovations office led by senior faculty. b. Staff have continued to participate in grant proposal writing, national and international conferences and workshops. Some of the research proposals won awards (refer to Appendix 2). c. Staff have published over 270 publications (refer to Appendix 2) d. Two staff completed post doctoral studies. A senior staff member was supported to undertake sabbatical leave for research and scholarly writing and was able to publish a book. e. Graduate student enrollment was increased by 50%. f. Number of publications and staff participating in collaborative and multidisciplinary research increased through emerging research projects. g. Number of staff undertaking PhD training increased through grants won (SIDA, NORHED-WIMEA, NORHED-HITRAIN) . h. Launched an incubation centre that was funded by the Ministry of Finance and Economic Planning housed in COCIS. **Failures** a) Low completion of graduate students where staff are not motivated to supervise and examine graduate research resulting in unnecessary delays on the programme. b) Lack of college annual conferences

Table 3: Performance - Knowledge Transfer and Partnerships for period 2011-2018

Knowledge and Transfer partnerships	**Achievements** a) The college has been visited by many high schools students who wish to see the computing facilities as well as learn about programmes offered. b) The college participated in career fairs in many schools offering career guidance during the last 10 years. c) The college provided ICT training for secondary school teachers and head teachers among others. d) Annual field attachment exercises have been conducted successfully for the last 5 years and this provides an opportunity for staff and students to interact with different potential employers thus providing additional knowledge and skills.

	e) COCIS has grown in partnership with a number of international universities and agencies and has signed a number of MOUs with several organisations. **Failures** f) The college has not consistently held open graduate research exhibitions g) The college has not launched out incubated products in the last three years.

Table 4: Performance - Organisation and Management for period 2011-2018

Organisation and management	**Achievements** a. The College Committees have been fully functional and have been regularly meeting. b. There has been increased financial transparency where heads of units have participated in budgeting and finance meetings. c. Funds allocated to schools for special activities such as Field Attachment and Examinations are shared and managed by the school management teams. **Failures** a. The college website is not regularly updated. b. Communication flow from management to staff and vice versa is not effective c. The College does not have a trained Communications Officer d. Performance appraisals of the college, school and department management team have not been done which is vital in identifying training needs in management. e. The college does not have an induction programme for new leaders.

Table 5: Performance - Quality Assurance for period 2011-2018

Quality Assurance	**Achievements** a. College continues to enforce the mandatory test timetables for all departments providing mid semester assessments to all students.

	b. College has actively participated in the students' evaluation of teaching provided the Quality Assurance Directorate. c. Quality Assurance committees were formed at college level comprising of representatives from all departments. d. Departmental, School and College Board meetings have been held at least once every semester. e. Undergraduate and graduate programs have been evaluated by external examiners every year. f. Curricula of all academic programs are available on the website and can be accessed by both staff and students. **Failures** a. Pedagogy training for academic staff has not been fully implemented. b. Quality Assurance meetings have not been very regular as expected. c. Results management systems have not been properly secured resulting in alteration of marks at different levels.

Table 6: Performance of Human Resource for period 2011-2018

Human Resource	**Achievements** a. 21 members of staff graduated with PhDs during period 2011-2018. b. 5 members of staff graduated with Masters degrees during 2011-2018. c. College continues to support staff on PhD training by providing a two way ticket during the PhD studies. d. Staff promotions included : Professor (1), Associate Professor (4), Senior Lecturer (5), Lecturer (17) and several Assistant Lecturers. e. Despite a lot of resistance and financial challenges, staff are provided with basic lunch during the semester since majority are involved in teaching and providing administration support for evening students. f. Through staff development, 29 members of staff were granted study leave to enable them pursue their degree programs. g. Some female participation in the college where at least each school has 1 female head of department. **Failures** a. The College establishment is about 30% filled and this results

	in departments being heavily understaffed. b. Staff attrition resulting from the need to seek for better pay which leads to heavy reliance on part time staff. c. Inadequate funding resulting in delayed payments for part time teaching and administrative staff. d. Lack of induction and training programme for newly appointed and promoted staff.

Table 7: Performance of ICT Services for period 2011-2018

ICT Services	**Achievements** a) There is increased access and use of ICTs in teaching and learning (Computers, projectors and MUELE). b) One of the Computer labs was equipped with computers through the African Development Bank (200 computers) and the other was supported by the university (120 computers). c) Some projects such as HITRAIN, WIMEA and SIDA have supported the ICT infrastructure by providing servers and computers to staff and students (PhD). **Failures** a) Computer laboratories have reduced from 14 in 2011 to 4 in 2018. b) COCIS has no full time System Administrators to manage the ICT infrastructure. The College heavily relies on part time staff who have a very high attrition rate. c) The college lacks trained Laboratory Technicians to support the students during practicals.

Table 8: Performace of Library Services for period 2011-2018

Library Services	**Achievements** a) The College established a library in Block B which has increased access and use of library services b) The COCIS library is electronically linked to the main library c) The COCIS library is able to serve evening students **Failures** a) Experienced some thefts b) Library space is inadequate for COCIS students. c) The library is understaffed.

Table 9: Performance - Physical Infrastructure 2011-2018

Physical Infrastructure	**Achievements** a) Partitioned offices for academic staff in the School of Computing and IT. b) Created a bag section where students can leave their bags while using the computer rooms. c) A seminar room was refurbished through SIDA support from one of the projects. d) Through funding from research grants (WIMEA, HITRAIN, SIDA) some research labs have been refurbished. e) COCIS buildings have continued to accommodate other colleges such as CHUSS, COBAMS and CEES during lectures and examinations. f) Phased renovation has commenced in Block A. **Failures** a) All the 3 blocks housing COCIS are in dire need of renovation. b) The water and sewerage system is inadequate for the huge population of students at COCIS. c) Lift in Block B has not been purchased which affects the disabled students. The lift in Block A also requires replacement of some parts.

2.3 SWOT Analysis

Before formulating goals for the College, an internal assessment of COCIS strengths and weaknesses was performed. An external assessment of opportunities and threats was also performed. The COCIS environment was assessed using the SWOT analysis under the following five themes:-

1. Research and Innovations
2. Knowledge Transfer, Partnerships & Networking
3. Teaching and Learning/ Library
4. Administrative Support for staff and students
5. Professional skills Development

The tables below show the strengths, weaknesses, opportunities and threats as raised by the stakeholders in relation to the above themes.

S T R E N G T H S	a) Strong brand that has been built over time at national and regional levels. b) COCIS has highly qualified young energetic staff (beyond NCHE standards) who teach on academic programs, certified staff teaching professional courses and highly qualified skilled administrative staff c) Various ongoing research projects, innovations and incubations. Relatively active research groups with diverse research fields. d) Strong curricula for programmes, which meet the market requirements and thereby attracting premium students. e) Good Internet connectivity, access and relatively adequate e-resources f) Adequate office staff space and space to facilitate students' teaching and learning, providing relatively conducive work environment. g) Existing collaborations with local, regional and international partners. h) Clear policies, regulations and governance structures which are implemented in the college. i) Favourable human resource policy allocating time for teaching, research and community outreach. j) COCIS houses the Makerere Cisco Academy support centre which oversees over 24 training institutions k) A renown testing center for courses e.g. ICDL that needs to be upgraded to a corporate image. l) Highly competitive professional ICT courses that are constantly reviewed.

W E A K N E S S E S	a) Lack of ICT pedagogical, trending and blended learning skills in course delivery and class management (tutor-based teaching). b) Lack of procedures and guidelines (handbook) on teaching and learning. c) Poor Monitoring and Evaluation guidelines for teaching and learning. d) Limited research budget to support grants and proposal writing resulting in low research outputs (ranked 2nd last college). e) Lack of college conference f) Researchers working in silos and lack of mentorships g) Inadequate supervisor to student ration resulting in low completion rates of graduates. h) Demotivating /selective rewards systems (supervision of Plan B students not recognized) i) Lack of tracking and dissemination of research opportunities j) Poor public image at university and national level (due to strikes) k) Lack of publicity about services, products and innovations l) Lack of structured career guidance programme m) Heavy reliance on contract staff who are given short contracts and have delayed salaries resulting in low motivation. n) Lack of promotion policies for administrator and limited career growth. o) Weak public relations and customer care p) Clients (students) not adhering to deadlines (registration, payments) which results in ineffectiveness. q) Insufficient infrastructure (poor equipment, air conditioning, sound system) r) Operating as business unit within an academic institution

O P P O R T U N I T I E S	a) Digital economy that makes the programs relevant. b) Government has identified ICT as a key priority area. c) Computing field is a supporting field for all kinds of research. d) Makerere ranking and brand attracts world class researchers and premium students in the country. e) Existing collaborations with donors and other stakeholders (CISCO, Microsoft, ICDL, Pearson Vue, Huawei, Amity Univeristy f) Existing MOUs with universities and other agencies g) Newly reconstituted Amity University programs including Diploma, Bachelors and Masters h) Grants from CISCO Academy support centre resulting in improvements (training instructors, student enrolment) in the Centre for Professional Skills Development

T H R E A T S	a) Negative university publicity and being black listed by donors due to rampant disruptions such as strikes b) Job insecurity (contractual jobs) and high labour turn over c) Staff welfare (more time devoted to external activities) d) Competition from other universities in Uganda and in the region offering the same training e) Insecurity of infrastructure f) External influences where Makerere University cannot implement its policies as passed by Council (payment of fees). g) High costs of equipment (computer infrastructure) and teaching materials h) Government meddling and unfair taxation on ICT products (OTT) i) Internal politics that demoralize staff

3 Section III – College Corporate Identity

3.1 Identity

In order to meet the increasing demand for Computing, ICT and Information Science services in Uganda in particular and the African region in general, COCIS is an agent for

1. Education and human resource development though running programmes in Information Sciences and Communication/Computer Technology fields
2. Innovation, knowledge creation for societal transformation
3. Thought leadership to catalyse change and influence development processes and practice.

3.2 The Mandate

The mandate of COCIS falls within the overall mandate of Makerere University, as stated below:

(a) Provision of higher education , promotion of research and advancement of learning;

(b) Dissemination of knowledge and giving opportunity of acquiring higher education to all persons including persons with disabilities wishing to do so regardless of race, political opinion, colour, creed, or sex;

(c) Provision of accessible physical facilities to the users of the Public University;

3.3 Vision

To be a leader in Computing and Information Sciences Education, Research and Services internationally

3.4 Mission

To provide transformative innovative teaching, learning, research and services responsive to dynamic, national, regional and global needs in Computing and Information Sciences.

3.5 Core Values

COCIS in the pursuit of its mission will be guided by the following core values (APRII) :

(i) Accountability
(ii) Professionalism (Commitment, Responsiveness, Efficiency & Effectiveness)
(iii) Respect (Friendly & Gender Sensitivity)
(iv) Integrity (Honesty & Transparency)
(v) Inclusivity (Gender sensitivity, disabled, marginalized)

3.6 Core objectives

The College has aligned its objectives to the overall Makerere University strategic goals. To this end, the College seeks:

1. To provide graduates with information science and computing skills, competencies and attitudes that meet the current and emerging needs for society development.
2. Research and innovations that generate tested contextual ideas and sustainable solutions for contemporary, emerging, strategic societal needs.
3. Talent effectively recruited, nurtured and deployed for efficient delivery of the University mission.
4. An enabling environment for university operations underpinning optimal utilization of resources created and sustained.

4 Section IV: Strategic Direction of COCIS

The COCIS Strategic Plan envisions a College of Computing and Information Sciences graduate that is versatile, professionally grounded, has ethical values, is committed to lifelong learning, a leader and change agent, who has had a positive experience at Makerere University that they can share and recommend to peers. COCIS seeks to implement its training programmes in ways which benefit society on a national, regional and a global scale. The College's strategic direction is underpinned by the broader policy frameworks such as the Sustainable Development Goals (SDGs), ICT strategic and Investment Plan (ICT-SIP) and National Development Plan (NDP) among others.

The goals, objectives and strategies highlighted in this section provide the operational mechanism for the College focus over the next ten years. This focus is central to the identified core functions of teaching and learning, mainstreaming open, distance and e-learning, student support services, impactful research and innovation, and knowledge transfer partnerships and engagement. It also provides the guiding principles for the identified support functions that provide an enabling environment for execution of the College mission, key among which are human resource development and management, governance and institutional effectiveness, library services, Information Communication Technology (ICT), gender mainstreaming, infrastructure development and management, allocation and management of financial resources and resource mobilization and investment, internationalization and sustainability or green economy. Additionally the strategic plan provides guidance in the cross cutting issues namely; organization and

management, ICT, the library, resource mobilization and management and physical infrastructure and planning.

4.1 HUMAN CAPITAL DEVELOPMENT

The strategic plan envisions a graduate that is versatile professionally grounded; has ethical values, is committed to lifelong learning, a leader and change agent, who has had a positive experience at the College of Computing and Information Science, Makerere University that they can share and recommend to peers.

4.1.1 Teaching and Learning

The teaching and learning provision is the main mechanism through which COCIS contributes to national human capital development computing and information science needs. Teaching and learning ensures the value addition/transformation processes of University students to graduates. These graduates have to be relevant in the world of work and society at both national and global levels. The strategic focus during the next ten years is to produce a graduate who will not only command traditional academic and subject specific skills but will also possess generalist skills, such as, problem solving, reflective abilities, willingness to learn and a predisposition to lifelong learning. This will therefore entail a shift to more learner centered methodologies and provision of high quality and relevant programs.

Table 10 : Strategy for Teaching and Learning

Goal(s)	Objectives	Strategies	Performance Indicators
To produce highly competitive computing and information sciences (CIS) graduates with skills, competencies and attitudes that meet the current and emerging needs for society development.	• To provide a teaching and learning environment that assures a productive experience to both the learners and academic staff • To produce competent graduates relevant to the world of work and society at both local and international levels. • To increase the supply capacity of the	• Mainstream technology into teaching and learning to cater for increased access to education (multimedia, video, use of online content, electronic boards, computers, cyberspace networks). • Harmonise academic programmes and transform curricula into practical competence-based learning focusing on knowledge and skills (leadership attitudes)	• Number of lecturers using advanced technologies in teaching and learning (65/80) • Number of programmes reviewed every 3 years (5) • Students' evaluation of the effectiveness of the lecturers' teaching (1 every year). • Number of programmes accepting credit transfers (2) • Number of tutorials used in teaching per semester (5). • Number of hours allotted per week by each academic staff for student consultation (3). • Market survey and the number of research reports (2)

	University to provide opportunities to meet increasing demand for higher education at national level.	• Have internships and field attachments for strategic partnerships / collaboration with the public and private sectors. • Establish a defined structure for tracking the academic and other student aspects (recruitment, orientation to graduation) • Integrate career guidance in teaching and learning and have mandatory tracer studies for all programmes	• Number of tracer studies done for all programmes (1) • Number of programmes designed on collaborative basis with other institutions (2) • Number of programmes whose curricula has been reviewed to integrate communication and problem-solving skills (2). • Number of senior academic members of staff involved in teaching foundation courses (5/80). • Monitoring & Evaluation system and supervision of field attachments and internships mechanism developed.

4.1.2 Mainstreaming Open, Distance and E-learning

Open, Distance and eLearning (ODeL) is recognized as one way of increasing access, promoting flexibility in education provision and addressing equity issues through the democratization of education. ODeL will be used to enhance access and increase the demand for higher education through increased access to flexible and quality technology supported learning. The strategic focus during the next ten years is to mainstream all academic programmes in COCIS and ensure that academic staff are trained and are using ODeL approach in teaching.

Table 11 : Strategy for Mainstreaming Open, Distance and E-Learning

Goal(s)	Objectives	Strategies	Performance Indicators
To mainstream ODeL in all the academic programmes in COCIS.	• To ensure a robust ODeL student support for increased satisfaction and retention. • To increase internationalization of undergraduate and graduate	• Transformation of traditional classroom based programmes into ODeL. • Increase the number of programmes offered using ODeL approaches. • Continuous pedagogical training and support academic staff design and	• Number of COCIS academic staff trained with pedagogy skills and developing quality blended learning courses and programmes (40).

	programmes. • To harness the learning preferences of the millennial (present day) learners.	development, content development and student support for the development of quality blended learning programmes. • Continuous promotion and development of MUELE for delivery of e-Learning courses and programmes in COCIS. • Provision of robust student training and support to all students enrolled on blended programmes.	• Number of blended programmes offered in COCIS at undergraduate and graduate levels (5). • Number of students who are actively using MUELE and other technologies for learning (2,500/3,500). • Number of students satisfied with the support services offered by ODeL (2,500/3,500). • Number of trainings held for students enrolled on blended programmes (10; 1 per year) • Number of international students enrolled on COCIS online / blended programmes (10)

4.1.3 Student Support Services

The provision of support services provides a vibrant student environment to enhance efficient and effective teaching. This ensures a holistic development of the student as valued members of the university community. This is geared towards supporting the students to meet their academic and professional aspirations that will translate into positive attitude as well as generate affinity and loyalty to the institution. This includes the provision of the appropriate human resource to meet the human capital needs at national, regional and international levels.

Table 12 : Strategy for Provision of Student Support Services

Goal(s)	Objectives	Strategies	Performance Indicators
To create the appropriate environment and support to the	• To enhance the academic, professional and social development of students.	• To provide mentorship, guidance and counselling to both national and international students.	• Number of mentoring and counselling sessions provided to the students per department per year (1) .

students of COCIS enabling them to meet their academic and professional aspirations.	• To create a conducive environment for student academic social life. • To provide a better learning experience, thus increase students' success • To instill commitment in students and local, national and global citizens. • To promote outreach and engagement.	• Enhance ICT support services through the use of the integrated financial and academic management systems • Engage the students body in students support services i.e. ICT services, and college activities, library and orientation • Continuous customer care refresher training and appraisal for front desk officers handling students. • Strengthen outreach and engagement activities among alumni, schools, and at-large community; • Start a permanent college endowment fund which will be used to retool the instructional materials and content, renovate core facilities, and rebrand the college that promotes academic excellence.	• Functional student support desk at COCIS. • Number of front desk staff, registrars, administrators given refresher training (15) • Counselling desk at COCIS • Special needs programme developed at the college (1). • Number of students participating in college activities (2,000/3,500). • Number of outreach and engagements activities (25). • Fully established endowment fund for the college.

4.2 DEVELOPMENT IMPACT

The College of Computing and Information Sciences will leverage on the initiatives for research capacity that have been built through collaborative research support for masters, doctoral and post doctoral training as well as research teams to create a critical mass of graduate enrolment to act as a base for knowledge generation and transfer. COCIS will create an environment that provides opportunities for students and staff to engage with the relevant stakeholders as part of their research. In the next ten years, knowledge transfer will act as a vehicle through which ideas generated from basic and applied research in computing and information sciences.

4.2.1 Impactful Research Innovations

Following Makerere University's strategy to become a research led university over the next 10 years, COCIS is positioning itself to advance basic and applied research in all sectors of society as far as computing and information sciences thereby becoming a pillar of both institutional and national development. This strategy will leverage existing capacities to integrate the knowledge generated through research, into teaching, learning, community engagement and the world of work in order to maximize impact. Research is the mechanism through which universities become the locus of scientific discoveries that drive national economies forward.

Table 13: Strategies for Impactful Research Renovations

Goal	Objectives	Strategies	Performance Indicators
To encourage and support research and innovation in the College	• To enhance knowledge generation and access in computing and information sciences. • To promote the generation of technology innovations and their accessibility to Uganda society with the view to improving the welfare of the nation. • To encourage and strengthen research partnerships • To promote and support the writing of project proposals	• Strengthen the current Grants Office into Research and Innovations Office led by a senior faculty. • Strengthen multi-disciplinary communities of scholars focusing on both basic and applied research in COCIS. • Allocate funds to build a strong research infrastructure. • Mentorship of undergraduate researchers such that some of the students stay on for their graduate studies • Create seed fund mechanisms to stimulate research among exceptional undergraduates, graduates, and junior faculty. • Prioritize funding for research and ensure that research findings are published in high-impact journals. • Identify college's research niche, particularly novel research themes where college has a competitive edge.	• Established Research and Innovations office led by a Senior faculty. • Number of staff participating in research (40/80) • Number of multi-disciplinary research projects emerging from the research groups per year (15) • Budget allocated for research activities in the college. • Number of new grants (15), • Number of publications in discipline specific journals (50), • Number of staff with cited publications exceeding reflected by the citation indices (40/80) • Percentage share of graduate students enrolled and completing on time (60/100) • Number of graduate students publishing in peer reviewed discipline specific journals (30)

		• Train staff for award winning proposals • Use proven and tested avenues to disseminate research findings and influence policy. • Quarterly review of research group performance • Support the college journal and conference • Recommend college research metrics for academic staff evaluation. • Strengthen the innovations centre at the college and stimulate staff and student innovations and inventions. • Improve the processes that affect the graduate enrolment (graduate supervision, grade thesis / dissertation, mentorship and career guidance) to increase graduate enrolment to at least 40% of the total student population.	• Number of academic staff undertaking sabbatical leaves for research and scholarly writing (5) • Number of patents sold (10). • The percentage of graduate students to overall students (40%). • Revive the college journal and conference. • Research metrics for academic staff evaluation. • Vibrant innovations centre at the college. • A budget for the motivation of graduate supervision, mentorship and process improvement. • Increase graduate enrolment to at least 40% of the total student population in the college.

4.2.2 Knowledge Transfer Partnerships and Networking

Knowledge Transfer Partnerships and Networking (KTPN) acts as the channel through which the university moves beyond the traditional forms of research dissemination, to create an environment of engagement with different actors in the knowledge generation chain. Knowledge production and transfer between universities and broad public and private sectors is a two-way traffic that calls for cultivation and fostering of symbiotic relationships. KTPN will be the mechanism through which knowledge and skills for the stimulation of innovation will be enhanced through collaborative projects between the private, public and business sectors and the university.

Table 14: Strategies for Knowledge Transfer Partnerships and Networking

Goal	Objectives	Strategies	Performance Indicators
To enhance the capacity of COCIS to generate solutions that are responsive to societal needs as well as build and sustain mutually beneficial partnerships	• To identify and engage relevant partners (local and international) • To develop a framework for engaging and working with the partners.	• Establishment of the Office of Outreach and Engagement led by a senior faculty. • Set aside a fund to support college's outreach and engagement activities. • Promote public-private partnership / forum for student development e.g. though curricula review, apprenticeships and internships • Media publicity and engagement though open / research exhibitions at the COCIS. • Strengthen the incubation centre in the college. • Strengthen outreach and engagement activities among alumni, schools and the community at-large. • Establish a current list of alumni based on placement data, conduct fundraising activities, and liaise with community and industrial partners. • Start a permanent college endowment fund • Develop a consulting framework for the college • Develop a criteria for annual recognition of outreach and engagement excellence.	• Established Outreach and Engagement office led by a Senior faculty • Budget supporting college outreach and engagement activities. • Number of open / research exhibitions at college level per year (1) • Functional and vibrant incubation centre • Number of innovations incubated • Number of students enrolled for short courses per year (1000) • Established college alumni database. • (MDG focus, joint research, grants, internship, employment rate, MOUs) • Number of engagements with schools, alumni and communities per year (10). • Endowment fund in place and institutionalized • Consulting framework for college in place. • Criteria for annual recognition of outreach excellence and engagement in place.

4.3 THE INSTITUTION

4.3.1 Human Resource Development and Management

In the current knowledge era, human resources are the prime movers of any institution. The human resource function for the strategic plan for 2020-2030 will seek to address the gaps that manifest across the different categories of staff in varying intensity and these are : pedagogical skills, orientation, induction, continuous professional development and exit arrangements, attitude towards change, work and the institution, customer care, communication and other life skills, moral, ethical and professional values.

Table 15: Strategies for Human Resource Development and Management

Goals	Objectives	Strategies	Performance Indicators
1) Have an engaged, motivated and highly productive workforce	• Establish the skill gaps in all employees in the college • Equip staff with relevant missing skills • Set up an induction program for all new staff in the College • Set up a continuous professional development program in the college	• Carry out a knowledge & skills gap audit • Carry out staff training • Develop a standard induction manual and training program for the college • Develop and implement a refresher training program in COCIS • Equip staff with customer care, communication and other life skills (entrepreneurial capabilities – innovativeness, creativity, self drive) • Equip staff with moral, ethical and professional values	• Number of staff evaluations undertaken per year (10) • Established induction manual and college refresher training program. • Number of pedagogy skills training done (10). • Number of soft skills workshops held (10)
2) Have a mechanism for performance	• Develop a comprehensive appraisal system	• Identify key performance indicators for each job • Develop manual and electronic	• Key performance indicators for each job in place and in use.

monitoring and improvement	• Develop a reward system for outstanding employees	appraisal tools for the college • Establish a reward mechanisms and criteria	• Number of performance appraisals conducted per year (10). • Established performance reward mechanism and criteria. • Number of rewards given to outstanding employees (30).

4.3.2 Governance and Institutional Effectiveness

Makerere University as a Public University is guided by the Universities and Other Tertiary Institutions Act 2001 (UOTIA). Key issues arising in the implementation of the UOTIA include: harmonization of governance structure and functions, institutional autonomy and running the University as an enterprise; synchronizing plans/policies of government and those of Makerere University; the ability to undertake institutional audit including quality assurance, marketing and image building. There is need to out-source the non-core functions of the University. The College is committed to this cause.

Table 16: Strategies for Governance and Institutional Effectiveness

Goal(s)	Objectives	Strategies	Performance Indicators
To develop efficient, effective and highly reputable college with a good brand	• To build a competent and visionary College management team • To provide effective information flow	• Ensure strict implementation and adherence to established policies and regulations • By holding regular meetings • Use of college websites and mailing • Use of performance appraisal for management team	• Fully fledged and functional collegiate system • Fully functional academic department handling academic activities. • A functional organogram • Number of meetings held per semester for each statutory committee (1) • Clearly defined and functional communication strategy for COCIS staff, students, alumni and public stakeholders • Up-to-date college website with well formatted content and effective navigation. • Performance appraisals of the management team (10)

4.3.3 Library Services

Library services play a crucial role in providing support to the functions and intellectual development of the College. The cornerstone of the strategies in the current plan is anchored in ensuring a user-centred Library and Information Service and sustaining effective institutional linkages.

Table 17: Strategies for Library Services

Goal	Objectives	Strategies	Performance Indicators
To improve the effectiveness and efficiency of the library services in the college of computing and information sciences	• To equip library with adequate resources	• Increase and diversity information resources (open software solutions, bargaining for e-resources) to cater for academic needs of users in COCIS. • Expand space and facilities in the college library • Develop a collection development policy for the College • Designate adequate space for the College library • Automate all the library services • Establish a service desk for	• Fully automated college library and linked to the main library • Library occupying adequate space for 200 students. • Number of new open information resources (50) • Increase resources of e-journals, e-books, book titles and volumes in the college libraries by 100%. • Number of established partnerships and collaborations with local and international institutions / organisations (i.e. for information exchange and other linkages) (20) • Hotspots set up in the library for increased connectivity (100%). • Established service desk for library and ICT support for both day and evening students. • Established library services for library users with disabilities and special needs

		library and ICT support	
	• To facilitate access to library resources.	• Train information literacy for students and staff • Develop a comprehensive library user manual	• Number of trainings conducted for students and staff regarding the use of library resource (10). • Comprehensive library user manual for college uploaded on the website.

4.3.4 Information and Communication Technology

ICT provides an enabling environment and facilitates access to knowledge, learning and innovations globally. COCIS will continue to use ICT as a platform for academic excellence, ensuring quality, effectiveness and efficiency in all its functions and innovations.

Table 18: Strategies for Information and Communication Technology

Goal(s)	Objectives	Strategies	Performance Indicators
To leverage ICT as a platform for academic excellence and innovations.	a) To harness ICTs to improve teaching, learning, research and outreach through e-learning b) To increase access to ICT facilities in the College c) To improve the capacity of staff and students in ICT use	a) Improved staff and student ratios to computers b) Access to computers and internet c) Optimal availability of computers determined based on use per unit time d) Increased number of Staff and students with ICT skills e) Gender mainstreamed in all ICT services f) Improved end user and technical support	• Staff to student ratios (1:100) • Student to computer ratios based on use per unit time (1:5) • Access to Internet in all college buildings and wireless lab for students access during the self study. • Number of courses integrating e-learning modules (100) • Upgraded ICT infrastructure at COCIS (LAN, user computer terminals, computers) • Number of systems administrators providing technical support (4 full time staff). • Number of lab technicians providing technical support for day and evening students(10) • Computer lab timetables that provide equal opportunities for all categories of students (female, disabled) every semester.

4.3.5 Gender Mainstreaming

The role of the Gender Mainstreaming Programme (GMP) of Makerere University is to mainstream gender in the University functions. The College fully embraces the gender mainstreaming practices in its functions. This will contribute to gender equality and women's empowerment in the College, the University, Uganda and beyond.

Table 19: Strategies for Mainstreaming Gender

Goal(s)	Objectives	Strategies	Performance Indicators
Reposition the Gender Mainstreaming program to excel in providing an equitable and gender responsive organizational environment.	To reposition the Gender Mainstreaming program for enhanced effectiveness in service delivery.	• Mainstream gender in College programmes • Include gender related activities in student initiated projects with minimum support;	• All new and revised programmes must incorporate gender. • Fraction of students initiated projects implementing gender related activities (40%).
	To promote gender responsive organizational culture in COCIS	• Promote best practice in gender equality at Makerere and beyond	• Number of gender mentoring sessions held for academic and administrative staff (10)

4.3.6 Physical Infrastructure and Planning

Table 20 : Physical Infrastructure and Planning

Goal(s)	Objectives	Strategies	Performance Indicators
Have adequate infrastructure for all college activities	Put to optimal use the existing infrastructure	• Continuous audit of the state and usage of the infrastructure, systems in relation to the teaching and learning requirements of COCIS • Create and operationalize a maintenance schedule • Improve access to facilities for students and staff with special needs	•Number of audits of the infrastructure and systems per year (1) •Maintenance schedule of Infrastructure •Procurement of lift in Block B and working lift in Block A.

		• Improve and construct the points of convenience for staff and students • Renovation of Blocks A, B and C.	•Increased number of points of convenience for staff (5) and students (20). •Renovated blocks A, B and C.

4.3.7 Allocation and Management of Financial Resources

Makerere University's has three main sources of funding: government, fees and grants from development partners. Makerere University would like to streamline the financial resource allocation mechanism between the college / units and the centre and improve the budgeting system with a view of making it performance based.

Table 21: Strategy for Allocation and Management of Financial Resources

Goal(s)	Objectives	Strategies	Performance Indicators
To establish an efficient and effective financial management system at COCIS	To create a College budget that consolidates departmental activity-based budgets	• The finance committee should consult with all departments to ensure that the interests of the departments are taken care of.	• Number of finance meetings where departments have participated- 1 meeting per semester (20).
	To increase financial transparency	• Participation of all units in the budgeting process. • Routine financial reports • COCIS will embrace the utilization of the ICT based financial management system and enforce control measures and accountability.	• Number of budget meetings where all units have participated (10) • Number of financial reports shared (10). • Utilisation of the Integrated Financial Management System (IFMS) (100%).

4.3.8 Resource Mobilization and Investment

In the face of steadily diminishing revenue support to the University, the University is adopting a systematic approach to philanthropy – gifts from University alumni, friends, Corporations and Foundations as a viable alternatives to the dwindling resources. Additionally, during the next ten-year period, the University will undertake investments comprising of a strategic mix of funding sources from endowments, tuition funds, private investors and rental income from acquisitions and leases with the aim of maximizing the rate of return on these investments. Funding for these investments shall include but not be limited to grants, loans, and donations within the confines of the University's Investment Policy and as shall be acceptable to Council. The College will actively pursue initiatives in these areas as stipulated in the University Strategic plan

Table 22: Strategy for Resource Mobilization and Investment

Goal(s)	Objectives	Strategies	Performance Indicators
To consolidate and widen the College financial resource base	To create as well as consolidate existing investment opportunities within the college	• Increase the level of funding from other sources such as foundations, alumni, and the private sector (Endowment fund, naming of building and other facilities at a fee, Centres of Excellence). • Establish a comprehensive marketing strategy for graduate programs • Establishment of college-based donors' forum • Put in place a fully functional alumni relations office and engage alumni in supporting the college • Strengthen the incubation centre and Centre for Professional Skills Development • Introduce customized short courses – targeting corporate world and alumni • Commercialize brilliant students projects • Strengthen grants office	• Contributions to College budget from other sources including alumni (20%). • A comprehensive marketing strategy for graduate programs (100%). • Number of donors' forums held at college level (10). • Number of audits and reviews of these centres per year (10). • Number of customised short courses for corporates per year (5). • Number of commercialised student projects per year (5). • Vibrant and active grants office (100%). • CiPSD with corporate image (100%) • A comprehensive marketing strategy for CiPSD (100%). • Motivated and skilled instructors in CiPSD (100%)

			•

4.3.9 Internationalization

Owing to the imperatives of globalization and the value that internationalization adds to higher education institutions, COCIS is conscious of the importance of integrating internationalization in her core functions. Attraction of international staff and students is in some cases dependent on the unique aspects of the curricula that are not easily attainable elsewhere. Further, it helps to enrich and enhance the teaching and learning experience through sharing of experiences by the faculty and students from diverse national contexts. Internationalization in this plan is manifested in various forms namely: admission of foreign students; integration of the international perspective in teaching, learning and collaborative researches and joint degree awards. The overall goal is to augment the global competitive edge of the College.

Table 23: Strategy for Internationalization

Goal(s)	Objectives	Strategies	Performance Indicators

To leverage resources and experience from the international experience of staff, students in teaching, learning, research and service provision.	To adopt internationally best practices into the working of the College.	• Staff and students participating in yearly exchange programmes • Admissions should be reserved for international students • Curricula should be aligned to international curricula. • Joint degrees (transferable credit units, 1 year done in a foreign university) • Each department should attract at least one visiting lecturer per year Routine (probably quarterly) financial reports. • Collaborative summer schools	• Number of international staff in COCIS per year (5). • Percentage admissions reserved for international students in COCIS (5%). • Number of curricula aligned to international curricula (3) • Website uploaded with relevant and up-to-date information targeting international students (100%) • Number of programmes accredited internationally (10). • Number of collaborative summer schools held (5)

4.4 Cross-cutting issues

4.4.1 Quality Assurance and Improvement

Quality assurance will underpin the activities across the investment areas. Quality assurance will examine the management structure and the codes of practice for both the core activities of teaching and learning, research, knowledge transfer partnerships and networking and the support functions of governance and administration, students and staff welfare, data management and the organizational culture. The overall goal for QA is to enhance the efficiency and effectiveness of the activities of the university. The College has accordingly set its goals and objectives for QA as presented below.

Table 24 : Strategy for Quality Assurance and Improvement

Goal(s)	Objectives	Strategies	Performance Indicators
To enhance the efficiency and effectiveness of the college.	• To measure the performance of teaching, research and administration • To develop strategies to improve on the delivery of teaching, research and administration • To offer improved services in teaching, research and administration	• Regular self assessments to measure performance of the core and support functions at college level. • Develop and implement a system for tracking of quality of student learning experience • Enforce pedagogy training for all academic staff in the college involved in the delivery of learning, teaching, research and supervision. • Institute an Annual Staff Review process where staff can reflect on the effectiveness of their teaching and supervisory practice. • All lecturers should be trained to use the results system • Provide assessments throughout the semester.	• Lecturers trained to use the results management system • Number of assessment given • Number of academic programs reviewed, approved and accredited (25). • System for tracking of quality of student learning in place • Student pass completion rates (70%). • Number of external examinations done per program per year (2) (40) • Number of stakeholders surveys (10) • Number of self assessment and performance reviews per year (1) • External review and tracer studies taken (one per 5 years) (2).

4.4.2 Monitoring and Evaluation Framework

For each thematic area, a range of measures of success have been specified. These will provide the benchmark to assess baseline, and progress of implementation over the plan period. The implementation of the ten Strategic plan will be phased into three-year operational plans and annual work plans which will be assessed for realization of the set targets. The annual work plan / activities will guide the budgeting process against which the College performance will be assessed.

5 Section V: Implementation Schedule

1. Teaching and Learning

Table 25: Implementation schedule for teaching and learning strategy

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030
• To provide a teaching and learning environment that assures a productive experience to both the learners and academic staff	• Mainstream technology into teaching and learning to cater for increased access to education (multimedia, video, use of online content, electronic boards, computers, cyberspace networks). • Establish a defined structure for tracking the academic and other student aspects (recruitment, orientation to graduation) • Monitoring and evaluating teaching and learning	• Number of lecturers using advanced technologies in teaching and learning (65/80) • Number of curricula reviewed every 3 years • Students' evaluation of the effectiveness of the lecturer's teaching. • Number of tutorials used in teaching in per semester. • Number of hours allotted by each academic staff for student consultation per semester. • Number of senior academic members of staff involved in foundation courses per year.	30% 5 2 2 3 5	50% 5 2 2 3 5	80% 5 2 2 3 5
• To produce competent graduates relevant to the world of work and society at both local and international levels.	• Harmonise academic programmes and transform curricula into practical competence-based learning focusing on knowledge and skills (leadership attitudes • Have internships and field attachments for strategic	• Number of programmes whose curricula has been reviewed to integrate communication and problem-solving skills. • Number of programmes designed on collaborative basis with other institutions • Number of programmes accepting credit transfers		1 1 1	1 1 1

	partnerships / collaboration with the public and private sectors.	• Monitoring and Evaluation system and supervision of field attachments and internships mechanism developed.		1	1
• To increase the supply capacity of the University to provide increased access opportunities to meet increasing demand for higher education at national level.	• Integrate career guidance in teaching and learning and have mandatory tracer studies for all programmes	• Market survey and the number of research reports • Number of tracer studies done for all programmes • Number of career guidance sessions held (10)		1 5	1 1 10

2. Mainstreaming Open, Distance and E-learning

Table 26: Implementation schedule for mainstreaming ODeL

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030
1) To ensure a robust ODeL student support for increased satisfaction and retention.	• Transformation of traditional classroom based programmes into ODeL. • Increase the number of programmes offered using ODeL approaches. • Continuous pedagogical training and support academic staff design and development, content development and student support for the development of quality blended learning programmes.	• Number of COCIS academic staff trained and developing quality blended learning courses and programmes (65/80). • Number of blended programmes offered in COCIS at undergraduate and graduate levels (5). • Number of students who are actively using MUELE and other technologies for learning (2500/3500). • Number of students satisfied with the support services offered by ODeL (2500/3500).	30% 30% 30%	50% 2 50% 50%	80% 3 71% 71%
• To increase internationalization of undergraduate and graduate programmes.	• Continuous promotion and development of MUELE for delivery of e-Learning courses and programmes in COCIS.	• Number of international students enrolled on COCIS online/blended programmes		5	5
• To harness the learning preferences of the millennial (present day) learners	• Provision of robust student training and support to all students enrolled on blended programmes.	• Number of trainings held for students enrolled on blended programmes (10; 1 per year)		5	5

3. Student Support Services

Table 27: Implementation schedule for Student Support Services strategy

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030
2) To enhance the academic, professional and social development of students.	• To provide mentoring, guidance and counselling to both national and international students. • Enhance ICT support services through the use of the integrated financial and academic management systems	• Number of mentoring and counselling sessions provided to the students per department per year (1). • Special needs programme developed at the college (1).		1 100%	1
• To create a conducive environment for student academic social life. • To provide a better learning experience, thus increase students' success	• Continuous customer care refresher training and appraisal for front desk officers handling students. • Engage the students body in students support services i.e. ICT services, and college activities, library and orientation	• Number of front desk staff given refresher training (registrars, administrators ..) (15) • Functional student support desk at COCIS. For improved customer care service • Counselling desk (services) at COCIS (1) • Number of students participating in college activities (2,000/3,500)	5	5 100% 100% 30%	5 57%
• To instill commitment in students and local, national and global citizens. • To promote outreach and engagement.	• Strengthen outreach and engagement activities among alumni, schools, and at-large community; • Start a permanent college endowment fund which will be used to retool the instructional	• Number of outreach and engagement activities (25) • Fully established endowment fund for the college.	5	10 100%	10

	materials and content, renovate core facilities, and rebrand the				

4. Impactful Research Innovations

Table 28: Implementation schedule for Research and Innovations Strategy

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030
• To enhance knowledge generation and access in computing and information sciences.	• Strengthen the current Grant's Office into Research and Innovations Office led by a senior faculty. • Strengthen multi-disciplinary communities of scholars focusing on both basic and applied research in COCIS. • Allocate funds to build a strong research infrastructure. • Mentoring undergraduate researchers such that some of the students stay on for their graduate studies • Identify college's research niche, particularly novel research themes where college has a competitive edge. • Training for award winning proposals • Use proven and tested avenues to disseminate research findings and influence policy. • Quarterly review of research group	• Established Research and Innovations Office led by a senior faculty. • Number of staff participation in research (40/80) • Number of multidisciplinary research projects emerging from the research groups (15) • Budget allocated for research activities in the college. • Number of undergraduate researchers taken on projects for mentorship (30) • Number of new grants (15), • Number of publications in discipline specific journals (50),	50% 20 5 100% 10 5 10 15	100% 30 10 100% 20 10 30 30	100% 40 15 100% 30 15 50 40

	performance • Support the local journal and conference • Recommend college research metrics for academic staff evaluation. • Strengthen the innovations centre on the college and stimulate staff and student innovations and inventions	• Number of staff with cited publications as reflected by the citation indices (40/80) • Number of academic staff undertaking sabbatical leave for research and scholarly writing (5)	1	3	5
• To promote the generation of technology innovations and their accessibility to Uganda society with the view to improving the welfare of the nation.	Improve the processes that affect the graduate enrolment (graduate supervision, grade thesis / dissertation, mentorship and career guidance) to increase graduate enrolment to a least 40% of the total student population.	• The percentage of graduate to overall number of students (40%) • Percentage share of graduate students enrolled and completing on time (60%) • Number of graduate students publishing in peer reviewed discipline specific journals (30)	5% 15% 10	20% 30% 20	40% 60% 30
• To encourage and strengthen research partnerships • To promote and support writing of project proposals	• Create seed fund mechanisms to stimulate research among exceptional undergraduates, graduates, and junior faculty • Prioritize for funding, as well as, we should ensure research findings are published in high-impact journals.	• Number of patents / intellectual properties sold (10). • A budget for training of staff in grants writing and seed funding for proposals (50m)	2 10m	5 25m	10 50m

5. Knowledge Transfer Partnerships and Networking

Table 29: Implementation schedule for knowledge transfer partnerships and networking strategy

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030
• To identify and engage relevant partners (local and international)	• Establishment of the Office of Outreach and Engagement led by a senior faculty. • Set aside a fund to support college's outreach and engagement activities. • Promote public-private partnership / forum for student development e.g. though curricula review, apprenticeships & internships • Media publicity and engagement though open / research exhibitions at the COCIS. • Strengthen the incubation centres in the college.	• Established Outreach and Engagement office led by Senior faculty. • Budget for outreach and engagement activities • Number of open / research exhibitions at college level (10) • Functional and vibrant incubation centre • Number of innovations incubated (20)	 20m 1 50%	50% 40m 5 100% 10	100% 60m 10 100% 20
To develop a framework for engaging and working with the partners.	• Strengthen outreach and engagement activities among alumni, schools, and at-large community. • Establish a current list of alumni based on placement data, conduct fundraising activities, and liaise with community and industrial partners. • Start a permanent college endowment fund • Develop a consulting framework for the college	• Number of engagements with schools, alumni and communities per year (20). • Endowment fund in place and institutionalized • Established college alumni database (80%). • Conduct fundraising activities (2) • Consulting framework in place. • Criteria for annual recognition of outreach excellence and engagement in place.	 100% 20% 20%	10 100% 50% 1 60% 60% 50%	20 100% 80% 2 100% 100% 100%

	• Develop a criteria for annual recognition of outreach and engagement excellence.	• Endowment fund in place and institutionalized			

6. Human Resource Development and Management

Table 30: Implementation schedule for the Human Resource Development and Management strategy

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030
• Establish the skill gaps in all employees in the college • Equip staff with relevant missing skills	• Carry out a knowledge & skills gap audit • Carry out staff training • Develop a standard induction manual and training program for the college • Develop and implement a refresher training program in COCIS • Equip staff with customer care, communication and other life skills (entrepreneurial capabilities – innovativeness, creativity, self drive) • Equip staff with moral, ethical and professional values	• A knowledge and skills gap audit report • Number of staff evaluations undertaken (10) • Number of pedagogy skills training done (10). • Established induction manual and college refresher training program. • Number of soft skills workshops held (10)	100% 1 1 50% 1	100% 5 5 100% 5	100% 10 10 100% 10
• Set up an induction program for all new staff in the College • Set up a continuous professional development program	• Develop a standard induction manual and training program for the college • Develop and implement a refresher training program in COCIS • Carry out induction training for new staff.	• Developed refresher training program at COCIS • Standard induction manual developed and in use • Number of induction trainings done (10)	 1	50% 50% 5	100% 100% 10

in the college					
• Develop a comprehensive appraisal system • Develop a reward system for outstanding employees	• Identify key performance indicators for each job • Develop manual and electronic appraisal tools for the college • Establish a reward mechanisms and criteria	• Key performance indicators for each job in place and in use. • Number of performance appraisals conducted (10). • Established performance reward mechanism. • Number of rewards given to outstanding employees per year (30).	 1 3	100% 5 100% 15	100% 10 100% 30

7. Governance and Institutional Effectiveness

Table 31: Implementation schedule for governance and institutional effectiveness strategy

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030
• To build a competent and visionary College management team	• Ensure strict implementation and adherence to established policies and regulations • Use of refresher courses and exposure opportunities • Use of performance appraisal for management team	• Fully fledged and functional collegiate system • A functional organogram • Fully functional academic departments handling all academic activities • Number of performance appraisals of the management team (10)	100% 100% 100% 1	100% 100% 100% 5	100% 100% 100% 10
• To provide effective information flow	• Put in place a clearly defined and functional communication strategy	• Clearly defined and functional communication strategy for COCIS staff, students, alumni and public stakeholders	100%	100%	100%

	for COCIS staff, students, alumni and public stakeholders • By holding regular meetings • Use of college websites and mailing	• Up-to-date college website with well formatted content and effective navigation. • Number of meetings held per semester for each statutory committee (1)	100% 2	100% 10	100% 20

8. Library Services

Table 32: Implementation schedule of the Library Services strategy

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030
• To equip library with adequate resources	• Increase and diversity information resources (open software solutions, bargaining for e-resources) to cater for academic needs of users in COCIS. • Expand space and facilities in the college library • Develop a collection development policy for the College • Designate adequate space for the College library • Automate all the library services Establish a service desk for library and ICT support	• Fully automated college library and linked to the main library • Library occupying adequate space for 200 students. • Number of new open information resources (50) • Increase resources of e-journals, e-books, book titles and volumes in the college libraries by 100%. • Number of established partnerships and collaborations with local and international institutions / organisations (i.e. for information exchange and other linkages) (20). • Hotspots set up in the library for increased connectivity (100%).	 50 5 25% 5 30% 100%	100% 100 25 50% 10 60% 100%	100% 200 50 100% 20 100% 100%

		• Established service desk for library and ICT support for both day and evening students. • Established library services for library users with disabilities and special needs.	100%	100%	100%
To facilitate access to library resources	• Train information literacy for students and staff • Develop a comprehensive library user manual	• Number of trainings conducted for students and staff regarding the use of library resources per year (10). • Comprehensive library user manual for college uploaded on the website.	1 20%	5 50%	10 100%

9. Information and Communication Technology

Table 33: Implementation of Information and Communication Technology strategy

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030
• To harness ICTs to improve teaching, learning, research and outreach through e-learning • To increase access to ICT facilities in the College • To improve the capacity of staff and students in ICT use	• Improved staff and student ratios to computers • Access to computers and internet • Optimal availability of computers determined based on use per unit time • Increased number of Staff and students with ICT skills • Gender mainstreamed in all ICT services • Improved end user and technical support	• Staff to student ratios (1:100) • Student to computer ratios based on use per unit time (1:5) • Access to Internet in all college buildings and wireless lab for students access during the self study. • Number of courses integrating e-learning modules (100) • Upgraded ICT infrastructure at COCIS (LAN, user computer terminals, computers) (75%)	1:150 1:50 50% 0 25%	1:100 1:25 75% 50 50%	1:100 1:5 100% 100 75%

		• Number of systems administrators providing technical support (4 full time staff). • Number of lab technicians providing technical support for day and evening students(10) • Computer lab timetables that provide equal opportunities for all categories of students (female, disabled) every semester.	3 5 100%	4 7 100%	4 10 100%

10. Gender Mainstreaming

Table 34: Implementation of the gender mainstreaming strategy

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030
To reposition the Gender Mainstreaming program for enhanced effectiveness in service delivery.	• Mainstream gender in College programmes • Include gender related activities in student initiated projects with minimum support;	• Revised and new programmes incorporating gender. (100%) • Fraction of students able to initiate and implement gender related activities with minimum support (40%)	25% 10%	50% 25%	100% 40%
To promote gender responsive organizational culture in COCIS	• Promote best practice in gender equality at Makerere and beyond	• Number of gender mentoring sessions held for academic and administrative staff (10)	1	5	10

11. Physical Infrastructure and Planning

Table 35: Implementation schedule for Physical infrastructure and planning strategy

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030
• Put to optimal use the existing infrastructure	• Continuous audit of the state and usage of the infrastructure, systems in relation to the teaching and learning requirements of COCIS • Create and operationalize a maintenance schedule • Improve access to facilities for students and staff with special needs • Improve and construct the points of convenience for staff and students Renovation of Blocks A, B and C.	•Number of audits of the infrastructure and systems (10) •Maintenance schedule of Infrastructure •Procurement of lift in Block B and working lift in Block A. •Increased number of points of convenience for staff (5) and students (20). • Renovated blocks A, B and C.	1 100% 5 25%	5 100% 100% 10 50%	10 100% 20 100%

12. Allocation and Management of Financial Resources

Table 36: Implementation schedule for allocation and management of financial resources

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030

• To create a College budget that consolidates departmental activity-based budgets	The financial committee should consult with all departments to ensure that the interests of the departments are taken care of.	Number of meetings where departments have participated 1 meeting per semester (20).	2	10	20
• To increase financial transparency	• Participation of all units in the budgeting process. • Routine financial reports • COCIS will embrace the utilization of the ICT based financial management system and enforce control measures and accountability.	• Number of budget meetings where all units have participated (10) • Number of financial reports shared (1 report per year - 10). • Utilization of the Integrated Financial Management System (IFMS) (100%)	1 1 100%	5 5 100%	10 10 100%

13. Resource Mobilization and Investment

Table 37: Implementation schedule for resource mobilization and investment strategy

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030

To create as well as consolidate existing investment opportunities within the college	• Increase the level of funding from other sources such as foundations, alumni, and the private sector (Endowment fund, naming of building and other facilities at a fee, Centres of Excellence). • Establishment of college-based donors' forum • Put in place a fully functional alumni relations office and engage alumni in supporting the college • Equip the Centre for Professional Skills Development so that it has a corporate image • Establish a comprehensive marketing strategy for short professional courses in CiPSD. • Introduce customized short courses – targeting corporate world and alumni • Commercialize brilliant students projects • Strengthen grants office • Maintain as well as create new partnerships through signing MOU's with different stakeholders Staff retention through motivation and Continuous professional development (Instructor-trainer qualifications)	• Contributions to College budget from other sources including alumni (20%). • Number of donors' forums held at college level (10) • Number of audits and reviews of these centre (10) • Number of customised short courses for corporates (5) • Number of commercialised student projects (5) • Vibrant and active grants office (100%) • CiPSD with corporate image (100%) • A comprehensive marketing strategy for CiPSD (100%). • Motivated and skilled instructors in CiPSD (100%)	 1 1 1 50% 50% 50% 50%	10% 5 5 3 3 75% 75% 75% 75%	20% 10 10 5 5 100% 100% 100% 100%

14. **Internationalization**

Table 38: Implementation schedule for internalization

Objectives	**Strategic Interventions**	**Measures of Success**	**Schedules by year**		
			2020	**2015**	**2030**

To adopt internationally best practices into the working of the College.	• Staff and students participating in yearly exchange programmes • Admissions should be reserved for international students • Curricula should be aligned to international curricula. • Joint degrees (transferable credit units, 1 year done in a foreign university) • Each department should attract at least one visiting lecturer per year Routine (probably quarterly) financial reports. • Collaborative summer schools.	• Number of international staff in COCIS per year (5). • Percentage admissions reserved for international students in COCIS (5%). • Number of curricula aligned to international curricula (3) • Website uploaded with relevant and up-to-date information targeting international students (100%) • Number of programmes accredited internationally (10). • Number of collaborative summer schools held (5)	1 5% 1 50% 3 1	3 5% 2 100% 6 3	5 5% 3 100% 10 5

15. Quality Assurance and Improvement

Table 39: Implementation schedule for Quality Assurance and Improvement

Objectives	Strategic Interventions	Measures of Success	Schedules by year		
			2020	2025	2030

• To offer improved services in teaching, research and administration	• All lecturers should be trained to use the results system • Provide teaching, research and administration assessments throughout the semester.	• Lecturers trained to use the results management system (80/80) • Number of teaching, research and administration assessments given (20)	25% 4	50% 10	100% 20
• To measure the performance of teaching, research and administration •	• Regular self assessments to measure performance of the core and support functions at college level. • Develop and implement a system for tracking of quality of student learning experience • Enforce pedagogy training for all academic staff in the college involved in the delivery of learning, teaching, research and supervision. • Institute an Annual Staff Review process where staff can reflect on the effectiveness of their teaching and supervisory practice.	• Number of academic programs reviewed, approved and accredited (25). • System for tracking of quality of student learning in place • Student pass completion rates (70%). • Number of external examinations done (2 per program) (40) • Number of stakeholders surveys (3) • Number of self assessment and performance reviews (10) • External review and tracer studies taken (2).	5 25% 40% 20 1 1	15 50% 50% 30 2 5 1	25 100% 70% 40 3 10 2

6 Section VI: Monitoring and Evaluation

Monitoring is the periodic checking on the planned activities to ensure that they are being executed according to plan and warning of deviations from the planned activities or intervention. Evaluation on the other hand encompasses assessment of outcomes or impact on the beneficiaries of interventions. Under this Strategic Plan, both monitoring and evaluation measures will be formulated to guide the implementation of the Plan.

7 Section VII: Financing of the Strategic Plan

The major risk facing secure implementation of the strategies in this strategic plan is inadequate funding. In order to mitigate this risk, a resource mobilization strategy will be worked out by the College Management team. Resources will be mobilized internally, from development partners, alumni and friends of COCIS and the Government of Uganda to support the realization of the strategic orientations of the Plan over the next 7 years. Furthermore, some of the Strategic pathways proposed in this plan such as restructuring academic programs to eliminate wasteful expenditure and outsourcing non core functions are envisaged to result into cost savings. The resources realized from the implementation of cost saving measures are expected to be channeled into financing the implementation of this Strategic Plan. For operationalization of the strategic plan an incremental resource projection will be determined. It should be pointed out that the bulk of strategies will be implemented as projects and their cost will be determined at the time of project formulation.

8 APPENDICES

Appendix 1: List Of Collaborating Universities, Organisations & Agencies 2011-2018

Universities

1. Amity University
2. Busitema University
3. Carnegie Mellon University, Rwanda
4. Cavendish University
5. Centro de Technologias Para Ia Academia, Universidad de La Sabana, Colombia
6. Chalmers University of Technology
7. Clark International
8. Dar es Salaam Institute of Technology
9. Dedan Kimathi University of Technology, Nyeri, Kenya
10. Egerton-University,
11. Eindhoven University of Technology
12. ESLSCA International Business School
13. Federal University Oye- Ekiti, Nigeria
14. Gothenburg University
15. Gulu University
16. Harvard Law School
17. Hogskolan Boras
18. Institute of Finance and Management Dar es Salaam Tanzania
19. International University of East Africa
20. IUIU University
21. Jomo Kenyata University of Agriculture and Technology
22. Kampala University
23. Karlstad University Sweden
24. KCA University Kenya
25. Kenya Faculty of Agriculture,
26. Kenya Methodist University.
27. Kenyatta University
28. Kings College London
29. Kyambogo University
30. Lakode Akintola University of Technology, Nigeria
31. Livingstone International University,
32. Lund University
33. Mbarara University of Science and Technology
34. Moi University
35. Monaco Institute of Computer Science
36. Mount Masaba High School
37. Muni University, Arua

38. Ndejje University
39. Nelson Mandela African institution of science & technology
40. Public Research Centre-Henri Tudor Luxembourg
41. School of Women and Gender Studies
42. Stellenbosch University, SA
43. Strathmore University, Kenya
44. Tshwane university of technology
45. Uganda Martyrs University
46. University of' Nebraska at Omaha
47. University of Bergen
48. University of Botswana
49. University of Dar-es Salaam
50. University of Estonia
51. University of Groningen, the Netherlands
52. University of Juba
53. University of Nairobi, Kenya
54. University of Sheffield, UK
55. University of South Africa
56. University of Swaziland
57. University of Tenesse, Chattanoga USA
58. YMCA

International Organisations and Agencies

1. Aegis Trust, Rwanda
2. Berkman Klein Center for Internet and Society
3. Bill and Melinda Foundation
4. Cisco Networking Academy (Regional)
5. Conduct ICDL Training of trainers.
6. European Union.
7. Global business labs (GBI)
8. Google
9. ICDL (international Computer Driving License)
10. Master Card Foundation.
11. Microsoft IT Academy
12. NIH
13. Oracle Training Center
14. Pan-African e-network project
15. PearsonVUE, Prometric and Kryterion
16. Swedish Embassy
17. The Imagine Cup competition.
18. The William and Flora Hewlett Foundation
19. USAID
20. Water Aid

21. NORHED

Local Organisations and Agencies

1. Afronet (U) LTD
2. Busoga Kingdom
3. Family Search International
4. Federation of Small & Medium Enterprises
5. Huawei
6. Infectious Disease Institute (IDI)
7. Kampala Capital City Authority (KCCA)
8. Kibo Foundation,
9. Ministry of Education
10. Ministry of Finance, Planning and Economic Development
11. National Information Technology Authority (NITA Uganda)
12. RUFORUM
13. Uganda National Council for Science and Technology
14. Uganda police force
15. Uganda Revenue Authority
16. Vision Group

Appendix 2: List Of Staff Projects And Publications

Projects

SN	GRANT NAME	Name of Funder /Partners	Grant Period e.g. 2013 – 2018	Amount	Key Team members
1.	Automating mobile survey Tech and spatial of viral cassava disease in Uganda	Bill and Melinda	01-04-2014 to 30-09-2018	493,396 USD	Dr. Ernest Mwebaze
2.	A Community platform for building peace through information -driven dialogue-ISOOKO	European Union.	01-01-2018 to Dec 2021	111,000.00 Euro	Dr. Sarah Kaddu
3.	Building Research Capacity In Innovative Information And Communication Technologies For Development (Ict4d) For Sustainable Socio-Economic Growth In Uganda (BRIGHT Project 317)	Swedish Embassy	2015-2020		Dr. Engineer Bainomugisha
4.	CIPSD Marketing Drive	Vision Group	2015-2018		
5.	CISCO Instructor Training (Silicon Valley)			USD 11,000	
6.	Cisco Systems, Makerere University COCIS is a Cisco Academy Support Center (ASC) and Instructor Training Center (ITC) for Uganda	Universities in Uganda	2011-2018		
7.	CISCO Training High School teachers and BTVE training		2017	Amount: (USD 11,000)	
8.	Copyright X	Harvard Law School, Berkman Klein Center for Internet and Society	2013-2017		
9.	Deploying interactive on -line networking Platform	European Union.	2014 to Dec 2018	21,340.00 Euro	Asso. Prof. Engineer Bainomugisha
10.	EDULINK	Egerton-University, Kenya Faculty of Agriculture, Jomo Kenyatta University, Makerere University and RUFORUM			

11.	Empowerment For Research Capacity In Knowledge And Information Production And Sharing For Socio- Economic Development In Uganda (KIPS Project 334)	Swedish Embassy	2015-2020		Dr. George Kiyinji
12.	Family Search	Family Search International and Busoga Kingdom			
13.	Health Information Training & Research in AE for Improved Health Care (HI-TRAIN PROJECT)	NORHED	01-11-2013 to 31-07-2018	704,874 USD	Dr. Josephine Nabukenya
14.	Huawei seeds for the future	Huawei, Ministry of Education	2016-2018		
15.	ICDL Training & Testing - MasterCard Foundation	ICDL Africa, MasterCard Foundation.	2014-2018	**337,450,000**	
16.	ICDL Training -Federation of Small & Medium Enterprises	Federation of Small & Medium Enterprises	2018	**70,000,000**	
17.	ICT4D	Gothenburg and Chalmers Universities in Sweden.			
18.	Linnaeus Palme (Staff exchange between EASLIS and the Swedish School of Library and Information Science)	Hogskolan Boras, Sweden	2015-2017		
19.	Makerere Innovation and Incubation Center (MIIC)	Ministry of Finance, Planning and Economic Development	2017-2018		
20.	METEGA	11 institutions, CAES and COCIS	2014-2018		
21.	Nurturing Genomics and Bioinformatics Research Capacity in Africa (BRecA)	NIH	09/05/2017 to 8/31/2022	250,000 USD	Dr. Daudi Jjingo, Dr. Florence Kivunike

22.	Pan African E learning centre	Amity and IGNOU Universities	2011-2018	Shs. 400,000,000	
23.	Planning activities to establish a center for data technology	The William and Flora Hewlett Foundation	July 20, 2018 to October 20, 2019	200,000 USD	Engineer, Ernest, John Quinn
24.	Scale deployment of smart phone agro-applications for field based diagnosis and real-time surveillance data collection	USAID	01-12-2017 to 31-12-2018	78,600.00 USD	Dr.Earnest Mwebaze
25.	Tele Education Center	Pearson VUE, Prometric, ICDL and Kryterion	2011-2018		
26.	Training For Sustainable Spatially Enabled E-Services Delivery In Uganda (TSSEED Project 321)	Swedish Embassy	2015-2020		D. Gilbert Maiga
27.	URA TREP Training	Uganda Revenue Authority		**Shs. 62,300,000**	
28.	WATER AID	Water Aid	2011-2017		
29.	WIMEA-ICT	University of Bergen, Dar es Salaam & Institute of Technology and University of Juba	2013-2018	18 Million NOKs	

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Appendix 3: List Of Staff That Graduated With Masters And Phd, 2011 – 2018

PHD

No.	Staff	Gender
1.	BAINOMUGISHA ENGINEER	M
2.	NAKATUMBA JOYCE NABENDE	F
3.	MUDALI DEBORAH	F
4.	KIVUNIKE FLORENCE NAMERE	F
5.	NAKAKAWA AGNES	F
6.	BAGARUKAYO EMILY	F
7.	AMIYO MERCY	F
8.	NABENDE PETER	M
9.	WAKHOLI PETER KHISA	M
10.	NAMATOVU HASIFAH KASUJJA	F
11.	KAHIIGI KIGOZI EVELYN	F
12.	MUGWANYA RYMOND	M
13.	TULINAYO PENLOPE FIONA	F
14.	JJINGO DAUDI	M
15.	ZAWEDDE AMINAH	F
16.	MWEBAZE JOHNSON B	M
17.	KYANDA SWAIB KAAWAASE	M
18.	AGABA JOAB EZRA	M
19.	KYEBAMBE MOSES NTANDA	M
20.	ODONGO STEVEN EYOBU	M
21.	BUKIRWA JOYCE MUWANGUZI	F

Masters

No.	Staff	Gender
1.	NANSAMBA BARBARA	F
2.	ASIO EVERLYN PATRA KALENZI	F
3.	ARINAITWE IRENE	F
4.	KATENDE JACOB	M
5.	NAMAGEMBE FLAVIA	F