Our Vision

To be the leading institution for academic excellence and innovations in Africa

Our Mission

To provide innovative teaching, learning, research and services responsive to national and global needs.

Core Values

• Allegiance to the Institution Integrity
• Customer Responsiveness
• Professionalism
• Openness to Diversity
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### Acronyms

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<th>Description</th>
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<tbody>
<tr>
<td>AfFD-HEST</td>
<td>African Development Bank Higher Education Science &amp; Technology</td>
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<tr>
<td>ARIS</td>
<td>Academic Records Information System</td>
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<tr>
<td>AFRIISA</td>
<td>Africa Institute for Strategic Resources Services and Development</td>
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<tr>
<td>ASMRS</td>
<td>Academic Staff Member Raising Scheme</td>
</tr>
<tr>
<td>CAES</td>
<td>College of Agricultural and Environmental Sciences</td>
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<tr>
<td>CAPREx</td>
<td>The Cambridge African Partnership for Research Excellence</td>
</tr>
<tr>
<td>CEDAT</td>
<td>College of Engineering Design Art and Technology</td>
</tr>
<tr>
<td>CEES</td>
<td>College of Education and External Studies</td>
</tr>
<tr>
<td>CHS</td>
<td>College of Health Sciences</td>
</tr>
<tr>
<td>CHUSS</td>
<td>College of Humanities and Social Sciences</td>
</tr>
<tr>
<td>CCNY</td>
<td>Carnegie Corporation of New York</td>
</tr>
<tr>
<td>CMC</td>
<td>Change Management Committee</td>
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<tr>
<td>CoCIS</td>
<td>College of Computing and Information Sciences</td>
</tr>
<tr>
<td>CoBAMS</td>
<td>College of Business and Management Sciences</td>
</tr>
<tr>
<td>CoNAS</td>
<td>College of Natural Sciences</td>
</tr>
<tr>
<td>CoVAB</td>
<td>College of Veterinary Medicine Animal Resources and Bio-Security</td>
</tr>
<tr>
<td>CRTT</td>
<td>Centre for Electronic Transportation and Technologies</td>
</tr>
<tr>
<td>DICTS</td>
<td>Directorate of Information and Communication Technology Support</td>
</tr>
<tr>
<td>DR &amp; GT</td>
<td>Directorate of Research and Graduate Training</td>
</tr>
<tr>
<td>EASHED</td>
<td>East African School of Higher Education Studies and Development</td>
</tr>
<tr>
<td>EASLIS</td>
<td>East African School of Library and Information Sciences</td>
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<tr>
<td>EU</td>
<td>European Union</td>
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<tr>
<td>GIS</td>
<td>Geo Information Systems</td>
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<td>GMD</td>
<td>Gender Mainstreaming Directorate</td>
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<td>FINIS</td>
<td>Financial Management Information System</td>
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<tr>
<td>FTSE</td>
<td>Full Time Student Equivalent</td>
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<tr>
<td>FSI</td>
<td>Female Scholarship Initiative</td>
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<tr>
<td>FSF</td>
<td>Makerere University Female Scholarship Foundation</td>
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<tr>
<td>HURIS</td>
<td>Human Resource Information System</td>
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<td>HERANA</td>
<td>Higher Education Research Network in Africa</td>
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<td>ICT</td>
<td>Information Communication Technology</td>
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<td>IDI</td>
<td>Infectious Disease Institute</td>
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<td>IPR</td>
<td>Intellectual Property Rights</td>
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<td>KTP</td>
<td>Knowledge Transfer Partnership and Networking</td>
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<tr>
<td>LAW</td>
<td>School of Law</td>
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<tr>
<td>LAN</td>
<td>Local Area Network</td>
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<tr>
<td>Mak</td>
<td>Makerere University</td>
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<td>MakHoldings</td>
<td>Makerere University Holding Company</td>
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<td>MakEF</td>
<td>Makerere University Endowment Fund</td>
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<tr>
<td>MCF</td>
<td>MasterCard Foundation</td>
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<tr>
<td>M &amp; E</td>
<td>Monitoring and Evaluation</td>
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<tr>
<td>MIS</td>
<td>Management Information System</td>
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<tr>
<td>MTSIFA</td>
<td>Margaret Trowel School of Industrial and Fine Art</td>
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<tr>
<td>MUARIK</td>
<td>Makerere University Agricultural Research Institute Kabanyolo</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>MUBS</td>
<td>Makerere University Business School</td>
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<td>MUELE</td>
<td>Makerere University E-Learning Environment</td>
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<tr>
<td>MISR</td>
<td>Makerere Institute of Social Research</td>
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<tr>
<td>MoU</td>
<td>Memorandum of Understanding</td>
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<tr>
<td>NCHE</td>
<td>National Council for Higher Education</td>
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<tr>
<td>NORHED</td>
<td>Norwegian Programme for Capacity Building in Higher Education &amp; Research for Development</td>
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<tr>
<td>NORAD</td>
<td>Norwegian Agency for Development</td>
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<tr>
<td>NUFFIC</td>
<td>Netherlands Support to Higher Education</td>
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<tr>
<td>OBT</td>
<td>Output Based Budgeting Tool</td>
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<td>ODeL</td>
<td>Open Distance and E-learning</td>
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<tr>
<td>PBL</td>
<td>Problem Based Learning</td>
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<tr>
<td>PDD</td>
<td>Planning and Development Department</td>
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<td>PGD</td>
<td>Post Graduate Diplomas</td>
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<td>PG</td>
<td>Postgraduate</td>
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<tr>
<td>PhD</td>
<td>Doctor of Philosophy or Doctorate</td>
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<tr>
<td>PWD</td>
<td>Persons with Disabilities</td>
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<td>QA</td>
<td>Quality Assurance</td>
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<td>QAD</td>
<td>Quality Assurance Directorate</td>
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<tr>
<td>RENU</td>
<td>Research and Education Network</td>
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<tr>
<td>Sida</td>
<td>Swedish International Development Agency</td>
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<tr>
<td>SSR</td>
<td>Student Staff Ratio</td>
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<td>UG</td>
<td>Undergraduate</td>
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<tr>
<td>UOTIA</td>
<td>University and Other Tertiaries Institutions Act</td>
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<tr>
<td>URAFR</td>
<td>University Research, Administrative, and Financial Reforms</td>
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<td>UPDF</td>
<td>Uganda Peoples Defence Forces</td>
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EXECUTIVE SUMMARY

The Makerere University Strategic Plan 2008/09 envisaged a three-tiered monitoring and evaluation mechanism. The rationale was to ensure that the University activities are being executed according to Plan. It was further anticipated that the M&E would provide a framework for corrective interventions when need arises. The strategic plan reviews are envisaged to result in either validation of the strategic orientations or act as a benchmark for new orientations depending on the dictates of the environment at the time of the review.

The 2015 review; builds on the annual reviews that have been captured in both the annual reports and the fact books. The annual publications show both qualitative and quantitative indicators along the strategic plan thematic areas. This evaluation is based on the performance indicators outlined by the plan based on the thematic areas. It starts with the 3 core functions of the University and then the support areas articulated by the plan.

The Plan explicitly articulated the direction of the University as:

(i) A learner centred problem based instruction providing experiential and flexible learning
(ii) A research driven University where research and teaching/learning are mutually reinforcing
(iii) Knowledge transfer partnerships and networking, because knowledge production and transfer between universities and broad public and private sectors is supposed to be a two-way traffic that calls for cultivation and fostering of symbiotic relationships.

ACHIEVEMENTS

Since commencement of the 10-year Strategic Plan in 2008/09, several milestones have been realised. Key among these as highlighted below by thematic area are:

CORE FUNCTIONS

Teaching and learning

(i) Enhanced access, the University has exceeded the Plan target of 35,000 to a climax of 41,354 students in 2013/14.
(ii) Review and harmonisation of academic programmes at both undergraduate and graduate levels.
(iii) Enhanced quality on the degrees awarded through joint course offerings and supervision e.g. 101 PhDs have benefited from this joint offerings.
(iv) Increased number of courses on e-learning platform currently at 592 from all the colleges.

Research and Innovations

i) Review and implementation of the Research Agenda.
ii) Increased research output in form of publications especially in journal articles which has more than doubled, policy briefs and paper presentations at national and international conferences. This has propelled the university rankings among the top 10 over the period under review.
iii) The University has been able to train more staff to PhD levels from 420 to 732. Staff at senior levels namely Professors, Associate Professors and Senior Lecturers has improved not only the quality of teaching but also research & innovations and knowledge transfer & networking.

iv) Growing number of research networks and collaborations e.g. Mak- Bergen, Resilient African Network (RAN) and African Centres of Excellence(ACE) all of which have continued to attract substantial research funding to the University.

Knowledge Transfer Partnership

(i) Established a partnership with the private sector, national & international organisations, and other universities in the curricula review, development of new programs, field attachment and co-supervision of students on field attachments and internships.

(ii) Institutionalisation of field attachment program which is now mandatory for all undergraduate students to undertake field attachment at least once during their academic programme so as to increase the employability of graduates.

(iii) Establishment of research and technology innovations incubation centres.

SUPPORT STRUCTURES

Human Resource

i) The recruitment, promotion and retention policy of the academic staff was reviewed.

ii) The number of professors, lecturers and assistant lecturers has grown to 85, 449 and 553 above the Plan target of 78, 388 and 368 respectively by 2014/15.

iii) Improved staff student ratio was 1:30 on average compared to the NCHE of 1:15 and the Plan target of 1:20. CHS, CoNAS and CoVAB meet the NCHE recommended benchmarks for SSRs.

iv) The number of full-time staff with PhDs has grown from 46% to 75% by 2014/15.

v) Graduate Fellows Policy was developed and approved.

Library

i) The library utilisable space has increased by an additional 8,000M2 bring the total space to 12000M2.

ii) Increase the total seating capacity in the main and branch libraries to 3900, bringing the seating ratio to 1:10 compared to the Plan target of 1:5.

iii) increase the library resources i.e. e-books, e-journals and books etc.

iv) Computerisation/ digitalisation of the library resources.

ICT

(i) Increase in the Internet Bandwidth realized from 68Mbps to 200 Mbps by 2014/15

(ii) Increase in the Optical-fibre network coverage beyond the main campus, i.e. CHS and MUARIK.

(iii) Establishment of the University Wireless Network (MAKAIR)

(iv) Use of ICT services beyond basic internet and mailing services to automation of business processes such as tuition collection (Mak-pay), pay-slips, Lib-hub processes (Library functions such as book cataloguing, digitization) and development of research management systems (gradtrack) among others.
(v) Upgrade of the University-wide storage system with storage capacity of 21 Terabytes.
(vi) Improved online visibility of the University

Physical Infrastructure

i) Development of the University Master Physical Infrastructure Development Plan for the main campus including the CHS and Makerere University Agriculture and Research Institute at Kabanyolo (MUARIK) campus
ii) Increase in total built up space e.g. CEDAT by additional 7700m²
iii) Construction of Centralised lecture facilities is on-going under the AfDB HEST support
iv) The road network across the University has improved significantly.

Organisation and Management

i) The transition from the faculty/schools and institutes to the College governance structure.
ii) Business re-engineering processes were defined by URAFR as outlined in the Organisational and Research Manual
iii) Mak emerged as one of the institutions that registered remarkable progress on all the indicators assessed by the network (HERANA Report)
iv) Communication Policy and Strategy were developed and approved by Senate and Council.
v) Improved University's communication channels between the centre and the units (both academic and administrative).
vi) Growing mainstreaming of ICT in the various functions of the University which has eased the consolidation of communication and information management.
vii) Every college and administrative unit formulated a new strategic plan to fit within the structural expectations of the new mode of university governance.
viii) Besides the University Annual performance reports, introduced was the production The University Annual factbook to guide in evidence-based decision making.
ix) An activity based resource allocation model was adopted

Financial Resources

i) Instituted structures for resource diversification specifically; Makerere University Holding Company (MakHoldings) and Makerere University Endowment Fund (MakEF).

Student and Staff Support

(i) A Guidance and Counselling Centre was established as an independent unit
(ii) Growing application of ICT in handling of students’ academic records.
(iii) Use of supportive technologies and teaching aid in the learning environment
(iv) Creation of the international student service Desk/Information centre
(v) Revival of annual student exhibitions/open days in the various colleges
(vi) Outsourcing of student catering services.
(vii) Improved health care and recreation facilities.

Cross-cutting
(i) The Quality Assurance Framework was established and is functional.
(ii) Accreditation of Academic Programs at both undergraduate and graduate by NCHE.
(iii) The University has been able to forge a number of collaborative linkages.
(iv) Growing number of women in leaderships at various management levels of the University

Challenges
The major shortcomings in the implementation of the plan include:

(i) Teaching and learning two key areas stand out: first, learner centred pedagogy has not been adopted as envisaged. Few colleges including CEDAT, CAES and CHS which had established PBL before the commencement of the plan continues with this initiative. Second, enrolment planning a key driver for the teaching and learning component remains fragmented and not aligned to the available resources. The composition of the students (undergraduate/graduate, humanities/sciences, national/international) has not been focused on the anticipated targets.

(ii) Under research and innovations, multi-disciplinary research teams to boost research output have not been adequately institutionalised. There is no rationalised research performance monitoring and evaluation either by colleges or individual academic staff. The research laboratory improvement committee has never been instituted. As such, the systemic status of research facilities review, prioritisation and resource allocation remains fragmented and a preserve of the respective colleges.

(iii) Similar to research and innovations, there is no institutional framework for coordinating knowledge transfer partnership activities in the University. The link between the University and the public and private sector remains informal or non-existent, career services for students are yet to be adopted and the coordination of student field attachment placement is programme based in many cases leading to duplication in effort and uncoordinated engagement.

(iv) Under the support functions, four key shortcomings stand out: the job descriptions and assessment across the University have never been implemented. This limits both performance reviews and job facilitation that will enhance performance; and lack of a systematic mechanism for induction & staff performance appraisal; lack of clear and enforceable succession Plans and guidelines and uncoordinated benchmarking by various units in the University; the library stock has had limited increment and the student book ratio has stagnated at the 1:7 compared to the ideal position of 1:40; Institutional commitment to ICT is inadequate and the physical facilities maintenance plan is yet to be developed and implemented.

(v) With respect to organisation and development, the tenets espoused by the University Research and Administrative Reforms Committee are yet to be adopted. Furthermore, the monitoring and evaluation framework remains weak and tenuous.

(vi) Inability to link the annual University budgeting process to the Strategic Plan priority areas due to limited resources; lack of the desired degree autonomy in financial management.

(vii) The University continues to have fragmented and inconsistent information provision because of lack of one stop information centre.
Recommendations

A brief overview of the recommendations to address the shortcomings is outlined below. The detailed action points across the various activities outlined in the strategic plan are given in the conclusion and recommendations section of this report.

**Teaching and Learning**

(i) Institutionalise enrolment planning through a deliberate effort to channel enrolment to the required student mix as well as matching the existing capacities/resource inputs (including staff based on NCHE-SSR, FTSE and Workload) in the various colleges/schools/Departments to the student numbers. The admission process should be informed by the requisite facilities. Continued improvement on the quality of instructional materials required for the delivery of all academic programmes is crucial;

(ii) Review the need for adoption of learner centred instruction and evolve an institutional initiative for re-training staff in learner-centred pedagogies and andragogy and where possible in wider application of the Problem Based Learning which is still limited to CHS

**Research and Innovations**

(i) Need to revive the Intellectual Property Rights Unit under the DR&GT. This will assure regular documentation of innovations (both innovative ideas and technologies) developed by staff and students and commercial exploitation of Intellectual Property Rights which has not yet taken root.

(ii) Research output and publications one of the annual performance indicators for staff recognition and promotion criteria.

(iii) Institute the laboratory improvement committee to be charged with oversight and the capacity to maintain and sustain the laboratory infrastructure improvements beyond the donor support.

**Knowledge Transfer Partnership**

Institute and operationalise a policy on incubation of business ideas and technologies

(i) Formalise the partnerships for public-private participation in University Programmes (i.e. in students’ placements for field attachments, internships and curricula review. - Evolve memoranda of understanding with governmental, private sector and non-governmental agencies to accommodate University programmes.

(ii) Evolve and institutionalise the University framework for utilization of the resource-pool of expertise (e.g. in form of consultancies and commissioned research undertakings.

**Support Functions**

(i) Expedite the review of University policies as recommended by URAFR and expected to be executed by the CMC.

(ii) Carry forward the implementation of the College system with the desired degree of autonomy (specifically regarding administrative, academic and financial management affairs).

(iii) Undertake regular human resource audits for both non-teaching and teaching staff in order to rationalise work environment/conditions, guide recruitment and minimise on the heavily loaded work areas

(iv) Institute measures to enhance academic mentorship

(v) Institute and operationalise a system of succession planning

(vi) Establish a physical facilities improvement plan and institute a systematic inventory and regularly review the University infrastructure facilities.
Realising Our Vision

VISION

STRATEGIC GOALS
Learner centred, Research Driven & Knowledge transfer partnership

ENABLERS
Finance
Human Resource, Infrastructure & Organisation

CROSS CUTTING
Quality Assurance, Gender mainstreaming & Internationalisation
1.0. INTRODUCTION

Makerere University Strategic Plan (2008/09 – 2018/19) envisaged a three-tiered monitoring and evaluation mechanism. The rationale was to ensure that the planned activities are being executed according to Plan, and establish corrective interventions when need arises. Apart from the annual reviews the Plan highlighted that the Strategic Plan will have an inbuilt review after every 3 years to take stock of the achievements realised and to assess the relevance of the University’s strategic orientations in light of the obtaining environment. An independent and critical midterm performance review of the 10-year (2008/09 – 2018/19) University Strategic Plan shall be conducted for self-assessment, accountability and drawing lessons. The reviews were envisaged to result in either validation of the strategic orientations or new orientations depending on the dictates of the environment at the time of the review.

This review is the first comprehensive analysis of the implementation of the Strategic Plan. An initial status review was undertaken in 2013 as a follow up to the revised Strategic Plans of Colleges and Administrative units that was necessitated by the revised governance system. The 2015/16 review builds on the annual reviews that have been captured in both the annual reports and the annual fact books. The documentation highlights both qualitative and quantitative indicators along the Strategic Plan thematic areas. Concomitant with this, is the need to establish whether the proposed interventions have had an impact on the key stakeholders as envisaged by the Plan.

The Strategic Plan 2008/09-2018/19 was developed in the quest to provide quality higher education within the mandate stipulated by the Universities and Other Tertiary Institutions Act 2001 as amended. The Plan explicitly articulated the direction of the University for the 3 core areas of teaching and learning, research and innovations and knowledge transfer partnerships as:-

(i) Learner centred problem based instruction providing experiential and flexible learning
(ii) A research driven University where research and teaching/learning are mutually reinforcing
(iii) Knowledge transfer partnerships and networking, because knowledge production and transfer between universities and broad public and private sectors is supposed to be a two-way traffic that calls for cultivation and fostering of symbiotic relationships.

This report gives a synopsis of the activities of the University since the formulation of the Plan and the extent to which the different implementing entities have been able to realise the stated strategy. The evaluation based on the performance indicators outlined by the Plan, is two dimensional. First, it considers the thematic areas starting with the 3 core functions of the University namely teaching & learning, research & innovations and knowledge transfer partnership; as well as the support areas articulated by the Plan. Second, is a process evaluation that reflects on the functions of the respective units in realising the undertakings as pronounced by the Plan. The review further derives from supplementary Strategic Plan Operational Framework document which articulated the milestones and assigned champions to drive the implementation process and realisation of strategies in the Plan. The mid-term review evaluates the extent to which the champions have taken forward the stated strategy and makes recommendations for the best way forward.

1.1 Purpose of the Evaluation

The evaluation is aimed at determining the extent to which the implementation has impacted (both positively and negatively) as far as bringing about the desired change is concerned during the past five
years (2008/09 – 2014/15). The goals of the Strategic Plan with respect to the three core functions of the University were to:

(i) To boost access opportunities and meet the Higher Education requirements at national and international levels and promote confidence in the academic provision under teaching and learning;

(ii) Focus on the expansion of the research portfolio, knowledge transformation and utilisation of research and innovations for research; and

(iii) Provide a framework for assessment and utilization of University products in the value chain, in addition to a structure for public, private sector interface in the promotion of education under knowledge transfer partnerships.

This evaluation was designed to establish the actual changes which have taken place in the various functional areas, the underlying and critical factors which have brought about the change or have hindered the realization of the expected change, lessons learnt, challenges and mitigation measures employed.

To this end, the evaluation is framed around three broad key questions including:

(i) What difference(s) or changes have taken place and which of those can be attributed to the implementation of the Strategic Plan over the past 5-6 years?

(ii) How have the above changes been brought about?

(iii) With what lessons for improvement in implementation?

1.2 Evaluation Methodology

The evaluation adopted a multi-pronged approach. The basic criterion was an analysis of the performance indicators as highlighted by the Strategic Plan and as captured by the periodic assessments made. Where feasible, performance was measured against the identified milestones in operational framework and the baseline status as captured at the commencement of the Strategic Plan implementation in 2008/09. The approach thus adopted the following methods:

(i) Review of existing documents including: the University Strategic Plan; the Operational Framework, the College & Admin Units’ Strategic Plans, the University Annual Reports since 2008 – 2013, the annual Fact Book, College Annual Performance reports, the Performance Status Update documents as presented to SPIC and FPAC etc).

(ii) Collect and analyse the data (both qualitative and quantitative) to synthesize out the changes which have taken place with their underlying factors;

(iii) Establish the key challenges and suggest measures to mitigate them for a smoother and more productive implementation over the remaining Plan period (2014/15 – 2018/19);

(iv) An evaluation instrument was developed to guide data collection from key stakeholders including (Principals/Heads of Administrative Units, Staff & Students) to establish evidence of realised changes.
1.3 Major Achievements Registered in the Implementation of the University Strategic Plan

Since commencement of the 10-year University Strategic Plan in 2008/09, several milestones have been realised. Some of these provide a broad framework and base for the realization of subsequent key strategies. Key among these are:

i. The transition from the faculty/schools and institutes to the College governance structure was successfully effected.

ii. All Colleges and Administrative units developed their Strategic Plans, and the Plans were approved by Council.

iii. Academic programmes across the different academic units were reviewed and harmonised in 2010. The second review is on-going targeting largely the postgraduate programmes and evaluating the efficacy of independent or integrated academic course units or programmes.

iv. The field attachment programme was institutionalised making it mandatory for all undergraduate students to undertake field attachment at least once during their academic programme.

v. The Research Agenda was reviewed and adopted. This improved research output/publications, policy briefs and paper presentations at national and international conferences.

vi. The Quality Assurance Framework [incorporating Directorate, policy and strategy] was established and is functional.

vii. Business re-engineering processes were defined by University Research Administration and Financial Reforms and outlined in the Organisational and Research Manual.

viii. Instituting structures for resource diversification specifically; Mak Holdings and Mak. Endowment Fund.
2.0. PERFORMANCE BY THEMATIC AREA (2008/09-2014/15)

2.1. Teaching and Learning

As one of the core functions of the University, the teaching and learning theme had two major goals. First, enhanced access opportunities that meet the higher education requirements at national, regional and international levels; and second, assuring improved quality and relevancy of teaching and learning. The strategic focus under this theme was to produce a graduate who will not only command traditional academic knowledge and subject specific skills but also possess generalist skills, such as, problem solving, reflective abilities, willingness to learn and a predisposition to lifelong learning. This approach was designed as a shift from teacher based to more learner centred methodologies of instruction that will guarantee the provision of high quality and relevant programs.

Underlying the two goals were the following objectives:

(i) provision of flexible teaching and learning programmes that meet national and international standards by 2013
(ii) decentralized program delivery to established satellite centres/branch campuses both on and off-shore by 2013
(iii) move towards graduate instruction and increased proportion of graduate students to 20% of total enrolment by 2015
(iv) reviewed and updated academic programs to ensure relevance and elimination of duplication by 2010
(v) continued improvement in the quality of instruction materials required for the delivery of all academic programs
(vi) provision of an environment that is conducive to learner centred pedagogy and andragogy in at least five academic units by 2018

The strategies/activities to realize the above set goals and objectives were outlined as:

1. Mainstream open, distance and e-learning (ODeL) approaches in teaching and learning in at least six Faculties.
2. Create and nurture satellite centres/branch campuses
3. Institutionalize enrolment Planning
4. Strengthen graduate training and research
5. Refurbish and upgrade the distance teaching and learning infrastructure
6. Create strategic linkages with professional bodies and with other stakeholders in offering experiential learning to students
7. Institute collaborative/joint curriculum development with local and international academic and research institutions
8. Conduct training workshops in learner centred and andragogical methods for staff
9. Operationalize the quality assurance framework
10. Streamline and rationalize the number of academic programmes offered
11. Introduce cross cutting courses for all students
12. Equip lecture rooms and laboratories with modern instructional facilities
13. Equip academic staff in learner centred pedagogy and andragogy skills in the 5 pilot academic units
14. re-orient curriculum to provide multi-disciplinary based prom solving by students in at least five academic units
The key indicators against which to evaluate progress include: the number of students enrolled for Makerere University (Mak) degrees at other campuses both on and off-shore, ratio of undergraduate to graduate students, number of programs using Open, Distance & E-Learning (ODeL) delivery modes, student-facility ratio, staff-student ratio, number of staff trained in learner centred pedagogy/andragogy, percentage of employees who rank Mak graduates highly, number of students and lecturers who participate in multi-disciplinary problem based field attachments, number of joint degrees awarded with other Universities in the region and overseas and students’ pass and completion rates.

2.1.1. Enhanced Access Opportunities

With an annual admission of 15,000 and a student population of 37,000 Mak shares 53% of admission of public universities. On average, Mak admits 25% of eligible applicants 6% of applicants are taken on government sponsorship and by 2014/15, ninety-six per cent (96%) of private applicants were taken. The implication is a declining pool of applicants for the private programmes which may be an indicator of increased competition from newer public and private universities. The University had hit the Planned enrolment target of 35000 students (including both undergraduates and graduates) by 2011/12 academic year (see figure 1). Over the review period, enrolment levels had exceeded the Strategic Plan projections, the highest peak was recorded in 2012/13 at 41,094 students.

Figure 1: Enrolment Trend 2008/09 – 2014/15

Other enrolment parameters included graduate and undergraduate composition, projected at 20% of the enrolment by 2015; Science based disciplines increase as the humanities decrease; and the increase in international student enrolment as part of the internationalisation thrust. The enrolment distribution by nationality and sex are given in table 1, the proportional distribution of the enrolment is illuminated in Figure 2. The number of females has been constant at 44% of total enrolment. International students have declined to 2% by the time of the review compared to the 2008/09 baseline value of 8%. Similarly, the graduate student mix has remained at an average of 6% compared to the Strategic Plan projection of 20%.
While maintaining the overall projected growth of 3% the Plan envisaged a selective reduction in enrolment in the humanities and a modest increase in the sciences. It was anticipated that while maintaining the overall projected growth of 3% the Plan envisaged a selective reduction in enrolment in the humanities and a modest increase in the sciences. It was anticipated that CHUSS, CoNAS and CEES register graduate enrolment levels of less than 5%. While maintaining the overall projected growth of 3% the Plan envisaged a selective reduction in enrolment in the humanities and a modest increase in the sciences. It was anticipated that CoCIS reduced from 5% to 3% by the time of the review. CHUSS, CoNAS and CEES register graduate enrolment levels of less than 5%.

While maintaining the overall projected growth of 3% the Plan envisaged a selective reduction in enrolment in the humanities and a modest increase in the sciences. It was anticipated that Agriculture, Forestry, ICT, Law science and Vet would grow by 3%; Medicine, law and technology would grow by 2% while fine art would grow by 5%. On the other side, Arts, Social Sciences, economics and education would reduce with percentages ranging from 2-4%. Figure 3 shows the enrolment trend in the different colleges. With the exception of the College of Education and External Studies whose enrolment reduced by 21% all colleges enrolment increased, CAES increased by 61% and CHUSS increased by 11%. This is partly attributed to the shift in programmes: Tourism, Environmental Management and Urban Planning shifted from CHUSS to CAES and CEDAT respectively. Average growth rate was twelve per cent (12%). The graduate student composition remained constant as well, with only the College of Health Sciences registering the proposed Strategic Plan composition of 20%; CoCIS reduced from 5% to 3% by the time of the review. CHUSS, CoNAS and CEES register graduate enrolment levels of less than 5%.

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<table>
<thead>
<tr>
<th>College</th>
<th>Growth trend</th>
<th>% graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAES</td>
<td>61%</td>
<td>9%</td>
</tr>
<tr>
<td>CoBAMS</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>CoCIS</td>
<td>18%</td>
<td>5%</td>
</tr>
<tr>
<td>CEES</td>
<td>-21%</td>
<td>2%</td>
</tr>
<tr>
<td>CEDAT</td>
<td>36%</td>
<td>3%</td>
</tr>
<tr>
<td>CHS</td>
<td>33%</td>
<td>24%</td>
</tr>
<tr>
<td>CHUSS</td>
<td>11%</td>
<td>8%</td>
</tr>
<tr>
<td>CoNAS</td>
<td>16%</td>
<td>4%</td>
</tr>
<tr>
<td>CoVAB</td>
<td>28%</td>
<td>10%</td>
</tr>
<tr>
<td>LAW</td>
<td>13%</td>
<td>4%</td>
</tr>
<tr>
<td>Avg</td>
<td>12%</td>
<td>7%</td>
</tr>
</tbody>
</table>
2.1.1. **Other Interventions to Boost Access**

Access focused programmes standing out by 2014/15 academic year include the MasterCard Scholars Programme at Mak. The ten-year programme that provides a comprehensive academic and social support package is in the second year of implementation. The MCF renewed their commitment to support 1000 youth from Africa. The programme awarded forty-six (46) scholarships for the academic year 2015/16. This brings the number of Scholars to ninety-five (95).

In similar provision, 173 students have benefited from the scheme to study in Mak for the Academic Year 2015/16 under the Higher Education Students Financing Board (HESFB), loan scheme introduced by the Government of Uganda in 2014. This compares with the 252 students admitted to Mak on the scheme in academic year 2014/15. The loan covers tuition, functional and research fees as well as learning aids & appliances for Persons with Disabilities (PWD).

2.1.1.2. **Institutionalise Enrolment Planning**

The Plan articulates the need to embrace evidence based decision making. One of the strategic thrusts outlined by the University is the need to generate institutional data to inform and guide the academic and strategic decisions taken at both unit and institutional levels. Among the key parameters considered by the Strategic Plan in attaining this strategic direction was **Enrolment Planning**. This is defined as the ‘a comprehensive process designed to help an institution achieve and maintain optimum recruitment, retention and graduation rates of students’. It was envisaged that enrolment Planning as a teaching and learning strategy would be instituted by 2014.

The rationale for enrolment Planning was premised on the inadequacies generated by the introduction of private programmes in Mak and the burgeoning student numbers. Furthermore, the University strategy expressed the need to move from a predominantly teaching (undergraduate) to a research led institution with at least 20% of enrolment at graduate level.

**Figure 4: Trend on Graduate Enrolment 2008/09 – 2014/15**

<table>
<thead>
<tr>
<th>Student Numbers</th>
<th>SP Projection</th>
<th>Actuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008/09</td>
<td>2670</td>
<td>2279</td>
</tr>
<tr>
<td>2009/10</td>
<td>2703</td>
<td>1577</td>
</tr>
<tr>
<td>2010/11</td>
<td>2836</td>
<td>1676</td>
</tr>
<tr>
<td>2011/12</td>
<td>2986</td>
<td>2331</td>
</tr>
<tr>
<td>2012/13</td>
<td>3154</td>
<td>2799</td>
</tr>
<tr>
<td>2013/14</td>
<td>3342</td>
<td>3524</td>
</tr>
<tr>
<td>2014/15</td>
<td>3551</td>
<td>2191</td>
</tr>
</tbody>
</table>
The average number of graduate enrolment remains at 9% (see Figure 4). All Colleges apart from the College of Health Sciences have less than 10% far below the anticipated target. Colleges of Computing and Information Sciences and Education and External Studies register as low as 3% and 2% respectively. Figure 4 shows the trend of graduate student enrolment compared to the Strategic Plan projections, the target figured were only realised in academic year 2013/14. The limitations in graduate enrolment have been attributed to 3 key factors:

(i) Funding for graduate programmes, under the Government support/scholarships were stopped in 1998. As a result, the majority of PhDs are attached to a specific research funding project mainly through donor support. This limits the number of students that can be admitted for PhD programmes indeed the bulk of students are Mak staff and as the percentage of staff with PhDs increase the potential students decrease, despite the fact that the supervision capacity has increased.

(ii) Graduation rates for the graduate students remain low compared to their undergraduate counterparts. This is an indicator for capacity gaps in supervision and retention of graduate students.

(iii) Information system capturing the number of graduate enrolment is inadequate as registration of graduate students is mainly effective in the admission year.

While the average graduate student numbers remained below average at 6%, there was an increase in the number of PhD students and graduates. The number of registered PhDs had reached 594 by 2014/15, and the University had advanced towards an annual graduation of 60 PhDs. The PhD graduates at the University increased from 30 in 2008/09 to 57 by 2014/15 which is less than the target number of 120 PhDs per year.

Figure 5: PhD Enrolment & Outputs at Makerere University 2008/09-2014/15

![PhD Enrolment & Outputs 2008/09-2014/15](image)

Figure 6: PhD Enrolment by field of Study 2008/09-2014/15

![PhD Enrolment by Field 2008/09-2014/15](image)
At institutional level, the low PhD graduation rates are centred on the PhD study process which is characterised as laborious and lengthy. The average years it takes to complete a PhD programme is seven years more than twice the recommended three years for PhD study. For example, out of the 546 students registered in the academic year 2014/15, sixty-five per cent (360) had spent more than three years on the programme and 9% had spent more than 10 years. The College of Education and External Studies had the highest percentage of registered students to have spent a higher number on their programmes at 23%. School of Law had 1 registered student who had spent up to 9 years on the programme.

Table 2: PhD Enrolment years spent on the program by College in 2014/15

<table>
<thead>
<tr>
<th>College/Years</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10+</th>
<th>Total</th>
<th>10yrs+</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAES</td>
<td>53</td>
<td>6</td>
<td>27</td>
<td>5</td>
<td>13</td>
<td>5</td>
<td>9</td>
<td>12</td>
<td>6</td>
<td>3</td>
<td>8</td>
<td>147</td>
<td>5%</td>
</tr>
<tr>
<td>CEDAT</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>10</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>40</td>
<td>8%</td>
</tr>
<tr>
<td>CEES</td>
<td>45</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>79</td>
<td>6%</td>
</tr>
<tr>
<td>CHS</td>
<td>9</td>
<td>2</td>
<td>6</td>
<td>11</td>
<td>17</td>
<td>7</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>69</td>
<td>1%</td>
</tr>
<tr>
<td>CHUSS</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>10</td>
<td>22</td>
<td>6</td>
<td>17</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>79</td>
<td>3%</td>
</tr>
<tr>
<td>COBAMS</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>34</td>
<td>6%</td>
</tr>
<tr>
<td>COCIS</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>2</td>
<td>30</td>
<td>13</td>
<td>15</td>
<td>3</td>
<td>73</td>
<td>4%</td>
</tr>
<tr>
<td>CONAS</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>33</td>
<td>6%</td>
</tr>
<tr>
<td>COVAB</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>15</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>37</td>
<td>0%</td>
</tr>
<tr>
<td>LAW</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>33%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>129</td>
<td>18</td>
<td>42</td>
<td>39</td>
<td>95</td>
<td>42</td>
<td>52</td>
<td>71</td>
<td>48</td>
<td>31</td>
<td>27</td>
<td>594</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: DRGT December 2015

From the programme perspective, the University runs 101 graduate programmes compared to 94 Undergraduate programmes. Several of the graduate programmes have enrolments of less than 10 students. The implication is the need to establish the optimal number of students that would be adequate for an academic programme to be offered. Equally important is a policy establishing exceptions when the optimal number of students cannot be realised.

The Plan envisaged a situation where there is a deliberate effort to channel enrolment to the required student mix as well as matching the existing capacities/resource inputs to the student numbers. By 2015, the enrolment mix in Makerere University remains largely adhoc and in some cases there is evidence of a mismatch between the available resources and the level of enrolment. There has been no deliberate effort to institutionalize enrolment planning. Colleges still present their admission capacity based on previous intakes. This does not take into consideration the input requirements. This is largely driven by the expected revenue from the private admissions. Furthermore, it not informed by the internal efficiency and/or throughput for the different programmes.

The performance evaluation for this strategy was based on the Staff/Student Ratio and the students’ facility ratio. The average SSR stands at 1:25 compared to the 1:15 of NCHE. This indicator however, needs to be elaborated further. While the target aggregated number of students has been reached, disaggregation by college reveals that only the science based disciplines have been able to attain the NCHE capacity indicators.
Table 3: Comparative Ratios for Students with Book, Computer & Lecture Space 2014/15

<table>
<thead>
<tr>
<th>College</th>
<th>Staff/Students (SSR)</th>
<th>Computer/Student ratio</th>
<th>Lecture-Lab Space/Students M²</th>
<th>Lec-Lecture/Lab Space</th>
<th>Computers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural &amp; Environmental Sciences</td>
<td>15</td>
<td>13</td>
<td>1.6</td>
<td>83</td>
<td>51</td>
</tr>
<tr>
<td>Business &amp; Management Sciences</td>
<td>50</td>
<td>45</td>
<td>0.3</td>
<td>260</td>
<td>430</td>
</tr>
<tr>
<td>Computing &amp; Information Sciences</td>
<td>49</td>
<td>6</td>
<td>0.9</td>
<td>230</td>
<td>1,523</td>
</tr>
<tr>
<td>Education &amp; External Studies</td>
<td>56</td>
<td>49</td>
<td>0.2</td>
<td>332</td>
<td>40</td>
</tr>
<tr>
<td>Engineering Design Art &amp; Technology</td>
<td>22</td>
<td>19</td>
<td>1.2</td>
<td>188</td>
<td>155</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>6</td>
<td>15</td>
<td>1.1</td>
<td>25</td>
<td>58</td>
</tr>
<tr>
<td>Humanities &amp; Social Sciences</td>
<td>31</td>
<td>32</td>
<td>0.3</td>
<td>316</td>
<td>604</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>8</td>
<td>11</td>
<td>3.5</td>
<td>-20</td>
<td>12</td>
</tr>
<tr>
<td>Vet. Medicine, Animal R’ces &amp; Biosecurity</td>
<td>8</td>
<td>12</td>
<td>3.0</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>School of Law</td>
<td>33</td>
<td>234</td>
<td>0.3</td>
<td>51</td>
<td>135</td>
</tr>
<tr>
<td>Fort Portal Campus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jinja Campus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.1.1.3. Open –Distance Learning

The Plan further envisaged that increase in access opportunities would be achieved through three main strategies including: - mainstreaming Open Distance and e-learning (ODeL) into a cross section of academic programmes at Mak; nurturing satellite off and on-shore branch campuses; improving distance learning facilities; and strengthening graduate training and research.

The University has been operating distance learning programmes since 1995. These programmes were however, limited to two programmes co-offered by the parent academic units and the Department of Distance Education. The rationale for the adoption of the Open, Distance and e-Learning (ODeL) was the need to expand University education beyond the barriers of the physical campus and allow learners to study according to their time, pace and place across the different disciplines. The stated target was to mainstreaming Open, Distance and E-learning (ODeL) approaches in at least six academic units.

By 2014/15, five (5) academic units have programmes offered in distance education mode including CoBAMS, CAES, CEES, CoNAS and CHS. The programmes offered include 2 Diploma programmes; 5 undergraduate degree programmes and 1 Master’s programme (See table 4).

Table 4: Programmes Offered under Distance Learning Mode

<table>
<thead>
<tr>
<th>College</th>
<th>Program/Year</th>
<th>08/09</th>
<th>09/10</th>
<th>10/11</th>
<th>11/12</th>
<th>12/13</th>
<th>13/14</th>
<th>14/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAES</td>
<td>Bach of Agricultural &amp; Rural Innovation</td>
<td>22</td>
<td>84</td>
<td>103</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CoBAMS</td>
<td>Bachelor of Commerce</td>
<td>2632</td>
<td>2234</td>
<td>2337</td>
<td>2495</td>
<td>2742</td>
<td>2615</td>
<td>2712</td>
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<tr>
<td>CEES</td>
<td>Bachelor of Education</td>
<td>1396</td>
<td>977</td>
<td>749</td>
<td>702</td>
<td>632</td>
<td>602</td>
<td>629</td>
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<tr>
<td>CoNAS</td>
<td>Bachelor of Science</td>
<td>225</td>
<td>136</td>
<td>123</td>
<td>125</td>
<td>100</td>
<td>102</td>
<td>131</td>
</tr>
<tr>
<td>CHS</td>
<td>Bachelor of Science in Palliative Care</td>
<td>3</td>
<td>60</td>
<td>28</td>
<td>6</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHS</td>
<td>Diploma in Palliative Care</td>
<td>9</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEES</td>
<td>Diploma in Youth in Development Work</td>
<td>108</td>
<td>143</td>
<td>109</td>
<td>60</td>
<td>22</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>CHS</td>
<td>Masters of Public Health</td>
<td>84</td>
<td>72</td>
<td>84</td>
<td>64</td>
<td>93</td>
<td>93</td>
<td>104</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4445</td>
<td>3562</td>
<td>3414</td>
<td>3515</td>
<td>3641</td>
<td>3525</td>
<td>3732</td>
</tr>
</tbody>
</table>
While the mid-term status indicates that five units have programmes in ODeL, the performance status in mainstreaming the delivery mode across disciplines remains dismal. Only two undergraduate degrees, 2 diploma courses and the Masters programme have been developed over the Plan period. The other three (3) programmes were in existence at the commencement of the Strategic Plan. The University therefore is yet to mainstream ODeL in her academic programmes.

The restricted success under this strategy can be attributed to the limitations in evolving the appropriate structures and operational framework for academic delivery in distance learning mode. The challenges associated with this are:

(i) The ODeL policy has experienced a protracted approval process, yet the policy was expected to provide guidelines and pathways for mainstreaming ODeL.

(ii) The study materials to enhance the academic offer of distance education students experience have not been adequately developed and the delivery mode has been more inclined towards on campus teaching.

(iii) The stock of target applicants for distance education programmes has significantly decreased. For example, analysis of the 2014/15 registered student data reveals that 93% of students on the B. Com external degree programme are through the direct entry scheme. The implication therefore is that there is need to reassess the format and target of distance education.

From another perspective, the Plan envisaged a steady growth in the percentage number of students offering courses in distance learning mode. The total number of students on the programmes has reduced by 25% from 4,445 in 2008/09 to nine per cent (9%) 3,636 by 2014/15 academic year against a projection of 4,477 for the same period. This has partly been attributed to the lack of a distance and e-learning policy to guide the offering of programs in eLearning mode with specific reference to how the course content and coordination elements can be distributed between the School of Distance and E-learning and the Departments where content is taught. The policy was passed by Senate and Council in 2015. Furthermore, the University has not expanded the distance education programmes and the stock of applicants for the initial programmes has gone down considerably. For example 96% of the students enrolled on the B.Com external degree programme are ‘A’ level leavers.

**E-learning**

It was envisaged that e-learning will be the pathway not only to expand access beyond the physical classroom, but to enhance students experience and promote the intended strategy of learner centred instruction. E-learning would then have the learners as active participants in the learning process. It would promote both individual and group learning within manageable confines. The E-learning and Teacher Education Centre was established in 2007, at the School of Education. The Centre championed the shift from Blackboard to Moodle as an open source e-learning management system adopted by Makerere University in 2009. The Centre has been tasked with the management of e-learning in Makerere University more especially courses under MUELE.

By 2015, the number of courses uploaded on the MUELE was that 592 out of the 7000 course units in the University from the 456 courses in 2013. The bulk of these were in the College of Computing and Information Sciences with the School of Law reporting only one course and CoVAB with only six courses. Remarkably, the scenario applies to the several distance learning courses, with limited courses in e-learning mode. Figure 7 below gives a snapshot of the courses in e-learning mode by 2015.
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Apart from MUELE the institution wide e-learning programme, there are several college based initiatives, these include:

(iv) The College of Health Sciences and CoVAB have piloted e-learning under the MUSK project—a web-based platform for users to store & retrieve learning materials that allows students to access library materials as well as discussions and evaluation by students.

(v) College of Computing and Information Sciences embarked on tele-Education programme in collaboration with Amity University & Indira Gandhi Open University. The programme which started in 2009 leading to a Master's degree in Business Administration has benefited close to 700 graduates.

(vi) Internet based Laboratories (i-labs): Through the i-labs project, the College of Engineering Design Art and Technology continued to be linked to laboratories at Massachusetts Institute of Technology (MIT) electronically. With this innovation, students are able to access and carry out advanced experiments using equipment which is not available at Makerere. Using the same i-labs project, the college was able to participate in the Vehicle Design summit that resulted in the 2008 efficient fuel consumption car assembled in Turin, Italy. The pilot has since expanded with CEDAT developing independent i-Labs which have supplemented the conventional labs within Makerere University and other education institutions. Thirty-one (31) online laboratories have been developed under the Presidential Initiative for Science and Technology. These can be accessed by students on the Electrical and Computer Engineering programmes at CEDAT.

These initiatives notwithstanding, the University is yet to evolve a systematic and coordinated effort towards integrating e-learning in its teaching and learning functions. Both technical capacity and the human resource knowledge gaps have to be addressed in order to fully exploit the access potential of e-learning.

In addition to e-courses, several units established e-learning infrastructure, the College of Health Sciences established the relevant e-learning infrastructure (a video conferencing auditorium, multimedia studio and relatively good internet connectivity both wired and wireless) to support medical education. In CEDAT, there was a general increase in the use of wireless network by students since this facility is now available around CEDAT, this has facilitated:

(i) Online access to exam results and coursework by students;
(ii) Use of improved audio and video systems during PhD Viva Voce;

(iii) Use of GIS in research using the new GIS Lab at CEDAT especially by the graduate students;

(iv) Use of the Dropbox, and Wikispaces for teaching purposes.

Within the College of Education and External Studies, specific attention has been made to utilising the mobile phones and the social media to promote practical experience and peer to peer learning. Some of the initiatives designed including the mobile distance learning.

These initiatives need to be harnessed for adoption by other units within the University. An inventory of academic best practices needs to be documented and disseminated across the University with a view of providing an improved learner centred experience.

**Satellite Study Centres and Branch Campuses**

The Plan envisaged expanding access and enrolment through establishment of satellite learning centres, on and off-shore branch campuses. The target was to create and nurture at least three satellite centres off shores/ and two local/on-shore branch campuses. Two on-shore branch campuses were established operating- with an enrolment of 707 in Jinja and 65 in Fort portal by 2014/15. Resourcing of the branch campuses remains a major challenge. Furthermore, the enrolment at these campuses is still minimal thus raising issues of efficiency in resource use and viability of the campuses. The establishment of the Campuses did not follow the anticipated format of a comprehensive assessment of the market, requirements and processes.

In addition to the satellite learning centres, the Plan envisioned to refurbish and equip the distance learning centres. At the commencement of the Strategic Plan implementation, the University had 9 learning centres. By 2014, the time of this review, the University is running five (5) dilapidated learning centres in Arua, Kabale, Mbale, Hoima and Gulu. The learning centre in Lira is being rehabilitated under the NORAD/NORHED - DELP Project.

The University is yet to come up with an integrated and streamlined processes for the off-campus sites. For example, there is disharmony in operations between off-campus branches and the extramural study centres under the School of distance and lifelong learning. Further, contradiction is evident between the Mak distance learning centres and the MUBS study centres within the same geographical locations.

2.1.2. **Improve relevance and quality of teaching and learning**

The second goal under teaching and learning was improved quality and relevancy. This focused on three major areas: first, academic programmes curriculum review, harmonization and development; second, change in delivery mode from teacher centred to learner-centred pedagogy; and third, Skills Enhancement Programmes. The strategic direction was articulated in the type of graduate produced and the requisite attributes of that graduate command traditional academic and subject specific skills as well as generalist skills such as problem solving, reflective abilities, willingness to learn and a predisposition to lifelong learning.’ In this regard, relevance of the skills imparted to the students extends to introducing cross-cutting skills enhancement courses.

2.1.2.1. **Academic Programme Reviews, Harmonization and Development**

Three key areas stand out, programme harmonisation & restructuring, tracer studies and joint degrees.

**Curriculum review/programme harmonisation**

With respect to Academic programme review, the University highlighted the relevance and elimination of duplication by the end of 2010. The aspect of relevancy was to be assessed through the creation of strategic linkages with professional bodies, favourable ranking of graduates by employers based on the versatility of the skills imparted and institution of a quality assurance framework that ensures student evaluation of lecturers. As part of preparation for the restructuring to the College system, the University instituted a Committee to review and harmonise academic programmes. As a result duplication was visibly reduced as programmes were reduced...
and merged. Programme reduction was greatly pronounced in the College of Humanities and Social Sciences as well as College of Agriculture and Environmental Sciences.

The early period of implementation was pre-occupied with the review and harmonisation of academic programmes in the majority of academic units. By June 2010 all academic units had revised their course curricula with the overall aim of harmonizing and rationalizing the curricula.

As the implementation progressed attention shifted to coming up with new academic programmes. A total of 32 Bachelor’s degree programmes as compared to 42 Masters 1 PGD and 6 Doctorate Degree programmes were developed. Gradually the move to emphasise graduate training appears to be taking root as evident from the increase in the range of academic programmes at graduate level. The academic programmes are more specialised, skills imparting and problem solving oriented. The Masters programmes were more in the areas of health sciences.

These programmes were submitted to NCHE for accreditation.
<table>
<thead>
<tr>
<th>College/Faculty /New Academic Program/Level</th>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>College of Business &amp; Management Sciences (CO-BAMS)/FEMA</strong></td>
<td>Bachelor of Arts in Economics Bachelor of Business Administration</td>
<td>MA in Gender Analysis in Economics MA in Economic Policy Management Master in Financial Services Master in Public Infrastructure Management (MPIM) with CEDAT MBA - Executive MBA Master of Evaluation (M Eval)</td>
</tr>
<tr>
<td><strong>College of Computing &amp; Information Sciences (CO-CIS)/CIT/EASLIS</strong></td>
<td>Bachelor of Information Systems Bachelor of Information Technology Bachelor of Records and Archives management</td>
<td>Master of Records &amp; Archives Management (MSc. RAM)</td>
</tr>
<tr>
<td><strong>College of Humanities &amp; Social Sciences (CHUSS)</strong></td>
<td>Bachelor of Arts in Ethics and Human Rights</td>
<td>Post-graduate Diploma in Investigative Journalism MA in Journalism &amp; Communication MA Communication Skills MA in Language Engineering &amp; Documentation MA in Translation &amp; Interpretation MA. Security Studies Ph.D in Social Sciences M.Phil/Ph.D in Social Sciences</td>
</tr>
<tr>
<td><strong>College of natural Sciences (CONAS)/Science</strong></td>
<td>BSc in Petroleum Geo-Science &amp; Production BSc in Biotechnology</td>
<td>MSc in Mathematical Modeling Master of Science in Biochemistry MSc in Petroleum Geosciences –supported by - (University of Bergen and NORAD)</td>
</tr>
<tr>
<td><strong>College of Agriculture &amp; Environmental Sciences (CAES)/Agriculture</strong></td>
<td>BSc in Human Nutrition BSc in Meteorology BSc in Agriculture &amp; Rural Innovation (BARI/Ext.) BSc in Water and Irrigation Engineering BSc in Bioprocessing Engineering Bachelor of Rural Economy &amp; Cooperative Management BSc Animal Science Husbandry</td>
<td>MSc in Plant Breeding and Seed System MSc. in Renewable Energy M.A. in Rural Development Master of Science in Integrated Watershed Management M.Sc. In Natural Product Technology &amp; Value Chains Master of Disaster Risk Reduction and Management Ph.D. in Plant Breeding and Biotechnology Ph.D. in Agricultural and Rural Innovation</td>
</tr>
<tr>
<td>College of Education &amp; External Studies (CEES) /Education</td>
<td>Bachelor of Youth in Development Work (External/ Distance Learning )</td>
<td>Master of Higher Education Studies</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>-----------------------------</td>
<td>----------------------------------</td>
</tr>
</tbody>
</table>
| College of Health Sciences (CHS)                          | Bachelor of Science in Palliative Care  
Bachelor of Biomedical Sciences  
Bachelor of Health Tutors Education  
Bachelor of Science in Cytotechnology | Master of Dentistry (Oral & Maxillofacial Surgery)  
MSc in Biomedical Engineering  
MSc in Pharmaceuticals and Health Supplies  
Master of Public Health Disaster Management  
MSc in Immunology & Clinical Microbiology  
MSc in Pharmacognosy  
Master of Public Health Nutrition  
Master of Nursing (Midwifery and Women's Health)  
Masters in Monitoring and Evaluation  
MSc in Health Professions Education  
Master of Public Health Disaster Management  
Master of Public Health  
MSc in Human Informatics  
Msc in International Health Research Ethics  
Ph.D in Health Sciences |
| College of engineering, Design Art & Technology (CEDAT)/Technology/ MTSIFA | BSc in Computer Engineering  
BSc in Renewable Energy and Conservation  
BSc. Engineering - Joint degree with Begorod Shukhov State Technology University in Russia  
Bachelor of Fine Art (BFA)  
Bachelor of Visual Communication, Design and Multimedia (BVCM)  
Bachelor of Industrial and Applied Design (BIAAD) | MSc in Power Systems Engineering  
MSc. In Technology Innovation & Industrial Development  
MSc in Telecommunication Engineering  
MSc in Construction Management |
| College of Veterinary, Animal Husbandry & Biosecurity (COVAB)/Veterinary Medicine | Master of Wildlife Tourism & Recreation Management  
MSc in Transboundary Animal Diseases  
MSc Natural Production Technology and Value Chain Joint Degree- Mak, Sokoine & University of Nairobi  
MSc in Wildlife, Tourism and Recreation  
MSc in Animal Product processing Entrepreneurship safety, - Joint Degree with University of Rwanda  
MSc in International Infectious Disease Management |
A second review was commissioned in November 2013 following industrial action and appeal for government takeover of the wage bill. The primary objective of the on-going review is to generate core, support and cross cutting course units in the respective colleges with a view of harmonising the disciplinary focus of the academic programmes offered. Specific focus has been made on the need to have cross cutting/ foundation course units that will apply to all students enrolled at Makerere University.

**Tracer Studies**

The Plan envisaged that 2 units would be identified per annum to undertake tracer studies beginning 2011/12. The tracer studies would then be used to determine the relevance of programmes to national development needs and the employability of graduates. One tracer study for four programmes in CHUSS was undertaken in 2013. The study revealed that 52% of the Development studies graduates were highly ranked by the employers compared 49% for Urban Planning, 47% for Tourism and 40% environmental management. On the reverse side 11% of the Environment Management graduates had limited competence (see figure 8). For example, a 2014 report by the Inter-University Council for East Africa (IUCEA), shows that 37% of the total employers interviewed in Uganda were satisfied with Ugandan graduates. The rest 63% faulted the graduates, saying the employees they had hired for the past one year hadn’t been adequately prepared by their pre-hire institutions.

![Figure 8: Professional Competence of fresh University graduates (CHUSS)](image)

The second tracer study was undertaken by the Quality Assurance Directorate targeting 2012 graduates. The study focused on the first destination and transition rate of graduates at Masters and all undergraduate levels of education offered by of Mak.

Tracer studies have further been organised at individual college level including: College of Health Sciences for the radiographers, using graduates as key stakeholders to inform training and policy in health professions: the hidden potential of tracer studies (2014)” This covered a cross-section of radiography graduates who completed between 2001 -2011. 95.8% of the respondents were employed as radiographers at the time of the survey and were all satisfied with their work. A significant number were employed abroad, while those who remained in the country worked for private facilities and only a few worked in government facilities.
Joint Degrees

With respect to Joint Degrees, the Plan envisioned that academic units will institute collaborative / joint curriculum development with local and international academic and research institutions. A number of MoUs have been signed with national and international universities for joint degrees. These among others include: the Shenyang Aerospace University (SAU), Liaoning University and Liaoning Shihua for collaboration in awarding joint Bachelors and Masters Degrees; the Award of a Master’s Degree in Defence and Security Studies collaboration between Makerere University and UPDF Command College Kimaka. Under the Sida collaborative research Programme sponsored by the Government of Sweden joint degrees have been awarded with Swedish institutions including Karolinska Institute, KTH, Lund University, Stockholm University, Chalmers and Uppssala Universities. Other Collaborative programmes include:

Table 6: Collaborative Degree programmes- December 2015

<table>
<thead>
<tr>
<th>Programme</th>
<th>College</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching of Chinese &amp; Spanish Subjects</td>
<td>CHUSS</td>
<td>Mak, Kenyatta and UDSM</td>
</tr>
<tr>
<td>MSc in Natural Production Technology and Value Chain</td>
<td>COVAB</td>
<td>Mak, Sokoine and University of Nairobi</td>
</tr>
<tr>
<td>Masters in Wildlife, Tourism and Recreation</td>
<td>COVAB</td>
<td>Mak and University of Manitoba Canada</td>
</tr>
<tr>
<td>MSc in Animal Product Processing, Entrepreneurship safety</td>
<td>COVAB</td>
<td>University of Rwanda</td>
</tr>
<tr>
<td>MSc in International Infectious Disease Management</td>
<td>COVAB</td>
<td>Mak and University of North Dakota</td>
</tr>
<tr>
<td>BSc Engineering</td>
<td>CEDAT</td>
<td>Belgorod Shukhov State Technological University in Russia</td>
</tr>
<tr>
<td>One Health Residency Program</td>
<td>CHS</td>
<td>University of Minnesota</td>
</tr>
</tbody>
</table>

While these have been characterised as joint degrees, the format has been more collaborative than joint. Curriculum is developed in collaboration with the partner University; with several of them having staff exchange. However, the degree award is a Makerere University degree.

Joint degrees are more pronounced for the PhD programmes with Swedish Universities, where there is joint course offerings and supervision. Candidates under this programme have been given the option to choose which of the partner Universities would award the degree. 101 PhD students have benefited from these joint offerings. Only one Masters’ degree programme under the College of Humanities and Social Sciences can be categorised as joint. The European Master in Social Work with Families and Children (MFAMILY) is a two-year Master’s programme. The programme has been developed by University Institute of Lisbon (Portugal), University of Gothenburg (Sweden), University of Stavanger (Norway) and Makerere University (Uganda).
2.1.2.2. Change in delivery mode from teacher centred to learner-centred pedagogy

The objective as articulated by the Plan was to provide an environment that is conducive to learner centred pedagogy and andragogy in at least five academic units by 2018. The primary objective was to improve academic provision and engagement between the learners and the teachers. The strategy would be implemented through re-tooling the academic staff in the target units. The Strategic Plan operational framework identified champions to take this forward. By 2014 there has been no institutional initiative for training staff in learner centred pedagogies. Attempts have been made for an annual allocation to this activity with no successful implementation.

However, a number of staff trained in research methods and in pedagogy/andragogy. Pedagogical training was undertaken in the CHS, partial development of learner centred materials was undertaken under the Partnership for Higher Education (PHEA). This however, remained project based and did not progress after project termination. Given this status, the number of staff applying Problem Based Learning is still limited to CHS, CEDAT (Bachelor of Architecture) and CAES (Forestry) translating into 5% of students and 23% of staff involved.

College based initiatives for learner centred pedagogy include: -

(i) Forty (40) lecturers from Faculty of Technology were trained in e-learning course modelling.

(ii) Skills enhancement programmes in the colleges of CHS, CoVAB and CoCIS. In the College of Health Sciences, the Departments of Surgery and Obstetrics & Gynaecology at MakCHS established a Skills Laboratory in 2014.

(iii) CEDAT in 2014 took an initial step and successfully hosted an international conference on Enriching Engineering Education Programme under the theme – “Problem Based Learning (PBL)” with a view of drawing ways through which the engineering curriculum can be restructured to adopt problem based learning.

(iv) CoVAB in 2011 introduced the AFRISA/SPEDA programme characterised as a retooling and employment generation initiative. The AFRISA programme based at CoVAB enrolled and graduated 132 students in 2014. Out of these, 74 (56%) were at the certificate level for skills in apiary, dairy, feeds and poultry value chains among others.
2.2. Research & Innovations

The main thrust for the research and innovation thematic area was the move towards a research driven University. It entailed the University to reposition herself for an environment where research and teaching/learning are mutually reinforcing. It was anticipated that being one of the oldest Universities on the continent with elaborate infrastructure for research execution, the University was uniquely placed to provide leadership for knowledge generation in Uganda. Further to this strategic intent, two goals were identified for the R&I thematic area namely: the consolidation and enhancement of the research profile of Mak; and attainment of enhanced transformation and utilization of knowledge and research innovations. The midterm performance assessment is based on the key output/outcome indicators as outlined in the operational framework including the volume & quality of research output; trend and level of International rating of Mak; level of gender integration into research policy; and number of staff trained in research methods, research grants and scholarly writing.

2.2.1. Research profile consolidation and enhancement

The goal of enhanced research profile was envisaged to be achieved through 6-core strategies including provision of a robust supportive environment towards a research – driven University. The Strategies under this objective include:

(i) develop and operationalise Mak research agenda;
(ii) strengthen research execution, management and coordination;
(iii) mainstream laboratory services in research and University- partnerships;
(iv) mainstream gender and actively involve women and special needs groups in research activities;
(v) strengthen the research capacity for staff and students;
(vi) mobilization of funds from budgetary and non-budgetary sources;

Indicators for performance under research profile include increase in volume and quality of research output which would translate into improved level of international rating of Mak. Achievements under research and innovations was the Development of the Research Agenda in 2009 and a subsequent one reviewed for 2013-2018.

Research Agenda 2013-18

i. Health and Health Systems Agricultural (crop & Livestock) transformation,
ii. Food Security and Livelihoods
iii. Natural Resources Management and Climate Change
iv. Education and Education Systems
v. Governance, Culture, Visual Arts, Social Justice, Communication and Sustainable Development
vi. Science and Technology including foundation science ICT, innovations, technology, engineering

Cross-cutting research activities: • Biotechnology, • Knowledge Translation, • Gender, and • Human Resource Development
2.2.1.1. Research execution, Management Structure & Coordination – The School of Graduate Studies was restructured into the Directorate of Research & Graduate Training (DR&GT) with Divisions to handle the various aspects research and training. The University set up a new governance and administrative structure to manage and coordinate research and innovations transforming from a School of Graduate Studies to a fully-fledged Directorate of Research & Graduate Training. The Directorate includes an Intellectual property unit.

A number of research management policies have been formulated to ensure quality and ethics in research and innovation and to streamline research management including dissemination and assuring Intellectual Property Rights, these include.

(i) The Research and Innovations policy
(ii) The Intellectual Property Management Policy were developed and approved by Council.
(iii) The Documented peer review system
(iv) The DRGT developed three (3) research management databases for Monitoring progress of staff and graduate students research work. These include the – RMACs for research tracking, the Staff Research Profiles Database and the Graduate Student Tracking system.

The IPR Unit was established as a project under the DR&GT in 2009. The staff who had been recruited could not be retained by the University due to the uncompetitive pay or remuneration. At that time, Makerere University had been identified by AAU to act as a regional Intellectual Property Centre for Universities in the region. This opportunity towards the quest for research leadership on the continent was missed because the IPR Unit is non-functional.

2.2.1.2. Research Output

Enhancing the research capacity of staff is one of the fundamental strategies in a research-led University. The University Research and Innovations Policy specified that the staff spend at least 20 per cent of their time on research and dissemination. The policy outlined the need to ensure appropriate student to staff ratios in line with the University establishment policy. In addition, the policy requires that all PhD students publish at least one paper before they graduate.

The key milestone was the volume and quality of research output. There has been a significant increase in the volume of research which is evident from the rankings of Mak and the number of publications in international research databases the Elsevier/Scopus and Thompson Reuters /Web of Science, as well as awards and recognitions of staff from the different colleges for excellence of research and innovations. Research publication has generated positive ranking for Mak and has been consistent across the different ranking systems where Sub Saharan Africa features. This is mainly in line with the stated vision to be a centre of Academic Excellence and Innovations in Africa. Rankings such as the Times Higher Education and Webometrics have placed Makerere University among the first top 10 Universities in Africa [Fig. 10].
The bulk of the publications have been under the journal article category (see Figure 11 & 12).

Figure 11: Trend of Research Publications in the Scopus database for Mak

Figure 12: Categories of Research Publications in the Scopus database
The Plan envisaged to institute and have operational research teams by 2011. While these exist mainly in response to call for proposals from development partners, the institutionalisation is inadequate and the format of operation not appropriately defined. There are pockets of specialised research teams that have gradually evolved especially in the science based Colleges based on thematic areas including among others the Lake Victoria Water Bodies (VICRES) in CoNAS; the Prepare PhD project supported by the European Union; The benefit of these research teams largely remains research output and publications captured by international databases and contribution towards the institutional rank.

2.2.1.3. Capacity Building for Research

The quality and volume of research output in the University is dependent on the number of staff with PhDs. It also determines the capacity for supervision and graduate enrolment. For the period under review, the number of full-time staff with PhDs has grown from 46% to 75% by 2014/15 when the senior academic category of Lecturer and above is taken into consideration.

<table>
<thead>
<tr>
<th>Year</th>
<th>Staff with PhDs</th>
<th>Senior Academics Lecturer &amp; above</th>
<th>Doctoral Enrolment</th>
<th>PhD Enrolment Vs staff with PhD</th>
<th>PhD Graduates**</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008/09</td>
<td>420</td>
<td>46%</td>
<td>598</td>
<td>1.4</td>
<td>30</td>
</tr>
<tr>
<td>2009/10</td>
<td>462</td>
<td>43%</td>
<td>518</td>
<td>1.1</td>
<td>39</td>
</tr>
<tr>
<td>2010/11</td>
<td>463</td>
<td>44%</td>
<td>618</td>
<td>1.3</td>
<td>57</td>
</tr>
<tr>
<td>2011/12</td>
<td>529</td>
<td>47%</td>
<td>568</td>
<td>1.1</td>
<td>43</td>
</tr>
<tr>
<td>2012/13</td>
<td>572</td>
<td>49%</td>
<td>563</td>
<td>1.0</td>
<td>61</td>
</tr>
<tr>
<td>2013/14</td>
<td>702</td>
<td>51%</td>
<td>559</td>
<td>0.8</td>
<td>51</td>
</tr>
<tr>
<td>2014/15</td>
<td>635</td>
<td>54%</td>
<td>594</td>
<td>0.9</td>
<td>57</td>
</tr>
</tbody>
</table>

* Some staff with PHDs were not captured by the HURIS system prior to 2013/14, **PHD graduates as captured in the Graduation Booklets

The staff productivity with respect to graduate students has considerably gone down from 1.2 in 2008/09 to 0.9 by 2014/15. It had been envisaged that the number of PhD enrolment would increase as the capacity to supervise which is denoted by the number of PhDs rose.

2.2.1.4. Research Funding

The capacity of staff to write fundable research proposals goes hand in hand with staff with PhDs. For the period under review, the number of research grants increased considerably- see figure 13. The year 2010 recorded the highest number of projects at USD 37.9m. These projects include the Bill and Melinda Gates Grant for tobacco, pneumonia and nutrition supplement ($4.4m), the Welcome Trust grant; for THRIVE, AFRIQUE ONE, TrypanoGEN ($12m), the National Institutes of Health: MEPI MESAU, TB, Research Training Hub & Hospital Household studies ($11m), the Centre for Disease Control and the Carnegie Corporation of New York for the next generation of academics ($2m). On the whole, the College of Health Sciences with her School of Public Health have taken lead in having an established grants office with capacity built/or exposed human resource in grant seeking and research grant proposal writing. Non-health related research project support includes, the Swedish Government support phase III, Norwegian Government Support-NoRHED. Other projects such as the MasterCard Foundation Scholars programme are non-research based although they contribute to the financial portfolio of the University.
The biggest drawback to research at Makerere University is that it is largely donor funded and driven. As such, whereas funding can be established as a performance measure, the relationship between this funding and research output is not well articulated.

The Strategic Plan stipulated institutional commitment to research of at least 3 percent (3%) of its internally generated funds to go to research and innovations annually. Under current arrangements research financing is one percent (1%) or less has been provided over the years. Research funding therefore was until 2010/11, largely been driven by development partners. This brings to the fore the issue of research prioritization and sustainability. Government support to research has been through the World Bank funded Millennium Science Initiative and the Presidential Initiative for Science and Technology in the three Colleges, CEDAT, CAES and CoVAB.

### 2.2.1.5. Research Infrastructure (Mainstreamed Laboratories)

The Plan envisaged to have the functionality of laboratories improved through establishment of a Laboratory Improvement Committee by the end of August, 2010; undertaking of a Baseline survey report on the status of laboratories- (equipment-staff-locations) Dec 2010 and re-designation of laboratories- (specialised/ general) by Jan 2011.

Efforts have been made to document the laboratory equipment requirements across the various colleges in the University. Both general and specialised laboratories have been improved including:

- the Central Diagnostic Laboratory for comprehensive diagnosis of animal diseases which information feeds into the National Animal Demographic Surveillance Database and the Avian Influenza research Laboratory both in CoVAB,

- the Demographic Surveillance Site (DSS) at Mayuge under the School of Public Health, CHS

- the multi-disciplinary Biomedical Laboratory in CHS;

- the Plant- breeding Science research facility at MUARIK and Molecular Biology Laboratory in CAES refurbished to support research on sorghum and Millet for food security and improved Livelihood in east Africa.

- the GIS Centre in CEDAT;

- the Makerere University Climate Change Centre in CAES – funded by Rockefeller foundation to promote awareness on climate change, conduct research on climate change science, climate change
mitigation and adaptation in all sectors

- the Imaging Centre in CoVAB;

Most of these research labs merit to be categorised as pockets of good practice which are a result of development partner supported project initiatives.

In addition to the specialized, general labs especially in CEDAT have been refurbished. These include, the Environmental Engineering Lab, the Mechanical Engineering Lab, the Architecture Studio and Computer Lab funded by Government of Uganda through the Presidential Initiative for Science & Technology. The initiative has further refurbished 90% of the lecture rooms and equipped them with screens and overhead projectors.

Over the review period, the comprehensive re-designation of laboratories—(specialised/ general) has been undertaken. Two laboratories have been re-designated as centralized laboratory facilities based at CoNAS (Diagnostic laboratory); and CAES (Biotechnology) funded under AfDB-HEST Project. In addition, one laboratory per college was rehabilitated and refurbished under the AfDB-HEST 5-year (2013-2018) project. These include: the Chemistry Laboratory in CoNAS, the Fluids & Mechanics Laboratory in CEDAT, the Physiology Laboratory in CHS, the Biosecurity Laboratory in CoVAB and the DOSATE basic science education Laboratories (Physics, Chemistry & Biology) in CEES.

2.2.2. Transformation & Utilization of Research knowledge & Innovations

The second goal under Research and Innovations was attainment of enhanced transformation and utilisation of research knowledge and research and innovations. This would increase the capacity for knowledge transformation and innovations as well as improve research dissemination. Strategies to achieve these were through development of a research dissemination strategy; promotion of commercialization of innovations/exploitation of intellectual property and enhancing networks with teaching, research and cultural institutions. The indicators to evaluate performance under this goal are the number of patents and intellectual property rights, spin-off companies and the level of adoption of both the hard and soft technologies by the community, the private and public sectors.

Highlights of achievements over the period under review are outlined below.

2.2.2.1. Dissemination strategy

The University has taken dissemination as an area of sharing research outputs. Dissemination continues to manifest through innovation technologies and exploitation of intellectual properties that have been adopted by the public and private sector agencies. These include, technology innovations focused on ICT solutions for communities in areas of agriculture and marketing agricultural produce as well as health, engineering and the environment.

As part of the Sida-Swedish Government collaborative research programme, the Directorate of Research & Graduate Training organizes annual research dissemination conferences where researchers share their findings with scholars and stakeholders. The University is yet to institute a functional University press to handle in-house publications and documented innovations. Nevertheless, publications in refereed journals at national and international levels have increased significantly for example the Elsevier/Scopus database reveals that research output for Makerere University increased from 15 in 2008 to 160 by 2014., while Web of Science was 453 by 2015.

The University is yet to come up with a comprehensive inventory of the innovations developed by Mak.
Some of research innovations include:

i) records management systems (e.g. the Academic Records Management System (ARMS), the Online Student Evaluation of Teaching (OSET) and the Special Investigations Unit (SIU) Case File Management system);

ii) surveillance/or monitoring and detection systems and information gathering systems on water quality (Mobile phones for Improved Safe Water (M4W) Access); and the Agricultural and Health related Initiatives which include the Plant (Crop Disease Monitoring system);

iii) new and improved crop varieties and animal breeds, and alternatives to conventional Drugs in treatment of diseases such as Malaria;

iv) monitoring of climatic changes, monitoring and exploring cost effective and sustainable use of alternative from of energy, Food security, Healthcare testing and monitoring, Education delivery and National service delivery transformation through Communication; and

v) Engineering related initiatives include the Centre for Electronic Transportation Technologies (CRTT): The Kiira EV launched in November, 2011, and subsequent vehicles designed the Kiira SMACK and the Kayoola bus

2.2.2.2. Enhanced Research Networks & Collaborations

The strategies for strengthening the existing as well as establishing new networks and collaborations go hand in hand with the building of research capacity for staff and students. For the period under review, effective research networks have been realized at the institutional level mainly including:

i) Sida supported Research Partnerships and Collaborations: Under the Sida program the DR&GT developed joint/collaborative research projects between Makerere University and several Swedish Universities. One of these included initiations of the 1st joint degree program between Makerere University and Karolinska Institute.

ii) The Cambridge Africa Partnership for Research Excellence (CAPREx) project 2012 – 2015: This network focusing on postdoc research fellowships includes Makerere University, University of Ghana – Legion, and University of Cambridge, UK

iii) The Norwegian Programme for Capacity Development in Higher Education and Research for Development (NORHED): This a broad-based network of institutions covering different disciplines ranging from ICT, health, agriculture underscores the international aspect of the University strategy to bring together, African, Norwegian and Asian Universities.

In addition to the institutional research networks, a number of Colleges have initiated national and international Research Networks and Collaborations. Key among these include:

(i) The Resilient Africa Network (RAN) is a network funded by USAID is a partnership of 20 African universities in 15 countries. It is led by Makerere University-School of Public Health, CHS with Tulane University’s Disaster Resilience Leadership Academy, Stanford University and the Centre for Strategic and International Studies (CSIS) as partners.

(ii) The University of California at Berkeley together with CHUSS signed a Consortium grant contract worth USD20 million. The Development Impact Lab project focuses on impact evaluation studies in health, social sciences and information technology. It offers competitive scholarships and research grants to staff in the partner universities. The focus is to utilize mobile technologies to improve health care; expand communications services in remote areas; improve access to safe
water; and, deliver new energy technologies.

(iii) Other networks include the Mak-Bergen Collaboration that embraces the College of Natural Sciences and the College of Humanities and Social Sciences as well as the Israel-Uganda apprenticeship scheme.

(iv) African Centres of Excellence funded by the World Bank {i.e. Makerere University Regional Centre for Crop Improvement (MaRCCI) and Centre of Materials, Product Development & Nanotechnology (MAPRONANO)} as platforms to develop capacity of university staff, government officials and private sector.

2.2.2.3 Challenges

(i) No University-wide documented and approved dissemination strategy in place and the dissemination committees at College level are yet to be instituted.

(ii) The laboratory improvement committee has never been instituted

(iii) The capacity to maintain and sustain the laboratory infrastructure improvements beyond the donor support

(iv) The Commercialization of innovations/exploitations of intellectual property is yet to take root.
2.3. **Knowledge Transfer Partnership & Networking**

Under Knowledge Transfer Partnerships and Networking (KTP), two goals were set to be achieved. This included creation of an enabling environment for public and private sector interface in the promotion of education in a competitive setting and provision of a partnership framework for assessment and utilization of University products in the value chain. The objectives were: first, to increase public, private sector participation in University activities by 2010; second, to promote increased joint research, technology innovation and transfer initiatives to address stakeholder needs by 2011; and third, to establish a partnership for the public and private sector utilization of the University competencies by 2010. The KPIs against which to evaluate performance revolved around:

(i) An established central office to coordinate KTP activities with developed and filled

(ii) A functional KTP committee set up

(iii) Execution of a survey of existing KTP activities,

(iv) Identification of key KTP focus areas on the basis of which to develop the KTP strategy and protocols

In the period under review, no central coordinating office committee have been set up, to take the knowledge transfer process forward. Pending also are the anticipated surveys of existing KTP activities, identification of focus areas for KTP and potential KTP partners to work with the University. Contrary to the Strategic Plan objective, no Incubation Policy is in place with no centralized technology and business incubation coordination centre.

Key strategic areas of focus to take forward the KTP initiative were:

i) To develop, approve and integrate the innovative award policy into the recruitment and promotions policy, there is need to revive the VC award for community based innovation that was instituted under the I@mak.com.

ii) To identify and designate specific days within the University calendar for open days and exhibitions, regularize, harmonise and structure them in the University Calendar and financial allocation.

iii) To develop and operationalize the KTP Policy to guide collaborations and networking, this will enable a streamlined and coordinated KTP process at the University.

The University’s capacity to take this strategy forward is hinged on documentation, harmonisation and institutionalisation.

2.3.1. **Public and Private Sector Participation in University Programs**

The University focus under this objective was the involvement of the public and private sector in the execution of the various programmes of the University. Partnerships have been created through review of existing and development of new academic programmes, industrial relations and offer of field attachment placements and co-supervision of students on field attachments and internships.

2.3.1.1. **Public -Private Sector Participation**

The University has had the practice of organising stakeholders’ consultative meetings every four years since 2004. As a service provider, the rationale was to provide a fora meaningful channels of interaction with her key stakeholders and development partners. The University in 2013 held the 4th stakeholders’ conference to receive feedback. The conference kick-started with the Mak@90 celebrations, which
enabled the University to create a platform for it to share with her development partners the content of the University Strategy, the reforms that have taken place and receive feedback. In addition, Mak has continued to reach out to various communities and interfaced with the public and private sectors to promote development from its research and innovations. For example, under the Presidential Initiative for Science and Technology three colleges stand out. Namely the SPEDA programme under CoVAB, the Clusters programme under CEDAT, and the Food Technology and Business Incubation Centre under CAES. The engagement under the initiative has extended to exhibitions and stakeholders conferences. Under curricula review, the University in collaboration with organisations such as UNDP, Institute of Certified Public Accountants of Uganda (ICPAU) and NORAD together with other Universities like University of Bergen were able to introduce academic programmes such as M.A in Gender Analysis in Economics whose aim is to train economists and Planners able to integrate gender in economic policy making and management; the NUFFIC grant for strengthened ICT capacity in 4-public Universities; M.Sc. in Petroleum Geosciences, Masters in Public Infrastructure Management and MBA (Executive) and Masters of Evaluation. The co-Supervision of students continues as one of the key partnership areas which had been envisaged to be pro-actively engaged in using practicing professionals.

The field attachments policy approved in 2009 was adopted to provide experiential learning to all undergraduate students in the University which was initially for selected academic programs. This has been made mandatory for all undergraduate students to undertake field attachment at least once during their academic programme. Under the program, students in their second, third, and some in the fourth years of study depending on the length of the program are attached in various fields for at least eight weeks. On average 11,000 students undertake field attachments annually in the months of June-July of each year.

In the same vein, CHS has built partnerships with communities and built their capacity to identify and address community health problems through the Community Based Education and Services (COBERS) program introduced in 2009. This has been lauded as a service provision initiative addressing the shortage of health worker’s that has contributed to addressing health inequalities between rural and urban communities in Uganda. Students are placed to work in rural communities for a period of time with simple innovative strategies, and students have managed to solve some of the most common health problems.

Another form of partnership is through the School of Law’s Public Interest in Law Clinic (PILAC) introduced in 2010 as a practical and hands on experiential approach in teaching law. This includes the mobile law clinic which harnesses the legal skills of students to educate communities on law and legal rights of individuals.

2.3.1.2. Innovation Incubation Centres

Research and technology innovation partnerships and incubation centres have manifested through;

a) Health Partnerships under the IDI laboratory training established at CHS, the University does not only give knowledge and practical skills in Laboratory Technical Operational Skills but also in Leadership and Management. More than 600 Laboratory Technicians and Managers had been trained from regional referral Hospitals, District Hospital and lower level health facilities.

b) Industrial partnerships under CoNAS include collaboration with Total E&P Uganda, a company sponsoring R&D and courses in all aspects of the Oil Industry, to promote education, exploration and development of petroleum Resources in Uganda. The collaboration provides for internships and energy seminars.
2.3.2. **Creation and Utilization University Products in the Value Chain**

The University had proposed to set up a resource pool of university expertise for the public and private sector to utilise. Over the review period, three colleges namely CEDAT and CoCIS have set up structures through which they offer service (consultancies’ and commissioned research) to both the public and private sector. The practice remains to be rolled out to other colleges.

The University has been able to organise exhibitions and open days at both the institutional and college levels. This is to help showcase its achievements in the core functions. Five colleges stand out namely: CoCIS, CEDAT, CovAB, CHS and CAES stand out with their annual open days. This not only provides an opportunity for the colleges to show case their activities but also offers an avenue for the key players to receive feedback.

2.3.3. **Challenges**

(i) The provision of that expertise continues to strain on the limited institutional resources including research time vs other core activities, utilities and the brand name without adequate benefit for the University.

(ii) Adhoc implementation of exhibitions and open days in the University
3.0 SUPPORT FUNCTIONS

3.1. Human Resource

Human resource stands out as the most important factor in the management of the organisation. The primary goal articulated by the 2008/09-2018/19 Plan was to ensure competitiveness in recruitment and retention of high quality human resource. The objectives underlying this goal included: securing and sustaining competitive terms of service, developing high level human resource performance, developing and maintaining high level support system and reducing academic staff/student ratio on non-distance education delivery mode from the current 1:25 to 1:15. To achieve the above goal and objectives, the University strategized to undertake the following:

(i) developing and operationalizing competitive and effective HR Policies,
(ii) complying with standards as specified by NCHE and International standards,
(iii) assessing and strengthening the human resource, knowledge competences and skills,
(iv) nurturing an environment for positive work culture to achieve optimum performance,
(v) instituting Academic Staff Member Raising Scheme (ASMRS) among graduate students

The key performance indicators included the staff/student ratios, staff turnover and performance ratings of staff by students. Staff are broadly categorised into academic staff, Administrative staff and unionised staff.

3.1.1. Recruitment and Retention of High Quality Staff

The Plan underscored the recruitment and retention of quality staff as the primary focus in fulfilment of University’s mission. Over the period under review, the recruitment, promotion and retention policy of the academic staff was reviewed. The number of professors, lecturers, and assistant lecturers had grown to 85, 449 and 553 above the Plan target of 78, 388 and 368 respectively by 2014/15 (see table 8).

Table 8: Academic Staff Projection and Actuals 2008/09-2014/15

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Proj</td>
<td>Act</td>
<td>Proj</td>
<td>Act</td>
<td>Proj</td>
<td>Act</td>
<td>Proj</td>
</tr>
<tr>
<td>Professor</td>
<td>59</td>
<td>63</td>
<td>56</td>
<td>73</td>
<td>62</td>
<td>74</td>
<td>67</td>
</tr>
<tr>
<td>Assoc. Prof</td>
<td>119</td>
<td>109</td>
<td>109</td>
<td>102</td>
<td>120</td>
<td>113</td>
<td>122</td>
</tr>
<tr>
<td>Sen. Lect</td>
<td>165</td>
<td>205</td>
<td>181</td>
<td>176</td>
<td>226</td>
<td>183</td>
<td>237</td>
</tr>
<tr>
<td>Lecturer</td>
<td>346</td>
<td>374</td>
<td>385</td>
<td>377</td>
<td>391</td>
<td>380</td>
<td>394</td>
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<tr>
<td>Asst. Lect</td>
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<td>498</td>
<td>336</td>
<td>493</td>
<td>344</td>
<td>492</td>
</tr>
<tr>
<td>Teach Asst</td>
<td>221</td>
<td>192</td>
<td>307</td>
<td>193</td>
<td>284</td>
<td>194</td>
<td>221</td>
</tr>
<tr>
<td>Grad Fellow</td>
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<td>36</td>
<td>0</td>
<td>55</td>
<td>0</td>
<td>73</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1352</td>
<td>1284</td>
<td>1543</td>
<td>1342</td>
<td>1519</td>
<td>1399</td>
<td>1477</td>
</tr>
</tbody>
</table>

Note: Proj — projections, Act — Actuals, Assoc Prof — Associate Professor, Sen. Lect — Senior Lecturer, Asst Lect — Assistant Lecturer, Teach Asst — Teaching Assistant
On the whole however, the number of staff remained below the target, (see table 9). One of the reasons for inability to meet the Plan staff number targets is the high attrition rate. Over the years, the University has been losing staff due to various reasons including retirement, contract expiry and resignation (see fig14 & 15). For the period under review, 477 academic staff have left the University (see table 10).

### Table 9: Staff Attrition by College and Rank 2013 - 2014

<table>
<thead>
<tr>
<th>College/Rank</th>
<th>Prof</th>
<th>Assoc</th>
<th>Sen Lect</th>
<th>Lecturer</th>
<th>Assist Lect</th>
<th>Teach Assist</th>
<th>Part-Time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAES</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>13</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>CEDAT</td>
<td>3</td>
<td>3</td>
<td>14</td>
<td>8</td>
<td>15</td>
<td>25</td>
<td>1</td>
<td>69</td>
</tr>
<tr>
<td>CEES</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>19</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>37</td>
</tr>
<tr>
<td>CHS</td>
<td>5</td>
<td>9</td>
<td>15</td>
<td>29</td>
<td>14</td>
<td>14</td>
<td>1</td>
<td>87</td>
</tr>
<tr>
<td>CHUSS</td>
<td>1</td>
<td>8</td>
<td>11</td>
<td>24</td>
<td>11</td>
<td>7</td>
<td>1</td>
<td>63</td>
</tr>
<tr>
<td>CoBAMS</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>12</td>
<td>14</td>
<td>3</td>
<td>1</td>
<td>37</td>
</tr>
<tr>
<td>CoCIS</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>12</td>
<td>10</td>
<td>1</td>
<td>37</td>
</tr>
<tr>
<td>CoNAS</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>14</td>
<td>6</td>
<td>14</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>CoVAB</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>14</td>
<td>1</td>
<td>39</td>
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<tr>
<td>LAW</td>
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<td>0</td>
<td>4</td>
<td>5</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>39</td>
<td>75</td>
<td>133</td>
<td>98</td>
<td>97</td>
<td>11</td>
<td>477</td>
</tr>
</tbody>
</table>

Overall, staff attrition based on colleges, CHS at 87 topped the staff departures in the entire University at all levels, most of these were at the lecturer level. In terms of ranks, a total of 133 lecturers left the University; for CEDAT the bulk were young professionals at the level of Assistant and Teaching Assistant. Twenty-four (24) professors and thirty-nine (39) Associate Professors left the University service and the highest attrition were in highest in CHS, CHUSS, CoNAS and CoVAB.

### Figure 14: Staff Attrition by College 2008-2013

The underlying reasons for the departure mainly include resignations for staff at lecturer and Assistant Lecturer levels, expiry of contracts mostly for Assistant Lecturers and Teaching Assistants, retiring from service at senior levels.
The underlying reasons for the departure mainly include resignations for staff at lecturer and Assistant Lecturer levels, expiry of contracts mostly for Assistant Lecturers and Teaching Assistants, retiring from service at senior levels.

When compounded at institutional level, the total number of staff (teaching and non-teaching) leaving the University over the Plan period is shown in figure 16.

Figure 15: Reasons for Staff Attrition 2008/09-2014/15

Figure 16: Trend in Staff attrition 2008/09-2014/15

When compounded at institutional level, the total number of staff (teaching and non-teaching) leaving the University over the Plan period is shown in figure 16.

5.1.1 Staff/Student ratio by College at Makerere University

The Plan envisioned that the number of staff will have reached 2000 by the end of the Plan period. Over the review period, average staff student ratio was 1:30 compared to the NCHE of 1:15 and the Plan target of 1:20. Values however, ranged from 1:90 in CoCIS to 1:6 in CHS (see figure 17). This analysis shows that only CHS, CoNAS and CoVAB meet the NCHE recommended benchmarks for SSRs.

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Retired</td>
<td>175</td>
<td>189</td>
<td>240</td>
<td>168</td>
<td>264</td>
<td>301</td>
<td>176</td>
<td>99</td>
</tr>
<tr>
<td>Resignation</td>
<td>175</td>
<td>189</td>
<td>240</td>
<td>168</td>
<td>264</td>
<td>301</td>
<td>176</td>
<td>99</td>
</tr>
</tbody>
</table>
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Figure 17: Baseline, Current and Target Staff Student Ratio by College

3.1.2. Human Resource Development

Human resource development remains the key tenet for quality teaching and research in the University. Over the review period the University has continued to concentrate on building a critical mass of staff in the areas of masters and PhD through local, international and sandwich study programs. The following have been the key funders namely SIDA, DAAD, Commonwealth to mention but a few. For the period under review, the number of full-time staff with PhDs has grown from 46% to 75% by 2014/15. Graduate Fellows Policy was developed and approved by Senate and Council. In the remaining plan period, it is anticipated that the operationalization will commence as starting point selective replacement of Teaching Assistant with graduate fellows’ contracts.

Figure 18: Trend on Human Resource Training of University Staff
3.1.3. **Challenges**

(i) Uncompetitive terms of service & poor retention coupled with a sluggish recruitment process have resulted into the current low staffing levels for both academic and non-academic staff.

(ii) Heavy teaching load for staff on ground, to balance it off with the other core activities of the university. This has implications for staff to undertake research and publish and hence retarded academic growth to the senior academic ranks. It further creates a vicious cycle that is demonstrated by the limited capacity to write fundable research proposals, less research and less publication.

(iii) The limited resources allocated to staff development, there continues to be over dependency on donor support for staff development.

(iv) The University still operates an old fashioned and manual record keeping system and a largely dysfunctional management information system that was supposed to integrate student academic records, human resources and Finance records management systems.

(v) Lack of a systematic training needs assessments.

(vi) The policy for engagement of Graduate Fellows in academic units and development of teaching and financing protocols for graduate assistants is yet to be embraced.

3.2. **Library Services**

Library services form the backbone of the academic core functions of teaching and learning as well as research and innovations. Recent developments have seen an increasing use of virtual resources and remote access to large databases and reference materials. The goal was to improve efficiency in provision and utilization of Library services. The objectives were: -enhancing collection development and sustaining library resources & facilities and ensuring optimal utilization of library resources. The following strategies were to be undertaken:

i) developing Library resources utilization strategy,

ii) increasing student: book ratio from 1:7 to 1:22,

iii) automating all Library functions,

iv) strengthening Library resource mobilization and sustainability mechanism, and

v) increasing Library out-reach services

The key indicators of progress included the level of utilization of Library e-resources, number of automated Library functions, student: book/journal ratios, chair/library user ratio and outreach services provided.
3.2.1. **Library Space and facilities**

The University library facilities have improved since the commencement of the Plan from a utilizable space of 8,000m² in 2007, with an additional 4,000m² brought the total space of 12000M² by 2012. In addition, the eight branch libraries and various academic unit-based Book Banks storage areas has a total area of over 2,000m². All this space added together, makes the University attain close to 70% of the projected library space requirement of 20,000m² by 2018. The expanded space was furnished and equipped with support from CCNY-Model Library Grant and the Government of Norway. The total seating capacity in the main and branch libraries increased to 3900; bringing the seating ratio to 1:10 by 2013 compared to the Plan target of 1:5.

<table>
<thead>
<tr>
<th>Seating Capacity</th>
<th>2008/09</th>
<th>2014/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Library</td>
<td>2,650</td>
<td>3,980</td>
</tr>
<tr>
<td>Agricultural and Environmental Sciences</td>
<td>89</td>
<td>140</td>
</tr>
<tr>
<td>Business and Management Sciences</td>
<td>71</td>
<td>71</td>
</tr>
<tr>
<td>Education and External Studies</td>
<td>392</td>
<td>157</td>
</tr>
<tr>
<td>Humanities and Social Sciences</td>
<td>178</td>
<td>226</td>
</tr>
<tr>
<td>Engineering Design Art and Technology</td>
<td>110</td>
<td>112</td>
</tr>
<tr>
<td>Veterinary Medicine Animal Resources and Bio-Security</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Albert Cook Library (College of Health Sciences)</td>
<td>262</td>
<td>262</td>
</tr>
<tr>
<td>Makerere Agricultural Research Institute Kabanyolo</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Total</td>
<td>3,863</td>
<td>5,059</td>
</tr>
</tbody>
</table>

*Source: Makerere University Main Library March 2015*

3.2.2. **Strengthen Library Resource Mobilization and Sustainability**

The Plan envisaged improved efficiency in service delivery and utilization through ICT, to this end, concerted efforts had to be put in to mobilize and increase the library resources and at the same time utilize ICT and implement a virtual library system with functional modules including circulation, cataloguing and acquisition by end of 2012. The University Library Virtual Library System has been made functional with support from the Carnegie Corporation of New York.

With Sida support over the period under review (2008/09 – 2014/15), the University Library managed to increase its resources as highlighted in table 11 below. This has also improved on the book student ratio.

<table>
<thead>
<tr>
<th>General Facilities</th>
<th>2008/09</th>
<th>2014/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workstations</td>
<td>747</td>
<td>747</td>
</tr>
<tr>
<td>Computers</td>
<td>115</td>
<td>520</td>
</tr>
<tr>
<td>Servers</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Sunray terminals</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Digital Library (Dspace) full text records</td>
<td>407</td>
<td>3,009</td>
</tr>
<tr>
<td>Digital Music Archive</td>
<td>1,577</td>
<td>2,213</td>
</tr>
<tr>
<td>E-Books</td>
<td>271</td>
<td>26,188</td>
</tr>
<tr>
<td>E-Journals</td>
<td>28,000</td>
<td></td>
</tr>
<tr>
<td>Print journals</td>
<td>10,865</td>
<td></td>
</tr>
<tr>
<td>Library Collections</td>
<td>427,573</td>
<td></td>
</tr>
<tr>
<td>Monographs</td>
<td>400,800</td>
<td></td>
</tr>
<tr>
<td>Book Bank Collection</td>
<td>191,803</td>
<td>227,049</td>
</tr>
<tr>
<td>Book Bank -Registered Student Ratio</td>
<td>1.07</td>
<td>1.07</td>
</tr>
<tr>
<td>Registered Student-Library Seat Ratio</td>
<td>7:01</td>
<td>7:01</td>
</tr>
</tbody>
</table>

*Source: Makerere University Main Library March 2015*
3.2.3. **Development of a Library Resource Utilisation Strategy**

The current library space has been re-organised for optimal utilisation. A well-equipped training unit was set up in the main library where information literacy sessions are conducted for University staff, students, and other institutions in Uganda and abroad. The Library utilization strategy adopted the 24 hour operation during peak periods; and Plans were underway to provide 24/7 service not only in the main Library but also in the Branch Libraries in the various Colleges. The Book Bank Collections have been merged with the formation of Colleges for optimal utilization.

**Increase Library outreach services**

The Library now has capacity to support large volume of research including other universities in the region e.g. Juba University. There is growing number of requests for Document delivery increased annually and 107 articles delivered to users under EDDS. In collaboration with Bergen University, Library staff and EASLIS have trained University of Juba staff and supported library automation.

The training programme for other public/private universities and research institutions for PERI and CUUL institutions’ librarians and staff trained annually.35 Librarians from PERI and CUUL were sensitized in the usage of e-resources.

Challenge is maintenance of library facilities and low funding towards E-resources.
3.3. Information & Communication Technology

ICT is one of the support tools which facilitate the core University functions of teaching, learning, research and innovations; knowledge transfer partnerships, collaboration and networking. The Plan focused on the need to consolidate ICT enabling and utilisation environment. This would be through enhanced quality and scope (Breadth and versatility of ICT services); effective and appropriate utilization of ICT resources as well as, improved electronic visibility of the University (services and academic programs) and mainstreamed ICT in the functions of the University by 2013.

The strategies highlighted by the Plan that would ensure active engagement include:

i) developing and operationalizing effective ICT Policies
ii) ensuring sustainability of ICT services and resources
iii) Equipping Mak staff and students with ICT literacy
iv) continually update the University's intellectual output on the University website

Performance measurement indicators for progress were outlined as: computer/user ratio, equitable ICT access per student per unit time, breadth and versatility of ICT services, and ICT equipment in use in University academic and administrative programs

By the time of the review the key achievements in the realisation of the ICT strategic intent have been, through policies, infrastructure, and increase in hardware and software facilities.

3.3.1. ICT Infrastructure & Utilisation

The period under review, focus was placed on harmonization and documentation of the existing University policies to promote ICT usage, review and implementation of the University ICT Master Plan and eliciting top management ownership of the ICT processes in the University. However, there is in place a University ICT Strategic Plan (2008-2018) which was reviewed and re-aligned to the College set up in 2014. In place is the Makerere ICT Policy Framework (2010-2014) which was rolled over to 2020 by the University Council.

3.3.1.1. ICT Infrastructure

Under the Directorate of ICT Support, developments in ICT infrastructure have included:

(i) Optical-fibre network extended to cover the main campus, CHS, MUARIK, LANS set up in supported colleges; 12 student internet access kiosks with 165 computers set up in various units; increased university web presence; use of e-mail services and a relatively well maintained Internet connectivity as a global research and learning resource

(ii) The growth in Internet Bandwidth realized has improved Internet Access quality (with bandwidth capacity of 68Mbps by 2013 to the current 200 Mbps by 2014/15) from the range of 24-20Mbps in 2008. From March, 2016 Internet Bandwidth was upgraded to 300Mbps. The Connection to the Research & Education Network Uganda (RENU) has provided the University with a link to other Universities and research institutions all over the world. This is to facilitate affordable research and education collaboration and sharing of research & education resources.

(iii) The University Wireless Network (MAKAIR) was established in 2010 with support from Sida. At the time of installation, the network was able to support the user community at Makerere with a possibility of scaling-up to accommodate growing numbers. Over the last few years, the number of users has continued to grow while the wireless network has not been scaled up to meet the
growing demand. This has resulted into poor user experience, dropped connections and inability to connect to the wireless network despite its availability. The wireless network is also running on obsolete technology.

3.3.1.2. ICT Utilisation

The University has over the years harnessed ICT to enhance the learning experience of students. In the academic units, the number of desktop computers has only increased by 14% from 4,960 in 2008/09 to 5,667 computers by 2014/15, as shown in table 12 below. This gives an average Computer/Student Ratio of 1:7 when compared to the total number of students.

Table 12: Trend in Computer/Students Ratio (2008/09-2014/15)

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Total no. of Computers</th>
<th>Total No. of Students</th>
<th>Average Computer/Student Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008/09</td>
<td>4960</td>
<td>34363</td>
<td>1:07</td>
</tr>
<tr>
<td>2009/10</td>
<td>5248</td>
<td>33112</td>
<td>1:06</td>
</tr>
<tr>
<td>2010/11</td>
<td>5271</td>
<td>33470</td>
<td>1:06</td>
</tr>
<tr>
<td>2011/12</td>
<td>5786</td>
<td>37137</td>
<td>1:06</td>
</tr>
<tr>
<td>2012/13</td>
<td>5786</td>
<td>41094</td>
<td>1:07</td>
</tr>
<tr>
<td>2013/14</td>
<td>5412</td>
<td>40603</td>
<td>1:07</td>
</tr>
<tr>
<td>2014/15</td>
<td>5667</td>
<td>38586</td>
<td>1:07</td>
</tr>
</tbody>
</table>

Table 13: Computer Facilities by College 2008/09 and 2014/15

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>2008/09</th>
<th>2014/15</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>College</td>
<td>Total Head Count</td>
</tr>
<tr>
<td>Agricultural &amp; Environmental Sciences</td>
<td>1566</td>
<td>501</td>
</tr>
<tr>
<td>Business &amp; Management Sciences</td>
<td>4974</td>
<td>228</td>
</tr>
<tr>
<td>Computing &amp; Information Sciences</td>
<td>4132</td>
<td>2035</td>
</tr>
<tr>
<td>Education &amp; External Studies</td>
<td>8792</td>
<td>205</td>
</tr>
<tr>
<td>Engineering Design Art &amp; Technology</td>
<td>2490</td>
<td>367</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>1370</td>
<td>100</td>
</tr>
<tr>
<td>Humanities &amp; Social Sciences</td>
<td>8023</td>
<td>481</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>1127</td>
<td>270</td>
</tr>
<tr>
<td>Veterinary Medicine Animal Resources &amp; BioSecurity</td>
<td>641</td>
<td>150</td>
</tr>
<tr>
<td>School of Law</td>
<td>1248</td>
<td>90</td>
</tr>
<tr>
<td>Fort Portal Campus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jinja Campus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library</td>
<td></td>
<td>140</td>
</tr>
<tr>
<td>Student Kiosks/Other units</td>
<td>393</td>
<td>480</td>
</tr>
<tr>
<td>Total</td>
<td>34363</td>
<td>4960</td>
</tr>
</tbody>
</table>

The total number of computers in the administrative and support units stands at close to 500 computers giving an increase of just over 50%. (i.e. from 231 in 2008/09 to 446 by 2013/14).

The use of ICT in academia and research has evolved from basic internet connectivity and communication
Key milestones in ICT capacity include:

(i) Improved access to ICT services through the provision of a network infrastructure in various student and staff locations, upgraded gateway router image to support IPv6 and other routing functions, upgraded firewalls, network services availability and functionality (140 data points), internet service enhancement and redundancy and ICT usage and system audits.

(ii) Extending the ICT service catalogue from provision of basic internet and mailing services to automation of business processes such as tuition collection (Mak-pay), pay-slips, Lib-hub processes (Library functions such as book cataloguing, digitization) and development of research management systems (gradtrack) among others.

(iii) The deployment of wireless hotspots (Wi-Fi) to improve access to University and online based educational resources. The installation of Thin-Client Computers at Internet Kiosks at Senate, CEES and CHS to provide students without personal computers or smart devices access to educational online based resources.

(iv) Upgraded the University-wide storage system at DICTS to a better and more resilient high performance Net-App storage system with storage capacity of 21Terabytes. The routine maintenance of the backbone and kiosks equipment has ensured high service availability.

3.3.2. University Visibility

Online visibility of the University has improved over the years with staff uploading more of their research publications online journals. These include standardized website templates; Updated Webserver’s core OS (Ubuntu) with updates and security patches, troubleshooting & web management; developed and distributed a web-ranking strategy and, designed staff and student websites. These steps have resulted into the increased number of publications on the Mak Institutional repository as well as improved quality of University websites. Over the Plan period Electronic visibility increased as evidenced through the rankings that have steadily improved, across the different league tables. These included the Webometrics, the Thompson Reuters Times higher education and Scimago institutional ranking as well as the HERANA African reviews. For example, the webometrics ranking moved Mak from the lowest African rank of 53 in 2010 to a constant ranking among the top 20 positions, with the highest being 4th in 2013.

3.3.3. Challenges

(i) User demand has out-grown ICT service provision at Mak. For instance, Bandwidth will always be a finite resource due to the growing number of users and changing trends in online behaviour. Users are more interested in highly graphical and real-time applications (video, audio etc.) than just e-mail access. Mak is currently running at 300Mbps which is a half (1/2) of the required Bandwidth (600 Mbps) and this places strain on the resource resulting into average user experience.

(ii) ICT projects in the University have mostly been donor funded which raises the issue of sustainability.

(iii) Inadequate ICT facilities in the University.

(iv) Lack of proper maintenance of ICT equipment.
3.4. **Physical Infrastructure**

The quality of physical infrastructure is one of the support pillars which underlie teaching, learning, research/innovations and KTP environment. The Strategic Plan envisioned improving the physical infrastructure environment to support the functions and services. The objectives outlined in pursuit of this goal are:

i) increase lecture space by 20,000 square metres by 2018  
ii) preserving and ensuring cultural, historical monuments and artefacts (ensuring the integrity landscape values, culture and history) by 2011  
iii) enhancing the re-organization and efficient running and management of laboratory facilities in Mak by 2014  
iv) improving efficiency and effectiveness in the management of physical resources such as classrooms, laboratories, equipment and estate by 2014

Key activities for support to achieve the physical Plan strategic intent above goal and objectives, the Plan lay the following strategies:

i) review and development of the University Master Physical Development Plan,  
ii) construction of blocks of lecture space appropriate for learner centred pedagogy and andragogy fitted with ultra-modern ICT facilities,  
iii) development and operationalization of a maintenance Plan for all University estates,  
iv) developing guidelines for capital development fund utilization,  
v) equipment and increase in central and unit laboratories for specialized, applied and basic research, teaching and learning,  
vi) developing a capital and facilities Plan,  
vii) designing and operationalizing an information system that produces and manages data pertaining to physical infrastructure capacity, and  
viii) Re-designing the existing instruction space to accommodate learner centred methodologies for the five pilot academic units.

The key performance indicators on which to evaluate progress included: - the number of properties developed, space per staff/student (Library, Lecture, Research, areas of convenience); the quality/quantity of well-designed and maintained landscapes/structures (roads, open spaces, signage, demonstration sites, galleries, museums, herbaria and aquaria); and number of well-equipped, accredited central and unit laboratories.

3.4.1. **Management of Physical Infrastructure**

During the period under review, the University was able to develop the University Master Physical Infrastructure Development Plan for the main campus including the College of Health Sciences and for the initial building (including office and lecture space) at Makerere University Agriculture and Research Institute at Kabanyolo (MUARIK) campus over the short, medium and long term. The Master Plan was approved by University Council with a phased implementation. The University has initiated the process of mobilising funding to support the implementation of the University master physical infrastructure development plan.
The Master Plan, made provisions to preserve the historical monuments and artefacts. At the same time, provisions were made for the re-organization and efficient management of the existing physical infrastructure facilities.

Figure 19: Makerere University Infrastructure Master Plan

### MAKERERE UNIVERSITY INFRASTRUCTURE MASTER PLAN

#### 3.4.1.1. Increase in Lecture & Learner centred Space

The Plan envisaged blocks of purpose built lecture space of additional 20,000 square meters appropriate for learner centred pedagogy and andragogy fitted with modern ICT facilities. Achievements include:

(i) Extension of CEDAT (with utilizable office and lecture space totalling to over 7,700m²).

(ii) Extension to the main library building which added another 8,000m² of utilisable space for academic purposes including space for students’ discussion, research commons, learning commons, a power point room, a computer laboratory for users with disability and a well-equipped general training room where information literacy sessions are conducted.

(iii) Construction of Technology incubation centre with an addition of 1250m²

(iv) Construction of centralised lecture space by over 10,000m² as part of the AfDB-HEST Project and an initial building at Kabanyolo Campus.

(v) The outsourcing of catering facilities created additional teaching and learning space through re-designation of the dining halls. These however, have had minimum redevelopment. The biggest drawback to the implementation of the physical infrastructure space has been the lag in the implementation of the learner centred pedagogy. The re-designation of existing space has not yet been undertaken largely because the concept of learner-centred instruction as the basis for re-designation is yet to be widely understood, appreciated and embraced. It is anticipated that with the out-sourced catering services, former dining halls could be the best and first candidates among the existing utilisable spaces to be targeted for remodelling towards in this direction.
Table 14: Change in Academic Space 2008/09 -2014/15

<table>
<thead>
<tr>
<th></th>
<th>2008/09</th>
<th>2014/15</th>
<th>2014/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Space (M²)</td>
<td>19216</td>
<td>21656</td>
<td>13%</td>
</tr>
<tr>
<td>Laboratory Space (M²)</td>
<td>10657</td>
<td>11391</td>
<td>7%</td>
</tr>
<tr>
<td>Library Space(M²)</td>
<td>12705</td>
<td>16705</td>
<td>31%</td>
</tr>
</tbody>
</table>

Equipped of lecture rooms and laboratories with modern instruction facilities

The Plan envisioned to carry out an inventory of the laboratory facilities including facilities and equipment. Over the review period, an inventory of laboratories was undertaken under the AfDB HEST project with the target of at least one laboratory in all sciences based colleges. CEDAT has further benefited from the support under the Presidential Initiative for Science and Technology. The following laboratories and lecture facilities have benefited: power systems lab, computer engineering; soil mechanics lab; public health engineering lab, materials lab, survey Lab, and architecture studios.

Support has further been through allocation for ICT facilities i.e. computers, servers and other equipment from the internal and external support. These include re-equipment of a computer lab in CoNAS which includes 50 computers and two (2) remote controlled servers in addition to equipment. With regard to the re-organization and efficient running and management of laboratory facilities; the existing laboratories continue to be utilized and managed by the academic units to which they belong. Some form of centralized or shared laboratories are expected under the above highlighted GoU secured AfDB-HEST Project support to Mak. These include the General Diagnostic Laboratory, the GIS centre and the Biotechnology Laboratory.

3.4.1.2. Other Physical Facilities in Academic Units

i) Skilling and Business Incubation Centre at Nakyesasa: Renovations were undertaken of the old buildings at Nakyesasa Farm on the 200-acre farm land for the CoVAB under the Presidential Initiative for Science and Technology. The renovations are part of a comprehensive Plan to turn Nakyesasa into a well-established skills development centre. The centre will house an administration block, hostels for students and a unit for each of the programs that are taught under the AFRISA platform. The centre will be used to equip students with skills that they can use to set up their own businesses. The centre will also be used to develop business for the products that will be manufactured during the learning process.

ii) The Ruth Keesling Wildlife and Gorilla Tourism Centre: Renovation of the former animal houses to house the Ruth Keesling Wildlife and Gorilla Tourism Centre. The centre is being developed as a destination for scientists and researchers in wildlife and those who want to be guided before travelling to see gorillas. The aim is for them to be given an experience as though they were actually visiting the gorillas in the wild. The project is funded by the Morris Animal Foundation (MAF), which is a major funder of the Mt. Gorilla Veterinary Project (MGVP), an independent NGO. The initiative will strengthen wildlife education, and gorilla tourism. This will in turn establish CoVAB as a regional hub in the area of wildlife research.

iii) The IDI Learning centre: Establishment of the Infectious Disease Institute (IDI) at the CHS as a state of the art Learning Centre. The centre is being for face to face and distance learning technologies for both local and international students.

iv) Food Technology & Business incubation Centre: Construction of a 1250m² 2-floor food processing block completed with internal and external finishes and associated electro-mechanical installations. The centre is supported under the Presidential Initiative for science and technology.
3.4.2. **Maintenance Plan for the University**

The University envisioned to have an infrastructure status audit (Asset mapping and harmonization of usage), a maintenance plan for the University infrastructure and GIS that integrates both spatial and management data. The implementation of these initiatives was expected to inform the development of the maintenance Plan. This notwithstanding, the University has been able to renovate the physical infrastructure predominantly in all halls of residence and in academic buildings with improved sanitary facilities. Improved road network and traffic flow in the University by the opening of a third major entrance as well as resurfacing of the roads.

3.4.3. **Challenges**

(i) Lack of a regular annual stock taking and inventory of the lecture and laboratory facilities.

(ii) Absence of a maintenance plan for the University physical infrastructure

(iii) A none functionally central space allocation committee

(iv) Limited funding that cannot allow prioritisation of maintenance and development of the physical infrastructure

(v) Being a public institution it inhibits the drive to explore alternative capital funding sources using its assets through arrangements such as venturing into Public-Private Partnership projects.

(vi) Encroachment on unutilised university land.

**Centralised Teaching Facilities and Incubation Centre**

![Centralised Teaching Facilities and Incubation Centre](image-url)
3.5. Organisation & Management

The organisational setup is the driving force that moves the different components in the University. It harmonises the core functions with the support functions to ensure that the University is a viable institution. The organisational establishment, maps the internal constituents to the expectations of the external stakeholders. The Strategic Plan intent therefore was to ensure an efficient and effective organisational and management environment.

The objectives underlying this goal included:-

i) ensuring that the organizational and management structures match with the demands of the University by 2012
ii) improve the corporate image of the University (re-branding) by 2012
iii) advocate for enactment and effective implementation of gender responsive policies and programmes in Makerere University by 2012
iv) improve the effectiveness of the University Planning system by 2011
v) provide a framework for evidence based decision making by 2011

The strategies to be implemented through the administrative structures of the University involve:

i) reviewing and harmonizing the governance and administrative structures and functions
ii) re-branding and protecting the corporate image of the University
iii) outsourcing non-core functions of the University
iv) ensuring gender responsiveness of University functions
v) developing capacity of leadership and management at all levels
vi) instituting institutional research and evidence based decision making
vii) restructuring the Planning and reporting system
viii) benchmarking and adapting best practices in the entire spectrum of the University functions
ix) developing and operationalizing the communication strategy

The key performance indicators against which to evaluate progress included: - the number of organizational changes related to mandates and organogram, number of engendered University functions, institutional rating (internal and external), and evidence based decision making by University organs.

3.5.1. University Organizational Structure

Over the review period, the University through University Research, Administrative and Financial Reforms (URAFR) Committee undertook a review of administrative and research management processes with a view of re-engineering them with a view of coming up with better organisation structures. The rationale behind the reforms was to make the University systems more efficient and a vehicle to reposition Makerere as a premier research-led institution as required by the Plan. The reforms transformed the University from twenty-one academic units, Faculties/Schools/Institutes into 10 Colleges. The nomenclature at the College level was established to distinguish the school, department, institutes and centres. However, the change is yet to be fully implemented as anticipated especially with respect to financial and academic autonomy.

The Organisational and Research Management Manuals were produced to guide the operations of the University. The reform process came up with the following recommendations; amend UOTIA to streamline top management., revise composition of University Council to make it more professional and efficient, overhaul the Management Information System (MIS) so as develop home-grown Management...
Information Systems and incorporate ICT in all University functions.

Over the review period, a Change Management Committee (CMC) was also constituted to ensure an integration of the processes as proposed in the University Manuals so as to facilitate smooth transition. The amendment of UOTIA and micro administrative organizational structures are on-going with stakeholder consultations to better service the college system.

As part of the restructuring process, a task force was constituted to undertake a comprehensive job evaluation, re-organization of the staff structure and financing of the University.

**Benchmarking**

The Plan had envisioned benchmarking as one of the avenues re-engineering the administrative and organisational structures for better service delivery. For example, benchmarks, have been made with seven African Flagship Universities under the Centre for Higher Education Transformation through the HERANA project. During the period under review, Mak emerged as one of the institutions that registered remarkable progress on all the indicators assessed by the network. Significant improvements were seen in the number of PhD enrolments, graduates as well as the research output in the Web of Science Database. The low number of staff at the senior staff ranks of professor and associate, proportion of staff with doctoral degrees, number of graduate students stand out as key points of weakness for Mak in this network. Figure 20 gives an overview of the status of benchmark universities in the HERANA network.

**Figure 20: Comparative analysis of status of Makerere University within the HERANA network**

![Figure 20](image)

**Source:** HERANA Report 2015

### 3.5.2. Communication Strategy of the University

During the period under review, a Communication Policy and Strategy were developed and approved by Senate and Council. The strategy has significantly improved the University’s communication channels between the centre and the units (both academic and administrative).

This has been through the University publications, and close collaboration with the media including radio, television, press releases & monthly press briefings. The growing mainstreaming of ICT in the various functions of the University has eased the consolidation of information management systems. The communication officers and web administrators in units have provided an interface between MAk and the public and private sector especially the print and electronic media. The University attempted to have pro-active engagement with the media through the Vice Chancellor's monthly press briefings.
Re-branding of the University is being guided by original insignia outlook [colours of the emblem] as registered. Signage at the main University campus has significantly improved with major roads and buildings labelled in University colours.

3.5.3. **Effectiveness of the University Planning System**

The implementation of the 10-year strategic plan 2008/09 – 2018/19 was guided by the operational framework. The framework provided milestones against which monitoring and evaluation were to be done. Units and the university as a whole on an annual basis have produced performance reports. Over the same period the transition to the college mode of governance was effected. Every college formulated a new strategic plan to fit within the structural expectations of the new mode of university governance. Similarly, all administrative units did re-align their strategic plans to meet the supporting requirements of the colleges. The biggest draw back to the realisation of the University, college and admin unit Strategic Plans is limited resources to implement the strategic intents.

To facilitate informed strategic decisions making in an academic institution Mak aspires to be, it has proved to be inevitable to realign the planning function in the University. Worldwide ideally the planning function in university mainly entails enrolment planning (Full Time Student Equivalent -FTSE), human resource planning, financial planning, academic costing and programming, physical and infrastructure planning among others. The rationale is to provide strategic support to enhance the University’s responsiveness to both the ever-changing needs of her internal and external stakeholders.

**Evidenced Based Decision Making**

With the changing demands in the provision of quality higher education, Universities have no choice but to devise ways and means of coping by carrying out strategic intelligence. This process entails undertaking both internal and external environmental scanning. This entails undertaking institutional research on different aspects of the University management periodically produced including the University Annual Report, quarterly implementation progress reports for various institutional development programmes and the Annual Fact book. Institutional research underpins evidence based decision making within the University.

The Plan envisioned that a system would be evolved to produce reports that will guide decision making and inform subsequent institutional development initiatives. Over the period under review, the University annually produces two key documents that have guided decision making. The annual report provides the qualitative information about the performance of the University along the strategic thematic areas outlined in the Plan. The fact book gives quantitative assessments and movements for the key indicators of the University from both the input and output perspectives.

However, these publications similar to the University Strategic Plan have largely remained as publicity and research reference materials for both internal and external stakeholders. It had been anticipated that this would be a supplementary function with the main function being to provide direction to the decision-making process in the University. The exception would have been the use of Annual Fact Book data for self-assessment undertaken by the QAD. The reason for this could be that the dissemination mechanism for the annual reports is inadequate and or the failure to establish a forum for a comprehensive review of the status of the University.

**Implementation of the Strategic Plan- Activity Based Resource Allocation**

For effectiveness in the implementation of the Strategic Plan, in 2010 the university transitioned into collegiate mode of governance. A comprehensive review of the curricula was undertaken to establish the distribution of workload across colleges using the Full-Time Student Equivalent (FTSE) so as to determine
the staff establishments. This informed the resource allocation based on where the teaching or workload is situated.

Further, yearly prioritization of strategic areas has been the guiding principle in budgeting and resource allocation. In 2011, an activity based resource allocation model was adopted. The model evaluates the prioritised Strategic Plan areas and allocates resources based on the provisions therein. The model was further informed by two external factors: first, the annual external audits which raised the query on limited harmonisation between the University Strategic Plan and the budgets produced every financial year; and second, the National Output Budgeting Tool (OBT) and the three-tiered budgeting approach adopted by the Ministry of Finance Planning and Economic Development. The OBT requires that strategic plan priority areas are outlined to form part of the Budget Framework Paper.

3.5.4 Challenges

(i) There has been and continues to be the limited resources, which has created a mismatch between the budget and the financial performance. Fig 21 an example of the annual allocations based on the Plan.

(ii) Lack of the desired degree autonomy in financial management at college level.

(iii) The Financial Management and Administrative reforms & restructuring of administrative units are yet to be fully implemented.

(iv) Lack of a systematic mechanism for induction & staff performance appraisal of staff and lack of clear and enforceable succession Plans and guidelines.

(v) Uncoordinated benchmarking by various units in the University.

(vi) The University continues to have fragmented and inconsistent information provision.

(vii) The one stop information centre has not yet been realised.
Strategic link to the budget FY 2012/13: The key focus areas

Teaching and learning
1. Enrollment 39000 for graduate and undergraduate students for academic year 2012/13 in 10 colleges.
2. Harmonization of academic programs and establishing efficiency measures in CHUSS
3. Distance education program run in at least 6 academic units
4. Development of a policy framework to guide establishment of branch and offshore campuses
5. Development and production of distance learning materials for the identified 6 programs.
6. Taskforce study report on program that can be modularized on a pilot basis and determining resource requirements for full semesterization
7. Review of cross cutting courses approved by Senate (communication, Ethics, ICT, Gender, Entrepreneurship)
8. Developing Problem based multi-disciplinary learning curriculum for the rest of the programs, participation of the private and public sectors in Curriculum reviews
9. Convert the position of teaching assistant into graduate fellow. Tuition waiver for graduate assistants and provision of stipend and transport allowance.
10. Increase the stock of computers and data points in the Library and target colleges namely CoCIS, CHUSS and CEDAT (UGX 1.1bn + presidential initiative).
11. Increase in the band width volume by 30% from 80mps to 100 mps (UGX1.9bn)
12. University is evaluating the course load and offerings especially in the science based programs where the resources available are not commensurate with the course load and enrollment levels

Research and innovations
1. Functional laboratory and research infrastructure, CEDAT & CAES - FTBIC – UGX 2.9bn
2. Research agenda- (DRGT- support from SIDA and Carnegie)
3. Nurturing the next generation of academic’s capacity building through award of competitive research grants- Focus in Agricultural, health and social research (Carnegie).
4. Operationalisation of the Intellectual Property unit (Presidential Initiative)
5. Research dissemination strategy
6. Establishment of a functional University press

Knowledge Transfer Partnerships
1. Linkage with the private sector in developing technologies for incubation in the FTBIC and CEDAT (UGX 4bn)
2. Surveying potential Knowledge Transfer Partners, Drafting policy on incubation centers Administration and Support Services
3. Construction and operationisation of the Business Incubation Centre (UGX 2.1bn)
4. Skills development and linkage with the animal resource and agricultural sector (UGX 1bn)

Governance/ Administrative issues
1. Review the governance and administrative processes and establish administrative support system and infrastructure-(UGX 1bn)
2. Implementation of the recommendation of the University Research Administrative and financial reforms committee (UGX 100m)
3. Master Plan for infrastructural development and facilities utilization-
4. Settle outstanding pension arrears- securitization proposal- (UGX 5bn)
5. Establishment of wired LANs in various academic and administrative buildings • Institution of wireless LANs (hotspots) in student halls of residence on main campus, and student centric locations
3.6 University Financial Resources

The fulfillment of the university's mandate largely depends not only on her capacity to mobilize resources but also on how efficient and effectively it manages their utilization. The goals here are to ensure optimal resource utilization as well as attainment of financial sustainability. The objectives include improve the effectiveness and efficiency of financial management, and diversify the financial resource base. Key strategies highlighted included:

(i) Develop a robust financial management system
(ii) Operationalize the investment and the resource mobilization policies
(iii) Establish a robust financial management system
(iv) Increasing capacity in the area of financial management, resource mobilization and investment.

The key performance indicators against which to evaluate performance include: harmonized financial management system with operational linkages to all units, number and amount of grants received, number of investments attracted and the level of return on these investments, level of business income generated by the different planning units and number of spin-off companies and level of income generated from spin-offs.

3.6.1 University Financing

The University’s core sources of funding include government subvention, internally generated (appropriation in aid) and donor support as presented in fig 20.

Figure 22: Makerere University Financial Sources
Over the period under review, the funding trend has fluctuated considerably, some years posting more resources than projected notably 2010/11 and 2012/13 (see table 14 and fig.21). There has been a steady increase in Government subvention funding which has more than tripled by FY 2014/15 at 148% compared to the projections. This has been largely as a result of the increase in the wage which on average constitutes 70% of the total yearly funding to the University. Non-wage recurrent for operational costs has remained static since the inception of the Plan. Government support for development had been anticipated at UShs.10bn per annum. While this target has been met, the format of support is not the expected conventional physical infrastructure development at a static meagre UShs.160m. The bulk of development support has been reserved for the Presidential Initiative for Science and Technology to cater for research and innovations in the three CAES, CEDAT and CoVAB.

While donor support as captured by the University final accounts remains low. The Plan projected that institutional development donor funding would be UGX 19bn per annum. [see Table 15].

Table 15: Makerere University Financing Trend vs Strategic Plan Projections (UShs. Billions)

<table>
<thead>
<tr>
<th></th>
<th>Gov’t Recurrent</th>
<th>Gov’t Dev’t</th>
<th>Internally Generated</th>
<th>Donor</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Projected</td>
<td>Actual</td>
<td>Projected</td>
<td>Actual</td>
</tr>
<tr>
<td>2008/09</td>
<td>44</td>
<td>44</td>
<td>0</td>
<td>0</td>
<td>64</td>
</tr>
<tr>
<td>2009/10</td>
<td>45</td>
<td>46</td>
<td>0</td>
<td>11</td>
<td>67</td>
</tr>
<tr>
<td>2010/11</td>
<td>45</td>
<td>53</td>
<td>10</td>
<td>1</td>
<td>78</td>
</tr>
<tr>
<td>2011/12</td>
<td>56</td>
<td>58</td>
<td>10</td>
<td>10</td>
<td>92</td>
</tr>
<tr>
<td>2012/13</td>
<td>75</td>
<td>60</td>
<td>10</td>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>2013/14</td>
<td>82</td>
<td>62</td>
<td>20</td>
<td>12</td>
<td>103</td>
</tr>
<tr>
<td>2014/15</td>
<td>89</td>
<td>62</td>
<td>20</td>
<td>1</td>
<td>99</td>
</tr>
</tbody>
</table>
The internally generated funding moderately increased to its highest in FY2013/14 by 61% and thereafter it is on a downward trend (see fig. 22). This is mainly attributed to declining enrolments of fee-paying students (see fig 25). A number of factors seem to be at play to explain this phenomenon for example the new public and private universities which have come up, changed tuition policy for students from the East African region paying the same fees as Ugandans, stagnation and the attendant value loss of fees paid by fee-paying students with no provisions for adjustments to the changing rate of inflation.

This state of affairs has obtained because of the inability of the University to counter the underlying funding assumptions of the Plan. The assumptions were that: i) all students would contribute to the operational costs of the University; ii) fee-paying students were to pay close to the unit cost (on average UShs.4million full time and UShs.2million part time) per academic year by 2011/12; and iii) fees at entry of program would apply for the duration of the course until graduation. And each cohort of students would come in at different fee deemed commensurate with the prevailing rate of inflation.

The Plan had anticipated a sustained growth in tuition fees until the optimal level when the tuition fees would be equivalent to the unit cost by 2015, however has not been the case. Several attempts were made to implement this strategy with minimum success. Tuition fees were increased by 40% in 2009/10 beginning with the first years increasing the internally generated revenue from UShs.67bn to UShs.78 billion. The onetime forty percent (40%) increase brought the level of fees to 50% of the unit costs. The difference was realised in FY2015/16 when UShs.2.1bn was included in lieu of the proposed 10% tuition increase for 1st years.
3.6.1.1. **Financial Management System**

Over the period under review, the University has operated different financial management systems, in different cost centres that they deem appropriate. The central financial management system has weak linkages to most of the cost centres. The supposedly integrated tertiary software on which the FINIS system runs has had several shortcomings with respect to capturing financial information and interface with the ARIS and HURIS components of the system. Financial performance reports therefore are sporadic and in many cases, do not provide adequate information to guide decision making. This has created a mismatch between the budget and the expenditure patterns. This coupled with inadequate financial resources generates cost overruns and arrears.

3.6.2. **Resource Mobilization & Investment**

The University Resource Mobilization and Investment Policies, Alumni Relations and Fundraising Strategies were developed and approved by Council. Over the period under review, the biggest milestone in the operationalisation of the resource mobilisation and investment policies was the institution of two independent Boards in 2014 to spearhead resource mobilisation and investments. The Makerere University Holding Company (Mak-Holdings) was instituted to develop and manage the commercial investments; and the Makerere University Endowment Fund (MakEF) to receive, mobilise and grow resources for the benefit of the University operations.

3.6.2.1. **Resource Mobilisation**

For externally mobilised resources, seed funding for the MakEF was provided by University’s long term held reserves managed by off-shore firm -Crown Agents Investment Management Ltd. The firm continues to be the off-shore Fund managers. Over the period under review, the Fund has had an average growth of 5 percent year [see fig 24]. The Board advised the fund manager to spread out the investment beyond bonds and equities.

**Figure 26: Mak Off Shore Fund Performance**

As part of the operationalisation of the policy, for the locally mobilised resources, all students at Mak and its affiliates pay an annual fee to the Fund effective from the Academic Year 2014/15. The Board is also targeting alumni, corporate organisations, friends and well-wishers of Mak..

A local Fund Manager- Genesis Africa was identified to manage the locally mobilised resources. The Fund manager kick started the local investments in June 2016. Since then as of Dec 2016, the fund had grown by 8 % [Fig 27].
CHS, on the other hand adopted a resource mobilisation strategy that involved the establishment of a grants office to champion grant writing and response to international and national calls for proposals. Evidence of success can be discerned from the number of research and other grants at the College. Efforts have also been made to establish grants offices in the other colleges starting with CHUSS and CAES as a pilot under the IDRC change management supported initiative.

3.6.2. Investment

Over the review period a number of colleges have been able to develop entrepreneurship capacity. These include CHS, CoCIS, CoBAMs, CAES, CEDAT and CHUSS-Language Centre, whose initiatives are driven by individual staff and therefore not integrated in the overall institutional set up.

At the institutional level, the instituted Board for Makholdings commissioned business diagnostic study which identified short, medium and long-term ventures that could make a significant positive financial impact to the University. Some of the undertakings include the Mak Guest House, University Hospital, Printery, University Bakery, Sports facilities, Memorabilia Shop and Centre for Languages and Communication services.

3.6.3. Challenges

The changing economic and financial position at national and institutional levels indicates a financially constrained operational environment. This is characterised by limitations in academic inputs; increasing and recurring budget deficits because of the following:

(i) Overall, the growing wage bill burden which takes over 70% of the revenue leaving while only 30% or less for the operational and development needs. Coupled with this from the internally generated funds, the University contributes a monthly wage bill top-up of 30%.

(ii) Declining enrolments of private (fee-paying) students as more public and private universities are established and hence the resultant shortfall in tuition revenue over the past few years and hence an unsustainable funding of both the recurrent and development needs of the University.

(iii) The growing pressure to operationalize the college system by granting increased financial autonomy to the college leadership.

(iv) Limited awareness, mind-set change to resource mobilization and untapped capacity to develop fundable proposals across the University.

(v) Delayed development of a comprehensive up-to-date database for development partners and prospects.
(vi) lack of institutional ownership and interest in building capacity to nurture and grow the desired lasting relationships with Alumni and development partners.
(vii) Inadequate capacity to do the necessary business intelligence for productive and sustainable investments

3.7. Students & Staff Support Services

Student and staff support services provide the basis for the holistic University experience. The main goal as articulated by the Plan was to holistically boost the academic and social development of staff and students. The objectives underlying this goal included: ensured equal opportunity; friendly and secure environment for staff and students and developed policies that deal with socio-health issues affecting staff and students to have been achieved during the period under review. The strategies towards these included:-

(i) evaluating and improving the efficiency and effectiveness/timeliness of the functional systems in the support organs of the University
(ii) Designing and operationalizing a medical insurance scheme for staff and students
(iii) reviewing standards and accredit student accommodation facilities under private sector
(iv) strengthen and maintain an international student service Desk/Information centre
(v) Organise student exhibitions/open days and carry out career guidance in secondary schools and the University

The performance indicators include:- established fast and efficient system for processing student academic documents; re-engineered business processes by 2010; improved customer-care with functional online staff and student communication by 2011/12; better counselling services; established students’ centre by 2011; and effecting of the desired changes or improvements in business processes.

3.7.1 Student welfare:

This cuts across a wide spectrum of student support activities to provide a holistic University experience. Focus has been given for the improvement the quality and breadth of customer care services in the University. The key areas include the academic (career guidance & counselling, teaching and learning environment) and social life (health care, accommodation and recreation facilities) and communication.

Over the review period, a Guidance and Counselling Centre was established as an independent unit from the University Hospital in 2012. This initiative brought guidance and counselling services closer to the University student community. With growing application of ICT, significant improvements have been registered in handling of students’ academic records. The learning environment for students has been enhanced with use of supportive technologies and teaching aids including use of Wi-Fi/hotspots, internet kiosks, and expanded learning environment outside the class room among others. The international student service Desk/Information centre was established with the creation of the international office to provide support to the international students. The revival of annual student exhibitions/open days in the various colleges through which students showcase outputs and outcomes of what has been imparted on them.

As part of the social welfare of the students, the University introduced the outsourcing of catering services in 2014. This has provided a more viable mode of catering services in the student’s halls of residence. The University Hospital is gradually improving on the facilities for improved health care service delivery. There has been continued improvement of recreation facilities.
3.7.2 Staff Welfare:
Human resource are prime movers of an academic institution and its welfare is paramount in delivery of quality services. Welfare encompasses recruitment and induction processes, performance appraisal, staff development health care, recreation, retirement and communication.

Over the review period, the key milestone here is development and approval of the Human Resource Manual which articulates on how the above outlined welfare aspects ought to be handled. The University has initiated the engagement of a private service provider for this service. The University maintained the Makerere University Retirement Benefits Scheme (MURBS) that is independently managed and overseen by a Board of Trustees, to handle issues of retirees. MURBS regularly organises awareness sessions for University staff so as to prepare for retirement.

3.7.3 Challenges
(i) Inefficient, bureaucratic and unfriendly customer care services for both staff and students.
(ii) Underutilisation of alternatives modes of communication about the key issues affecting the students and staff.
(iii) Lack of a one stop centre to provide current and prospective students with information.
(iv) The growing backlog of unpaid retirees’ benefits.
(v) Failure to operationalisation the Human Resource Manual.

3.8. Cross-Cutting Issues
The Plan articulates quality assurance, internationalisation and gender as the cross-cutting issues that have an impact on the University activities.

3.8.1. Quality Assurance

Under Quality assurance, the period under review the following have been established: College Quality Assurance Committees (mandated to develop quality standards and promote a quality research culture in the colleges); Board of Research and Graduate Training (mandated to handle research related matters); Library Quality Assurance Committee (mandated to develop Quality standards and promote Quality of Library Services); and the Administrative Quality Assurance Committee (mandated to promote the University quality culture within the administrative units).

In addition to mainstreaming the quality assurance structures, the University undertook a comprehensive process-reform; the college system, the organizational and research manual were key outputs of the reform process. The University put in place the Change Management Committee (CMC) to implement recommendations of the reform process. It had been anticipated that the activities of CMC would permeate into routine activities for the Directorate. The University is yet to experience the transformation of the University into an efficient decision making institution that was espoused by the CMC.

Quality Assurance Framework: The University instituted several mechanisms to assess the performance of the QA policy including: self-assessment exercises; tracer studies; international and local journals; plagiarism checks; graduate progression tracking (to propel completion rates). Over the review period the following are being implemented:

(i) institutional self-assessment to measure performance of the University in its core functions is on-going on a yearly basis. Policies that are being revised as a result of the assessment include the a) policy on teaching loads for academic staff in the various schools/colleges; b) policy on provisioning of ICT equipment for both staff and students; and c) policy on the Full Time
(ii) Attempts to establish students’ pass and completion rates made although not streamlined. Completion rates vary across Colleges, tracking the 2009/10 admission cohort reveals that on average 50% of the students admitted graduate within the specified time CHS, CoVAB and CAES >60 % have the highest.

(iii) Evaluation of staff by student is on-going since 2010/11 as a pilot scheme in five colleges namely CHUSS, CEDAT, CoNAS, CHS and CAES under the ARMS Project to transform the manual evaluation form into an online system. With support of the Afriq Units Project funded by EDULINK, the University secured a Lactro Dara Machine to facilitate capturing of data from the Evaluation of Teaching forms.

(iv) Pre-entry law exam was introduced to enhance the quality of graduates, and the throughput rate for the programme.

(v) Evaluation of teaching environment by staff awaits Senate approval.

**Makerere University ISO 9000 Subscription:** The ISO certification was to be pursued in a phased approach beginning with identifying structures and processes such as laboratories and centres that are ready for certification. The underlying cause for the delay is the inadequate funding as more resources need to be committed to the assessment and certification process. However, the University is compliant to the National Academic Standards set by the Uganda National Council for Higher Education. Furthermore, the University has committed itself to International monitoring mechanisms such as Thomson Reuters, Higher Education and Research Network for Africa (HERANA) and SCIMAGO Institutional Rankings (SIR).

### 3.8.2. Institutional Collaborations & Internationalization

Internationalisation was one of the cross cutting areas articulated by the Plan. Over the period under review, as part of operationalizing the international perspective, the University has signed MoUs in various areas. Focus of Institutional collaboration in **Teaching & Learning** includes staff & student’s exchanges, summer schools and joint degrees with other Universities; **Research & Innovations** includes capacity development in research, joint research and transfer of research materials; and **KTP & Networking** includes strategic partnerships, cooperation, cultural exchanges, technology and business incubation.

*Figure 29: Trend in Collaborations and Area of Support*

![Collaborations and Area of Support](image.png)
The major areas of collaboration as highlighted in fig 29 are in research & innovations and KTP & Networking. In terms of timeframe, a bigger proportion of the MoUs duration ranged between 3-5 years with a few extending to 10 years and above.

Besides international research, there were a number of service and sale agreements, consultancies, commissioned specialised trainings, student internships and field attachments with the private sector organisations and agencies both local and international. Other areas included hire of Space for hosting of Telecommunication Masts and non-disclosure Agreements.

The biggest challenge to the MoUs signed by Mak is the capacity to operationalise the activities as outlined. Several of the MoUs remain as documents filed and kept in the Central Registry. There have also been cases where multiple MoUs exist with a single entity. There is therefore need to create a monitoring desk and follow up mechanism after signatures of the MoUs.

3.8.3. Gender Mainstreaming

Gender mainstreaming is one of the cross-cutting issues. The Plan envisioned to mainstream, gender into its functions. Over the period under review, Mak Gender Policy came into place in March 2010 and the Directorate of Gender Mainstreaming in 2011. There has been increased visibility of gender sensitiveness and upward movement of women into leadership positions as evidenced by those who are now full professors from 2 in 2008 to 8 as of 2015. Increasing women in leadership, through the gender and leadership training, women in top leadership positions increased by 13% in top management, Deanship by 44% and overall female academic staff has remained on average at 25% [see Table 16]. Some attempt was made to institute affirmative action for women in leadership at Senate and Council levels.

Table 16: Gender terrain at Makerere University

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<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Female</td>
<td>%</td>
<td>Total</td>
</tr>
<tr>
<td>Students (General)</td>
<td>29235</td>
<td>12404</td>
<td>42</td>
<td>38146</td>
</tr>
<tr>
<td>Students (sciences)</td>
<td>5175</td>
<td>1398</td>
<td>27</td>
<td>10338</td>
</tr>
<tr>
<td>Academic Staff</td>
<td>1047</td>
<td>240</td>
<td>23</td>
<td>1429</td>
</tr>
<tr>
<td>University Senate</td>
<td>51</td>
<td>7</td>
<td>14</td>
<td>75</td>
</tr>
<tr>
<td>Top Management</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Principals</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>9</td>
</tr>
<tr>
<td>Deputy Principals</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>9</td>
</tr>
<tr>
<td>Deans</td>
<td>21</td>
<td>2</td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>Directors (Academic &amp; Administrative)</td>
<td>2</td>
<td>2</td>
<td>100</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: Situation Analysis of the Gender Terrain at Makerere University (2007) and Makerere University Fact Book 2014/15
The pre-entry exams were further used as a gender balancing factor as shows in the fig 29 below.

Figure 29: Distribution of School of Law Admissions by Sex

Increasing girl child access to Higher Education

As part of advancing girl child education, the Gender mainstreaming directorate has spearheaded the drive to increase girls accessing university education. With Support from the Carnegie Corporation of New York (CCNY) which funded the Female Scholarship Initiative (FSI) programme a total of 691 girls from poor and disadvantaged backgrounds benefited and pursued various degree courses. The University also established a Female Scholarship Fund (FSF) for Resource Mobilization under which the CCNY matches local resources mobilised. Further to that, a new scholarship initiative to support 1,000 Girls in Uganda and the African region supported by the MasterCard Foundation is being implemented. Two cohorts with a total of 95 bright students (girls and boys) from poor and disadvantaged backgrounds are pursuing academic programmes under the initiative.

3.8.4 Challenges:

(i) The University has not fully operationalised the quality assurance framework for the administrative structures.

(ii) No harmonised effort to centralise management of collaborative MoUs both national and international.

(iii) Unintegrated gender policy at the various functional areas of the University right from the unit level.
4.0. CONCLUSION AND RECOMMENDATIONS

Several observations have been made in the previous sections that highlight the significant progress towards strategic plan goals. The following conclusions and recommendations attempt to provide future areas of consideration. While some propose a change in the strategy, several underscore the need to reassess the implementation process if the targets set by the plan are to be realised. The following recommendations attempt to capture the characteristics that are not meant to be independent of the University Strategic Plan, but are meant to complement smooth operations of the University strategy.

4.1. Teaching & Learning

1) Concretise and finalise the on-going review of academic programs at both graduate and undergraduate levels which currently stand at 101 graduate programs and 94 undergraduate programs many of which especially at graduate level are undersubscribed. The review should generate and streamline core, support and cross cutting course units in the respective colleges. While this will harmonise the disciplinary focus of the academic programmes offered, it will further provide the generalist 21st century skills that the strategic plan envisioned.

2) Institutionalise enrolment planning through a deliberate effort to channel enrolment to the required student mix as well as matching the existing capacities/resource inputs (including staff based on NCHE-SSR, FTSE and Workload) in the various colleges/schools/Departments to the student numbers. The admission process should be informed by the requisite facilities. Continued improvement on the quality of instructional materials required for the delivery of all academic programmes is crucial.

3) Refocus and emphasise graduate training with enhanced supervision and progress monitoring for better quality and graduation rates. Lobby Government to seriously consider re-instating sponsorship of graduate students in selected programmes crucial to national development both at Masters and Ph.D. levels.

4) Intensify the drive to attract international students at both undergraduate and graduate levels.

5) Reassess the format and target of distance and lifelong education given the dwindled catchment area originally targeted.

6) Operationalise the ODeL policy which was passed by Senate and Council in 2015. Open, Distance and e-Learning policy is to guide the offering of programs in e-Learning mode with specific reference to how the course content and coordination elements can be distributed between the School of Distance, Lifelong Learning and E-learning and the Departments where content is taught.

7) Evolve a systematic and coordinated effort towards integrating e-learning in its teaching and learning functions. Both technical capacity and the human resource knowledge gaps have to be addressed in order to fully exploit the access potential of e-learning.

8) In addition to e-courses, some Colleges/Schools have established e-learning infrastructure (including video conferencing auditoriums, multimedia studios and relatively good internet connectivity both wired and wireless) to support education in the various study disciplines. The University needs to consolidate these fragmented efforts in the various Colleges and Schools.
9) Come up with an integrated and streamlined policy and operational guidelines for the off-campus sites and the extramural study centres under the School of distance and lifelong learning. The viability, resourcing and modification of the two established branch campuses need to be seriously evaluated and addressed.

10) Institute regular/or periodic conducting of internal and external (tracer) efficiency studies as a mechanism for self-assessment of the internal functioning and to secure the desired regular rating of our products-the graduates.

11) Creation of strategic linkages and partnerships with professional bodies and organisations needs to be intensified and institutionalised if the University to benefit more from practicing professionals not only in teaching but also in research and co-supervision of students.

12) Review the need for adoption of learner centred instruction and evolve an institutional initiative for re-training staff in learner-centred pedagogies and andragogy and where possible in wider application of the Problem Based Learning which is still limited to CHS

4.2. Research & Innovations

1) Need to revive the Intellectual Property Rights (IPR) Unit under the DR&GT. This will assure regular documentation of innovations (both innovative ideas and technologies) developed by staff and students and commercial exploitation of Intellectual Property Rights which has not yet taken root.

2) Research output and publications one of the annual performance indicators for staff recognition and promotion criteria.

3) Institute the laboratory improvement committee to be charged with oversight and the capacity to maintain and sustain the laboratory infrastructure improvements beyond the donor support.

4) Institutionalize research teams and support the evolving specialised/thematic research teams.

5) Institute a committee to steer R&I dissemination/or the University-wide dissemination strategy scheduled with clear timelines on the University calendar.

6) Establish a functional University Press to handle not only in-house publications but also generate income to the University.

7) Uphold the Strategic Plan annual institutional commitment to research of at least 3 per cent (3%) of its internally generated funds to go to research and innovations. This will somehow attempt to address the issue of research prioritization and sustainability.

8) There is need to publicise the Research and Innovations Policy amongst staff and students.

9) Enforcement of the policy for continuous publishing and updates on the University’s website.

4.3. Knowledge Transfer Partnerships & Networking

1) Institute and operationalise a policy on incubation of business ideas and technologies.

2) Formalise the partnerships for public private participation in University Programmes (i.e. in students’ placements for field attachments, internships and curricula reviews. - Evolve memoranda of understanding with governmental, private sector and non-governmental agencies to accommodate University programmes.
3) Lobby government on the formalization of the UMA internship placements for University graduates

4) Evolve and institutionalise the University framework for utilization of the resource-pool of expertise (e.g. in form of consultancies and commissioned research undertakings.

5) Institute in the University Calendar, periodic organisation of academic/applied open/research exhibitions both at college and Institutional levels.

6) Revive the institutional/College/School/Departmental annual recognitions and awards.

7) Formalization with different associations on co-supervision of students as opposed to formal MoUs. Key partnerships for this strategy will include formal MoUs with associations such as the UMA, FUE and PSFU.

4.4. **Organization & Management**

1) Expedite the review of University policies as recommended by URAFR and expected to be executed by the CMC

2) Carry forward the implementation of the College system with the desired degree of autonomy (specifically regarding administrative, academic and financial management).

3) Operationalise the Communication Policy and Strategy (including setting up of a one-stop information centre)

4) As part of the on-going restructuring of the micro-structures of administrative units, undertake a thorough job analysis and evaluation.

5) Evolve and operationalise an organised system of periodically undertaking best practices benchmarking visits in the various functional areas of the University (i.e. do institutional strategic intelligence or continuous scanning of the higher education provision environment).

6) There is need to institutionalize and allocate Resources for regular benchmarking.

7) Regular update and review of the FTSE and workloads is essential given the changing staff and student numbers as well as the innovations in modes of teaching.

8) The need to establish structures that will regularly evaluate the financial performance of the University against the Plan goals, objectives and activities. Furthermore, the structure should have the capacity to hold champions accountable for the performance of the stated annual activities. Close monitoring will ensure that actual resource performance follows strategic allocation as outlined in the Plan reviews.

9) The University needs to come up with a comprehensive benchmarking strategy and processes to be used as a proxy for future performance and evaluations.

10) There is need to revive pro-active engagement mechanism with the media for ease of sharing information with key stakeholders (through radio, television, press releases & monthly press briefing).

4.5. **Human Resources Management**

1) Work towards improved terms of service.

2) Institute a systematic mechanism for induction of and regular appraisal of staff

3) Undertake regular HR Audits for both non-teaching and teaching staff in order to minimise on the heavily loaded work areas and disciplines.

4) Institute measures to enhance academic mentorship
5) Institute and operationalise a system of succession planning
6) Institute unit/college based committees for periodic undertaking of University-wide training needs assessment and plan for continuous professional development.
7) Fully operationalise the utilisation of graduate fellow's policy so as to promote utilisation of graduate fellows, particularly from the resource pool of PhD students
8) Institutionalization of the use of practicing professionals for academic and other organised events such as mentorship & role modelling, soft skills and other cross cutting areas of focus.
9) Computerise human resource records' keeping and management.
10) harmonising and rationalize workloads vs remuneration. Workloads commensurate with the remuneration;
11) Institutionalize and operationalize the annual performance recognitions scheme under the Office of the Vice Chancellor

4.6. Library Services

1) Adequately provide for maintenance of Library facilities given the increased and growing demand for better library services.

4.7. ICT Infrastructure & Utilization

1) Explore partnerships to increase the ICT infrastructure and bandwidth while at the same time upgrading the wireless network to meet the increasing and growing demand.
2) Re-examine the issue of compatibility of the existing Management Information Systems (MIS) and their alignment to CEMAS
3) Scale up the ICT Infrastructure and make provisions for regular maintenance and upgrades.
4) Address the issue of sustainability through the ICT user contribution/or cost-recovery for better user experience.
5) Mobilise resources to support ICT resources.
6) University devise mechanisms of enabling students and staff to acquire quality but reasonable priced ICT equipment from Computer manufacturers.
7) Establish a maintenance and disposal system for the ICT equipment to serve the entire university

4.8. Physical Infrastructure

1) Institute a systematic inventory and regularly review of the infrastructure
2) Develop and institute a maintenance plan for the University
3) Re-develop or remodel the former Dining halls in the Halls of residence into Teaching and learning spaces fitted with learner-centred equipment such as visual Aids.
4) Through a phased approach embark on the operationalisation of the University Master Physical Development Plan.
5) Have a centralized or shared management of laboratories.
6) Ring fence the development fee every financial year for the maintenance of the physical infrastructure. The starting point will be a dedicated percentage of the development fee ring fenced for capital development.
7) Need for an aggressive drive to explore alternative capital funding sources.
8) Need to undertake a comprehensive infrastructure status audit on the basis of which to develop a capital and facilities maintenance Plan.
9) Need to prioritise securing the University land that has potential to facilitate the venturing into Public-Private Partnership projects and ultimately financial resource diversification.
4.9. University Financial Resources

1) The need for sustained increase in tuition fees until the optimal level when the tuition fees would be equivalent to the unit cost so as to provide quality teaching
2) Lobby government to support the graduate training in sectors crucial to national development.
3) There is need to appeal for review of the current form of Government support to public Universities, in lieu of the inability to meet the growing wage burden currently at 70%.
4) The University needs to aggressively work towards attracting postgraduate students (both local and international).
5) Increased financial autonomy to the college leadership to counteract the growing pressure to operationalize the college system
6) Embrace utilization of ICT based financial management systems, to minimise or eliminate losses and fragmentation currently exploited by students in the payment of fees.
7) Review and operationalize the Resource Mobilization Policy, the Alumni and Fundraising Strategies
   i. Aggressively work on the current limited awareness and mind-set change to resource mobilization across the University;
   ii. Improve on the limited level of grant-writing skills or capacity to develop quality cases for support/grant writing, across the various units in the University;
   iii. Integrate engagement with Alumni and other stakeholders across the different units within the university but most especially discipline and hall of residence based initiatives.
8) Address the inadequate capacity to do the necessary business intelligence for sustainable and productive investments;
9) Uphold the investment and resource mobilisation initiatives under the Makerere University Holding Company and the Makerere University Endowment Fund;
10) Address the high Staff attrition of capacity built staff in resource mobilization and Address the underlying prospect research inadequacies, the inability to create and maintain up-to-date databases for the past, current development partners and prospective partners.

4.10. Students’ & Staff Welfare Support Services

1) Step up the facilitation to the international office
2) Streamline the organisation of Student exhibitions/open days given the fact that there is no institutional structure to ensure continuity and sustenance.
3) Shorten the time lag between the different University processes (such as registration, identity card issuance and examination permit acquisition).
4) Institute a standing committee to review the standards and accreditation of private students’ accommodation facilities under private sector.
5) Improve on the communication about the key issues affecting the student life at campus
6) Improve on the communication about the key issues affecting staff (all categories)
7) Come up with and operationalize a Policy on medical insurance for students and staff

4.11. Cross Cutting

1) Besides national accreditation of academic programmes by the NCHE, there is need to pursue ISO9000 certification for the Institution to be an internationally recognised higher education provider.
2) Fully operationalise the Quality Assurance Framework (including students’ evaluation of staff and
teaching/learning environment) right from the Departmental level.

3) Given that only 50% of our students graduate on time, there is need to regularly monitor and establish the internal efficiency and students’ pass rates (i.e. cohort analysis).

4) Put in place and operationalise policies relating to offer of joint degrees and pre-entry examination.

5) No harmonised effort to centralise management of collaborative MoUs both national and international.

6) Fully operationalise the Gender policy.