UNIVERSITY OF LAGOS

RESEARCH & INNOVATION POLICY

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Research & Innovation Office
University of Lagos
Akoka, Yaba, Lagos
Nigeria

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ISSN:

Published by

University of Lagos Press and Bookshop Ltd
Works and Physical Planning Complex
P.O. Box 132
University of Lagos
Akoka, Yaba
Lagos, Nigeria
E-mail: press@unilag.edu.ng

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Vision and Mission Statement

Vision

To be a Top Class institution for the pursuit of excellence in knowledge, character and service to humanity

Mission

To provide a conducive environment for teaching, learning, research and development, where staff and students will interact and compete effectively with their counterparts globally

FOREWORD

Research, innovation and scholarship are central to our mission as a university. They are the bedrock of our dynamic knowledge creation that forms the critical elements of all disciplines. This makes it imperative to promote and undertake impactful and high quality research, in order to contribute meaningfully to our socio-cultural well-being, health, legal, environmental, technological, economical and the general development and advancement of society. Research integrity is the crucible upon which research is conducted and thus forms the basis of scholarship in the University of Lagos. Consequently, the conduct of research and our research governance should conform to global best practices.

The Research and Innovation Policy of the University of Lagos provides guidance for the conduct of quality and innovative research in all fields of human endeavour. Without a doubt, this policy outlines the responsibilities of the University, researchers, and sponsors. Equally, it provides compliance guidance on conventional procedures for conducting research. Other areas the policy is directed to include: conflict-of-interest, human, environmental and animal research ethics, biological, chemical, environmental and nuclear safety, Intellectual Property Management, among others. As we promote and support multidisciplinary research collaborations across faculties within the university and with other academic institutions and organizations within and outside Nigeria, we hope to expand and deepen research innovations, for national growth and development, through knowledge-based paradigms such as: (a) knowledge production (research and development of new knowledge), (b) knowledge transmission (education, training and development of people) and (c) knowledge transfer (the diffusion of knowledge and innovation). Research Institutes, Centres and Research Groups are veritable platforms that drive research and innovation. In the same way, an established Technology Incubation Centre will serve to promote commercialization of research outcomes and entrepreneurship. Going forward, the alignment of research, innovation and development with the industry and our academic programmes will, in no small way, speed up our ecosystem to drive economic growth and build appropriate employment capacity for our students, both nationally and internationally. The prime purpose of establishing the Research and Innovation Office is to coordinate competitive research along tested value propositions, while providing the enabling environment for the upgrade of research and innovation.

The University of Lagos, no doubt, has a competitive research and innovation space that does not only have the capacity to improve Nigeria's Global Innovation Index ranking, but can also stamp our status as a research-based university. This policy will guide the

adaptation and utilization of available knowledge stock in order to solve challenges, through technology transfer without re-inventing the wheel, while being engaged in innovation. In all, what we so cherish and do emphasize is essentially that research and scholarship must be conducted with utmost honesty, integrity, maximum scientific and ethical standards, originality, and all other qualities that can dignify research. We place value in these, knowing that they profoundly accentuate knowledge that promotes individual and national development.

I therefore recommend this Research and Innovation Policy to ALL, for the promotion of impactful research, development and innovation in the University.

Prof. R. A. BELLO ***FAEng***
Vice Chancellor, May 2017

PART A: INTRODUCTION TO THE RESEARCH AND INNOVATION POLICY

1.1 Background

Teaching, research and service are core mandates of the University of Lagos, as provided in the 1962 Act of Parliament establishing the University. While these core areas have been operational, the expected synergy in their alignment and concomitant output to society are yet to attain the expected momentum and impact. The challenges in least and developing countries, especially in Africa, make it imperative for universities as citadel of learning to effectively and efficiently build and expand her ecosystem to drive national development and growth.

The conduct of "research for research sake" is becoming unattractive, with challenges such as poverty, lack of access to basic amenities, preventable disease, weak health systems, failing infrastructures, weak economy, failing social, educational, cultural, environmental, legal, and housing systems that need urgent solutions. While other countries of the world have efficient Agricultural systems, for example, Nigeria in particular and countries of Africa in general, continue to practice traditional and obsolete farming systems, with a substantial part of farm produce lost before being transported to the market. Post-harvest loss affects everyone, particularly having an overall impact on national economic growth and the entire population. Consequently, the foundation for food security and economic prosperity is threatened. This has to change, and this will change, especially with the strides that innovative research is contributing to the world's development index.

The University as a "microcosm of knowledge" is best placed to catalyze and promote sustainable and inclusive development, through impactful research that utilizes science, technology and innovation (STI). Consequently, access to new and appropriate technologies would promote steady improvements in living conditions that is lifesaving for the most vulnerable populations, as well as drive productivity that guarantees rising income.

The challenges with the outcomes of the Millennium Development Goals (MDGs), which has been replaced with the Sustainable Development Goals (SDGs), underscore the urgent need for a paradigm-shift among developing countries. The resources needed to implement the SDGs are enormous and require an active multi-stakeholders' participation in attaining these goals. In developed and in some developing countries, innovation-driven growth has been widely practiced through the creation and development of STI capacity. A more encompassing developmental agenda that

integrates STI to public policy goals, paying special attention to the connection between, STI, culture, education, innovation, and development is required.

As a public university, a more dynamic approach that fosters public-private partnerships, promotes innovation, catalyzes the use of technology and non-technological approaches, interfaces with and mobilizes state national and international technology/ research centres and networks, and encourages joint research and development (R&D) activities, forms the basis for the guidance provided in this policy.

Research and Innovation are powerful drivers for raising prosperity and improving national competitiveness. However, since technological knowledge and skills have been cumulative over the years, first mover advantages in favour of industrialized countries have created a lopsided global landscape. Connecting local technological needs to international technological opportunities could be a challenge. The unmet needs in Nigeria in particular and Africa in general are critical points requiring solutions.

The possible starting point will be to expand the landscape of research and innovation. In this regard, there is need to consolidate the University of Lagos research ecosystem, through the creation of seamless interaction of sound research, innovation, educational infrastructures across disciplines in the faculties, including the Distance Learning Institute (DLI), linkages between public and private innovation actors, enterprises committed to research and development, as well as a win-win Intellectual Property Rights (IPRs) framework. The increase in the creation and transfer of knowledge from publicly funded research to enterprises has been organized to reinforce the impact of research on innovation capacity. Establishing a Research, Innovation and Implementation Foundation and a registered Public Limited Company will enable effective and efficient research, innovation and implementation. It will also help to advance the activities of research and innovation to the most appropriate value point taking into account our unique socio-economic, cultural, environmental, legal and general developmental considerations.

Research is conducted across disciplines and faculties among faculty members, students at the undergraduate and post-graduate levels and collaborators from the industry and other organizations and agencies. In this era of networking, collaborative research and innovation will continue to grow, with the emergence of issues that were not anticipated or hitherto ignored. The research process is dynamic and could be complicated, if there is no policy documents that provides guidance. This policy therefore provides the governance framework for the conduct and management of research and innovation in the University of Lagos (henceforth referred to as "the University").

The responsibilities of researchers, sponsors and research managers in "**the University**" are outlined in this policy. In the annexes are implementation details, **"The University"** recognizes and ensures that research is conducted under acceptable best practices that are safe and protect human participants, animals, the environment, intellectual property rights (IPRs) administration, conflict-of-interest, responsible conduct of research, management of resources for research, including equipment, data and software, post-doctoral and early career mentorship plan that guarantees sustainable development of competent next-generation research leaders.

The financial management system, which provide guidance for the transparent management of research funds and grant administration, are expanded in the *Operational Manual for Research Grant Administration and Management (OMRGAM).* Overall, a seamless, transparent and accountable disbursement and management of research and implementation funds would be consolidated.

This policy complies with the 1962 ACT of Parliament establishing the University of Lagos, her vision and mission and shall become binding to all upon approval by the Senate of the University.

1.2 Objectives

The objectives of the Research and Innovation Policy are to:

i. Provide guidance to faculty members, students, industry and other collaborators on the research and innovation governance of the university.
ii. Highlight the support structures available for research, innovation and research coordination.
iii. Drive the emergence of innovation hubs for the creation and diffusion of technologies, talent management and the promotion of innovation-driven entrepreneurship.
iv. Guide faculty members, students and sponsors on compliance governance for research and innovation.
v. Provide guidance on university-industry linkages in fostering research and development, technology and business development solutions to micro, small, medium and large industries.
vi. Highlight the framework and opportunities for private-public partnership in research, innovation, technology transfer and commercialization.

1.3 Purpose and Scope

1.3.1 Purpose

To advance the frontiers of both fundamental and applied knowledge in service to humanity, and specifically to: provide guidance for the conduct of research and

innovation by faculty members and students within the University and in collaboration with industries, national and foreign institutions and organizations. Furthermore, the policy provides the general framework for the development, implementation, commercialization of research and innovation outcomes and evaluation of research and its management in the University of Lagos. It also highlights the framework for incremental, inclusive and incremental/radical innovation that will encourage inclusive growth and support research that addresses major social challenges locally and can compete with leading world innovators.

1.3.2. Scope

This Research and Innovation policy applies to **ALL RESEARCH and INNOVATION** conducted in the University by staff and students (Undergraduate and Postgraduate). It also includes those conducted within the country and with international research collaborators from industries, academic institutions and other organizations or Agencies. Equally, the policy aligns with the policy on Science, Technology and Innovation of the Federal Ministry of Science and Technology and the National Industrial Revolution Plan.

PART B: RESEARCH AND INNOVATION MANAGEMENT STRUCTURE

2.0 Coordination of Research and Innovation

The coordination of research and innovation shall be done at different levels and committees:

2.1 University-wide:

a. **Central Research Committee (CRC):** This is the highest research management body of the University. It is chaired by the Deputy Vice-Chancellor (Academics & Research) [DVC (A&R)]. The CRC oversees the administration of internally generated revenue-funded research grants for faculty and the organization of the Annual Research Conference and Fair. Membership includes: Research and Innovation, Director of Academic Planning, Director, Director of Quality Assurance and representatives from all Faculties and the University Librarian.

b. **University Research Ethics Committee:** The University Research Ethics Committee shall function as an independent Committee, in accordance with the Research Ethics Policy of the University. The Committee shall be constituted by the DVC (A&R). Membership of the committee and its operationalization shall follow guidelines stipulated in the University of Lagos Research Ethics Policy and Standard Operating Procedures' template that guide the structure and membership of Research Ethics Committee. This Committee shall:

   i. Review ethical considerations in humans, environmental, plants, animal, chemical and nuclear research.
   ii. Review major multi-faculty/multi-disciplinary research proposals.
   iii. Ratify research proposals approved by the College/ Faculty Research Ethics Committees

The Research and Innovation Office shall serve as the Secretariat of the University Research Ethics Committee (UREC).

c. **Research and Innovation Office**: A Professor shall serve as Director of the Research and Innovation Office, in line with the approved establishment; and reports to the Deputy Vice-Chancellor (A&R). The Research and Innovation Office is **"The University's Central Research Office** and plays the following roles that include:

   i. Development of research policies, priorities, strategic plans, best practices guidelines, monitoring and evaluation of research outcomes for approval by management;

ii. Pre-award and post-award activities, including dissemination of Research Funding Applications or Opportunities and support for proposal development.
iii. Support for the University's Research, Innovation and Implementation Foundation (ULRIIF).
iv. Support to members of various faculties and students in securing research opportunities (fellowships, funds, equipment donations) from external organizations nationally and internationally;
v. Management of research grants that are awarded in line with best practices through the Grants' Management Unit (GMU);
vi. Organization of seminars and workshops for researchers and students on proposal development and submission; proposal review mechanisms, closeout and dissemination of end of study findings; compliance guidance, Intellectual Property Rights administration etc.
vii. Collaboration with the School of Postgraduate Studies in order to provide linkages, sharing and development of funding opportunities for submission.
viii. Monitoring and reporting externally funded research grants and communication with sponsors as appropriate;
ix. Development of strategies for strengthening research and innovation among faculty members, students and external collaborators;
x. Promotion of Research and Development linkages with the industry, research and academic universities nationally and internationally.
xi. Dissemination of professional development opportunities for staff and students to enhance their research and innovation performance;
xii. Promotion and provision of Intellectual Property Administration by which novel research findings are protected through the Technology Transfer Unit (TTU) in collaboration with the Legal Unit to manage the IP assets of the University;
xiii. Coordination of Research Groups/Clusters, Centres and Institutes;
xiv. Compilation and synthesis of annual research reports and management of the research sub-link on the University's website;
xv. Ensure compliance to research governance guidance such as Human and Animal Protection, Intellectual Property Policy, Biosafety guidelines as contained in the Research and Innovation Policy.
xvi. Development of a University-wide database on research and innovation projects conducted by all members of staff and students.
xvii. Establishment and updating of database on researchers' areas of interest and specialties and equipment available for research.

xviii. Support the UNILAG RESEARCH AND INNOVATION PRODUCT LIMITED (URIPL) – the University's Research and Innovation firm to birth spin-offs for researchers to commercialize research products.

2.2 Colleges/Faculties/Department Research Committee

i. **Colleges/Faculties Research Committee.** This committee shall comply with and oversee the implementation of this policy at the College/Faculty. The Provost Dean shall establish the College/Faculty Research Committee for the College/Faculty to oversee research matters. Review of study protocol for faculty and students' research projects shall be done at this level.

Database on research projects shall be managed from departments when results for academic programmes are taken at the undergraduate and postgraduate levels for uploading to the University's research database that is domiciled in the Library. Proposals to be approved by the University's CRC shall first be reviewed with recommendations from the College/Faculty Research Committee.

The College/Faculty shall have Research Administrators and personnel trained on Research Administration to ensure that research management aligns with the policy of the University. The Faculty Research Chairpersons Committee (FRCC) shall be established to support the activities of the Research and Innovation Office. The FRCC shall comprise of Chairpersons of the Faculty Research Committee, including the Dean or Representative of the School of Postgraduate Studies, Representative from the Distance Learning Institute and the University Librarian.

ii. **Departmental Research Committee.** This committee shall be established by the Heads of Department to review faculty and students' research proposals, before submission to the College/Faculty Research Committee. Database on research projects/proposal shall be generated and shared with the Faculty. Departments shall have Research Administrators and Administrators trained on Research Administration to ensure that research management aligns with the policy of the University.

2.2 Research and Innovation Office

The Research and Innovation Office shall promote and coordinate research in all its ramifications as well as the application of the output of research, whether as products or service development. Research and development shall be used to elevate research output for national development and the benefit of mankind. The incubation of valuable research outcomes after patent application/patenting shall be incubated for entrepreneurs to commercialize.

The Research and Innovation Office shall promote strong university-industry linkages that will strengthen collaboration with the industry, including major industries and the Small and Medium Entrepreneurs (SMEs), by providing a Research and Development (R&D) and technology development platform that will add value to locally produced materials and products for scaling up production and global competitiveness.

2.2.1 Research Grant Administration and Management

The management of research is a critical aspect of good research management practices that ensures that an efficient and effective pre-award and post-award process that governs the implementation of awarded grants. The guidance on the Management of Research grant is one of the annexures to this policy which provides a step-by-step process in the pre-award and post-award processes.

The research Grant Management Unit (GMU) of the Research and Innovation Office shall oversee all aspects of research grant management. GMU shall consist of Research Administrators, Financial Officers, Research Ethics Officers and other relevant personnel with training and experience in Research Administration.

Research Fellows and Adjuncts from faculty members shall support research proposal development and other pre-award process.

2.2.2 Pre-Award

Submission of multidisciplinary grant proposal shall be done centrally through the Research and Innovation Office that manages all research submission portals.

The pre-award activities shall entail the following:

1. Provision of support to proposal development by ensuring that proposals are aligned with specific requirements of the Funding Opportunity Announcements (FOAs) and compliance with proposal preparation guidelines of the funding agency.
2. Coordinate proposal development which may require the setting up of multidisciplinary team, external collaborative partners, drafting of letters of commitment for cost-sharing requirements, space requirements, award/sub-award budgets and commitment forms and other institutional support letters that may be needed.
3. Work with finance staff to prepare budget and ensure that the budget is a complete reflection of aspects of the scope of work described in the proposal as required by the FOA or grant call.
4. Promote linkages with Sponsors of Research including the industry and other agencies.

2.2.3 Post-Award

The post-award process shall be managed by the research Grant Management Unit (GMU) of the Research and Innovation Office and shall ensure that the awarded research is implemented in accordance with the terms and conditions of the funders, taking cognizance of the approved budget and financial reporting standards. GMU shall ensure seamless disbursement of funds and engage with the researchers and pre-award team to facilitate the implementation of the research.

Global best financial practices that ensure transparency, and accountability shall be employed in all grant administration processes. End of study closure shall be done alongside with the pre-award team and the GMU with a certified financial report from the University Bursar.

The guidance for the pre- and post- award processes are contained in the *Operational Manual for Research Grant Administration and Management.*

2.2.4 Facility and Administration (F&A) Rates

The F&A rates for all grants shall be between 10 – 25% for all grants. However, approved rates in sponsor's policy shall guide the F&A rates that will be computed in proposal submissions. The research Grant Management Unit (GMU) of the Research and Innovation Office shall support budget preparation, disbursement and reporting.

2.2.5 Effort, Time and Other Commitments

All researchers engaged in sponsored projects will adhere to the sponsoring agency's guiding principles and the University's policies on charging and reporting of effort on sponsored projects, as contained in the *Operational Manual for Research Grant Administration and Management (OMRGAM).*

In order to ensure excellence in research and innovation by promoting the successful management of effort, time and other commitments throughout the sponsored projects' life cycle, support for the faculty's research work is important. However, faculty should not commit 100% of their effort on sponsored projects to avoid duty tensions with other obligatory university responsibilities.

1.2.6. Research Portal for Grants

The Research and Innovation Office shall manage all institution-based Research Portals for Funding Agencies nationally and globally. Researchers and Students who wish to apply for grants that require access should contact the Research and Innovation Office.

2.2.6 Technology Transfer Unit

The Technology Transfer Unit (TTU) of the Research and Innovation Office shall guide the administration and management of Intellectual Property (IP) assets of the University and shall be responsible for the protection and commercial development of creations and inventions. The IP policy of the University shall apply in the intellectual property administration process.

The TTU shall:

i. Process and safeguard relevant IP agreements;
ii. Determine patentability, manage invention disclosures, undertake patent search, complete and file applications for patents;
iii. Obtain patent protection
iv. Evaluate the commercial potential of an invention;
v. Source and locate suitable commercial development partners;
vi. Negotiate and manage licenses.

To facilitate patent filing, a line of charge shall be included in all Central Research Committee (CRC) budgets that are submitted for funding. Unutilized funds related to patent shall be returned.

The Research, Development and Intellectual Property Committee (RD&IPC) shall guide IP registration and commercialization process as well as serve as an advisory committee on university industry research and development activities.

3.0. PART C: RESOURCES TO SUPPORT RESEARCH AND INNOVATION

Resources to support research shall be provided through innovative funding mechanisms, policies, and appropriate infrastructure.

3.1 Research Funding

Funding for research shall be achieved at three levels:

i. **Internally Generated Revenue:** The University shall continue to fund faculty research from internally generated revenue and grants for the mini and full proposal award administered through the Central Research Committee.
ii. **External Funding of Research:** Faculty members and research students shall seek for research funding nationally and internationally. Industry-funded research shall be explored to expand research infrastructure and capabilities to address industry and society's needs.
iii. **Facility and Administration Fees and Royalties from Commercialized Patents:** Research management fees and royalties from commercialized patents shall be used to strengthen research and innovation; and upgrade research and innovation infrastructure of the University.

3.2 Library

The library shall stock resources in form of books, journals and relevant publications to support research and innovation. The capacity of the library for curating, data management and preservation, and institutional repository for research projects including thesis and other outcome of research shall be continuously updated and made visible. Remote access to library resources real-time shall be strengthened.

3.3 Central Research Laboratory, Workstations and other specialized Laboratories

Research laboratories and workstations for a broad range of research in energy, oil and gas, pharmaceutical, nanotechnology and material science, cosmetics, agricultural, manufacturing, humanity, business, social sciences, environmental, chemical etc shall provide platform to conduct innovative research.

The Central Research Laboratory, Workstations and other specialized laboratories shall comply with best practices in line with quality standards that align with the appropriate requirement of the International Standard Organization (ISO). This requirement will not only ensure that the results emanating from the laboratories and workstations are valid, but will also provide students the platform to familiarize themselves with global standards in laboratories.

The establishment of shared platforms with the industry to enhance university-industry linkages shall be promoted and managed under a mutually beneficial agreement.

3.4 Bursary Unit

The Bursary Unit shall provide financial administration and management support to research and innovation activities by ensuring proper management and seamless disbursement of research funds. Financial reports of awarded grants shall be provided for funded research grants.

3.6 Registry/Administration

The Registry shall support research and innovation activities by providing human resources and guidance for the hiring of temporary staff to implement research and innovation activities.

3.7 Legal Unit

The Legal Unit of the University shall provide legal support to facilitate research and innovation matters.

3.8 Centre for Information Technology and Systems (CITS)

CITS shall support the research and innovation activities using appropriate technologies for data management, communication and visibility of research and innovation outputs.

1.9 Quality Assurance Unit

The Quality Assurance Unit shall, in collaboration with the Research and Innovation Centre, promote and strengthen quality assurance across the University's platforms that support research and innovation.

1.10 Other Research Support Platforms

The following units shall provide support for seamless and safe conduct of research: Medical Centre, Security Unit, and Works and Physical Planning department.

PART D: INNOVATION HUBS

Innovation is crucial for achieving long-term economic growth. It fosters competitiveness, creates jobs, helps to address environmental and health challenges, reduces inequality and contributes to sustained and inclusive growth. As the paradigm of innovation continues to change, the University shall position itself to promote transformative and high-impact innovation, to meet current day challenges. The following shall be speedily pursued:

i. Physical, virtual and computational resources shall be deployed to set up innovation hubs to leapfrog creativity, harness talents for startups in the Information Communication and Technology (ICT) space. Open labs shall be established to accelerate innovation for learning and entrepreneurship, thereby using the power of human organization to deliver useful innovation to the world.
ii. Partnerships with private and public sector groups and institutions/organizations nationally and internationally, such as Risk Capitalists, Venture Capital Investors, Angel Investors, Foundations etc to accelerate new ideas through start-ups for development to deliver tangible real-world benefits.
iii. Advance innovation research and policy through systematic analysis of the factors shaping innovative outcomes, through research and policy advocacy with diverse stakeholders and thought leaders.
iv. Educate the next generation of innovators through formal curriculum and classes that integrate expertise in innovation with existing disciplines-based training. Therefore, certificate, undergraduate, postgraduate, and postdoctoral innovation programmes, in addition to Faculty-based innovation research support shall be established.
v. Talent hunt shall be organized periodically to stimulate ideas and solutions for high impact.

Mentorship, Intellectual Property Right's administration, legal and business development support shall be provided to facilitate the translation of ideas to solutions and transactional entities.

5.0 PART: RESEARCH, DEVELOPMENT AND INNOVATION IMPLEMENTATION AND COMMERCIALIZATION.

The platforms for research, development implementation and commercialization of impactful and less cumbersome production outcome of research will ensure that research governance in **The University** is effectively and efficiently managed and products made available to meet national and international needs. To this end, the following platforms shall be established:

5.1. UNILAG Research, Innovation, Implementation Foundation (ULRIIF).

This Foundation shall handle the governance of all SPONSORED Research in The University and should be financially viable to pay her staff and contribute to the development and strengthening of research infrastructure/facilities and capacity such as support for electricity, high-speed internet, equipment, reagents and training of faculty and other activities that will be described in the constitution of URIF at incorporation.

The following shall apply to ULRIIF:

i. Incorporated as a not-for-profit Organization with a Board of Trustee.
ii. The Vice-Chancellor shall be the Chairman and shall constitute members of the Board that will include at least 6 – 7 external members.
iii. Operate under strict financial and ethical governance.
iv. Receive, maintain and manage all funds from sponsored research so that research funds can be speedily disbursed and managed.
v. Attract Individuals, Angel Investors, Venture Capitalists and Foundations to support research and innovation.
vi. The Bursar shall provide all financial governance.
vii. Pre-award and post-award research activities shall be implemented.
viii. Compete for implementation grants as a not-for-profit organization.
ix. Receive and hold funds from donors to support SMEs and startups to grow.
x. Support spin-offs and start-ups from output of research and innovation.
xi. Operate in accordance with international best practices.

5.2 Research Park/Technology Incubation Centre

The translation of research to useful products for national development is an important component of research output in the University. The University shall establish the UNILAG RESEARCH PARK (UNILAGRESPARK)/ UNILAG TECHNOLOGY INCUBATION CENTRE (UNILAGTIC) through which research outputs, innovations and special inventions from research ideas shall be given visibility and nurtured through startup ventures and other business spin-offs. This will be done in collaboration with the UNILAG ENTRENEURSHIP CENTRE in relevant areas. The UNILAGRESPARK shall

be developed to operate in line with best practices to create the appropriate environment where research and innovation intersects nicely with business.

Collaboration with industry partners and other stakeholders shall drive this process, so as to galvanize entrepreneurship that will stimulate job creation through the production of **Proudly Nigerian Products and Services**. The goal is to meet the food, health, engineering, transport, socio-economic and cultural needs of Nigerians by Nigerians. The huge resources of Nigeria shall be explored to provide cost-effective solutions and save the much-needed foreign exchange for the country.

The Research, Development and Intellectual Property Committee (RD&IPC) shall guide the IP to commercialization process as well as serve as an advisory committee on university industry research and development activities.

5.3 University of Lagos Research and Innovation Product Limited (ULRIPL)

This Company shall produce and commercialize output of research that can be undertaken to ensure that products are sold directly to distributors and end-users.

The following shall apply to ULRIPL:

i. Incorporated as limited liability company
ii. Memo and articles of incorporation to spell out the objects
iii. Board to be constituted by the Vice Chancellor
iv. Appropriate faculty members shall provide technical support from Business Administration, Law, Sociology and others as appropriate.

5.4 Research Clusters/Groups, Centres and Institutes

Research Clusters/Groups, Centres and Institutes shall be established to provide platforms to undertake interdisciplinary and multidisciplinary research to profoundly address research and innovation questions in a broader way. These platforms shall be managed using the *Guideline for the establishment of Research Groups/ Clusters, Centres and Institutes*.

Attributes of Research Clusters/Groups, Research Centres and Institutes

(i) Research Clusters/Groups: Research Groups shall be established and consist of researchers undertaking interdisciplinary and multidisciplinary research as an emerging group with a defined research scope. The Research Cluster/Group shall consist of 5 – 10 research members, with a Principal Investigator or Team Lead and a Deputy Principal Investigator.

The Research Clusters/Groups are important platforms that will collaborate with other research groups to provide a multidisciplinary outlook in addressing research queries and also form the primordial unit for the establishment of Research Centres as they grow over time. The Research Cluster/groups shall: (a) develop research proposal within their scope (b) provide specialized services to the community based on their skills and special capabilities (c) contribute to the development of policies or policy review related to their area of competence (d) collaborate with stakeholders/institutes/organizations to advance their core area of interest. The Research and Innovation Office shall midwife the formation of Research Clusters and guide members of the Research Clusters/Groups.

(ii) ***Research Institutes and Centres:*** Research Institutes and Centres shall be established to address competitive and impactful research. Research Centres shall position, promote and project the University's areas of research excellence and develop and strengthen the University's research reputation.

The research centres shall also serve as a platform for interfacing with other research institutions, industries, public or private organizations; and a medium for facilitating interdisciplinary and multidisciplinary collaborations. Similarly, the research centres, which are made up of several Research Clusters/Groups, shall be able to make substantial impact to solving local community, state, national, continental and global challenges in diverse areas in unique ways and approaches.

Research Institutes and Centres shall:

i. Absolutely align with the strategic interests of the University
ii. Demonstrate convergence with the University's Research Strategy
iii. Strategically align with the priorities of research funders and compete and bid for research or implementation funding.
iv. Compete for research funding and implementation grants.
v. Be of high quality with demonstrable evidence of international best practices.
vi. Translate knowledge to solutions for real world problem.
vii. Organize colloquia, workshops and capacity building and research/ programmes, implementation of projects, in collaboration with statutory bodies of the University.
viii. Demonstrate the highest level of financial management and capacity for research.
ix. Provide quarterly and annual reports as and when due on the activities of the Institutes or Centres.
x. Function in accordance with the laws of the University and the governance framework for the operationalization of Institutes and Centres.

Senate shall approve Research Institutes and Centres upon recommendation by the Academic Programme Committee. The title "centre" or "institute" shall only be used

after approval or when so designated, after a selection process by External Agencies. Other research groups not approved shall use other general identifiers such as "project" or "group". The *Guideline for the establishment of Research Groups/Clusters, Centres and Institutes* shall be available to guide researchers.

1.0. PART F: RESEARCH COMPLIANCE POLICIES AND GUIDELINES

Best practices shall guide the conduct of research and innovation. This is to ensure that research is conducted in a responsible, ethical, safe and balance manner. Fraud and falsification of research results and other forms of scientific misconduct shall be subjected to extant rules and regulations of the University of Lagos. The under-listed policy and guidelines shall apply as appropriate:

i. Research Ethics Policy
ii. Human participant protection in research.
iii. Use of Animal in Research and Teaching.
iv. Responsible conduct of research.
v. Conflict of interest policy.
vi. Health, security, safety and Environment.
vii. Bio-, Chemical-, nuclear safety manual.
viii. Intellectual Property Rights Policy (including operational agreement templates and forms).

All faculty members and students shall ensure that they receive appropriate training. Equally, they shall ensure that they are familiar with all relevant requirements concerned with their research.

6.1 Mandatory University-wide Capacity Building on Compliance Requirement for Research

To ensure a university-wide awareness on research compliance requirements by all faculty members and students, the University shall subscribe to the CITI training programme or other available on-line resources that will fast-track this process. This shall be the first step, until the University develops her customized on-line programme. Overtime, the conduct of real-time workshops shall complement capacity building programmes.

All staff and students shall take the appropriate on-line courses, as may be determined by their various faculties. Likewise, evidence of participation, as indicated by the submission of printed certificates, shall be monitored for staff during the ANNUAL PERFORMNCE EVALUATION and during registration of courses and examinations for students. All new staff and students shall take the appropriate courses, during post-employment documentation while new students shall show evidence of completion of the appropriate course during registration upon admission.

Mandatory re-certification shall be done, as may be appropriate for the modules.

6.2 Scoring of Patents for Promotion.

To encourage the filing of patents of research output, patented files by staff shall be scored in line with the procedures of the Appointments and Promotion Committee. This is underscored by the delay in the immediate publication of research, findings when patents are being processed for filing.

1.0. PART G: RESEARCH REMUNERAION AND EMPLOYMENT OF PERSONNEL FUNDED FROM RESEARCH GRANTS

7.1 Research Remuneration

The research-based salary structure for the University shall guide remuneration of external grants by faculty members.

7.2 Employment of Personnel Funded from Research Grants

7.2.1. Research Professor:

A full-time professor of the University, with teaching responsibilities, shall receive a short-term appointment as Research Professor, where sufficient time is needed to give full-time attention on the research. In this circumstance, the Grant Agency may fund the computed teaching effort of the Professor that would be used to hire an adjunct that will teach the courses. Nevertheless, Research Professors shall continue to engage the community in advancing research through seminars, workshops and conferences. Guidance on the appointment of Research Professor is contained in the Appointment and Promotion Handbook.

7.2.2. Postdoctoral Fellow:

Postdoctoral Fellows (PDFs) who, are at the time of appointment, have completed a doctoral degree, shall be employed to implement funded research within the time frame of the funding by Principal Investigators in a Research Group, Centre or Institute. The main objectives of the postdoctoral researchers are usually to broaden their research expertise, build expertise with established researchers and strengthen their publication record, thus enhancing their future employment opportunities.

The guidance and terms of conditions for employment of PDFs are as provided by the Human Resources Department of the University.

Post-Doctoral Mentorship Plan: A postdoctoral mentorship plan shall be developed for the University to create a developmental pathway for next-generation researchers.

7.2.3. Temporary Research Employees:

The employment of Temporary Research Staff such as: **Research Assistants, Project Staff, and Project Supervisors or Adjunct Investigators** shall be based on the University's Human Resource Policy on the employment of temporary research staff.

8.0. PART H: COLLABORATION IN RESEARCH AND INNOVATION WITH ACADEMIC/RESEARCH INSTITUTIONS, ORGANIZATIONS AND THE INDUSTRY

The University shall enter research and innovation collaboration with academic/research institutions, the industry and other Organizations and Agencies to:

i. Strengthen research and innovation capacity
ii. Develop research networks for joint research proposal development, knowledge creation and implementation.
iii. Enhance students' hands-on exposure to real-time industry or organizational practices to prepare them in their career activities.
iv. Establish and manage innovation hubs for value creation and migration to the Entrepreneurship Centre for mentorship and accelerated growth.
v. Facilitate technology transfer (including adaptation and adoption of knowledge from knowledge stock), licensing and commercialization of research outputs.
vi. Provide Research and Development platforms for the industry and other organizations in a mutually beneficial way.
vii. Provide unique and well-tailored research and development; and quality assurance backbone to Small-Medium Entrepreneurs, so as to ensure the competitiveness of their products and services.
viii. Establish shared facilities with the industry on campus for R&D and high level training.
ix. Provide special services using available infrastructures in times of local or national emergencies.
x. Support all gown-to-town activities required of a citadel of learning toward achieving a vibrant learning, research and innovation, as industrial ecosystem.
xi. Create extensive data for analyses, and policy formation.

Equity, justice and other extant laws of the Federal Republic of Nigeria shall guide all collaborations in a mutually beneficial manner.

This Research and Innovation Policy and global best practices shall guide research, innovation, development and commercialization in **The University**.

9.0. PART I: RESEARCH DATA MANAGEMENT
Protection and Archiving /Retention of Research Data

9.1 Collections and Use of Research Data

Researchers shall collect data concerning human participants, animals and other data in compliance with the Research Ethics Policy of the University of Lagos that governs responsible conduct of research.

The Researcher shall respect confidentiality and privacy of research participants at all times in the collection, storage and use of data.

Research data collected should be preserved in such a way that it allows verification by third parties.

9.2 Retention/Archiving of Research Data

Researchers shall retain data in accordance with best practices in the area of discipline:

i. For the period specified by the Grant Agency that supported the research; or
ii. In the absence of an Agency specification, a period of 5-7 years after the research or from publication of the data.

10. PART J: RESEARCH INSTRUMENTS, EQUIPMENT AND SOFTWARE (PROCUREMENT, DONATION, DISPOSAL, USE/RE-USE ETC)

This policy provides guidance on the procurement, use/re-use (by single/several parties), disposal, sale of research equipment and software in the University of Lagos. The import of this guidance is to ensure that the University provides responsible management, accountability and effective use of resources (instruments, equipment, software and other materials) that are procured or donated in the course of conducting research.

This policy recognizes the following considerations:

i. Sources of funds that were to procure research equipment, software and other materials.
ii. Third parties direction on the ownership of the equipment and software, especially after the completion of the research.
iii. Joint use of equipment by multiple users.
iv. Inter-institutional usage
v. Ownership and use when the investigator leaves the University.
vi. Maintenance and service plan of the equipment.
vii. Safety issues related to research equipment and software.

10.1 Procurement, Ownership, and Use/Re-use

Maintenance of equipment and materials for research is crucial for its durability. It should be noted that for very delicate and expensive instrument and equipment, a maintenance plan and insurance should be considered at procurement. Furthermore, the use of sponsored research equipment for training or other research in the University should be carefully negotiated to provide access for university research and training. Restriction in the use of equipment can only be considered when alternatives are available. The University's procurement guidelines shall guide the procurement of research equipment. The following conditions shall guide the ownership, use/re-use of research instruments, equipment and software in the University of Lagos.

i. **Research Instrument, Equipment, and Software purchased with University of Lagos resources:** All research equipment purchased with internal funds shall be the property of **The University**. These materials shall be logged in the University's asset register and shall not be relocated in the event of the investigator leaving the University. Other investigators shall continue to use the equipment, but shall be re-assigned and documented appropriately. In situations where there is no anticipated use of the equipment or when it becomes obsolete, it shall be stored safely or handled appropriately by the Board of Survey

ii. **Research Instruments, Equipment and Software purchased with Granting Agencies Funds (TETFUND and other In-country or International Agencies):** The guidelines of the sponsors or agencies awarding the grant shall guide ownership, use and disposal of instruments, equipment and software. Usually, the University will retain the research instruments, equipment and software for future research and training of students.

iii. **Research Instruments, Equipment and Software Purchased with Research Contract Funds**: The terms and conditions of the contract on ownership and/or disposal of the equipment shall be followed. However, this should be negotiated at the agreement drafting stage to support further use for research in **The University**. Where the University retains ownership of the equipment, the guidance on disposal described above shall apply.

10.2 Disposal and Trade-offs of Research and Innovation Equipment

The University's Policy on boarding of unusable items shall apply in the disposal of instruments, equipment and software used for research.

11. PART K: RECOGNITION AND AWARDS TO PRINCIPAL INVESTIGATORS (PIs), RESEARCHERS/ RESEARCH CLUSTERS/GROUPS, INNOVATORS, RESEARCH CENTRES AND INSTITUTES TO PROMOTE RESEARCH

The escalation of research and innovation to promote national development and growth shall be fast-tracked through a competitive and reward system. Principal Investigators, Researchers, Research Clusters/Groups, Research Centres and Institutes shall be recognized for their contributions to the promotion of research and innovation by the:

i. quantum of grants won;
ii. consistency of grants awarded;
iii. significance of research outputs/innovation;
iv. patents filed;
v. research outputs commercialized; and
vi. ground-breaking research contributions and publications of scholarly works in high-impact journals.

The Guide for Recognition Awards to Researchers and Research Groups, Centres and Institutes shall define the procedures for recognition. The following shall be recognized for awards:

i. Distinguished Researcher/Innovator award.
ii. Best Principal Investigator of the year award.
iii. Best Research Group of the year award.
iv. Best Research Centre of the year award.
v. Best Research Institute of the year award.
vi. Award of Excellence for Innovation to Research Groups, Research Centres, and Institutes.

In addition, the Guidelines for the Reward Scheme for Exceptional Scholars in the University as approved by senate shall be implemented to recognize and reward research and innovation.

12. PART I: DISSEMINATION OF RESEARCH, IMPLEMENTATION AND REVIEW OF THE RESEARCH AND INNOVATION POLICY

12.1 Publication of Research

Research findings shall be published in national and international high-impact journals to give visibility to the outcome of research conducted in the University.

12.2 Conduct of Annual Research Conference and Fair

University-wide Research Conference and Fair shall be held annually to disseminate the outcome of research findings and exhibition of invention and other research products. The Annual Research and Conference provides the platform for research conducted in the University to be presented as posters or oral presentation for robust scholarly engagement.

The Fair shall provide an innovative platform for the industry and other stakeholders to interface with the research community in order to promote product initiation, development, assessment and incubation.

12.3 Implementation of the Policy

i. The procedures and guidelines for the implementation of this policy shall be provided as annexes.
ii. A strategic plan, with operational and action plans, shall be developed to fully implement this policy.
iii. The Research and Innovation Policy shall be made available to all staff, students and sponsors of research.
iv. The School of Postgraduate Studies (SPGS) shall actively make copies available to all registered postgraduate students. SPGS shall also ensure that students' research comply with the governance provided in this policy, especially but not limited to the protection of humans and animals in research. In addition, the SPGS shall ensure that Postgraduate students undertaking research overseas where biological or material samples are shared should be made to complete the University's Material Transfer Agreement (MTAs) to protect the interest of all parties.
v. Research outputs shall be reviewed for patentability before publication.
vi. This policy shall be given to all students and newly employed staff and shall be part of staff and students' engagements, including orientation workshops for newly employed staff and students.

12.4 Review of the Research and Innovation policy

This policy shall be reviewed as appropriate with the version and date of modification stated.

13. PART M: ANNEXES

A. COMPLIANCE

I. Human participant protection in research
II. Animal Ethics Policy
III. Responsible conduct of research
IV. Conflict of Interest Guidance
V. Health, Security, Safety and Environment Manual
VI. Bio-, Chemical-, nuclear safety manual

B. INTELLECTUAL PROPERTY MANAGEMENT

I. Intellectual Property Policy
II. Operational forms and agreement templates.
III. Guideline for filing of Patents.

C. RESEARCH GRANT MANAGEMENT

I. Operational Manual for Research Grant Administration and Management (OMRGAM)

D. OTHER GOVERNANCE GUIDANCE

I. Guidelines for Research Groups/Clusters, Centres and Institutes.
II. Postdoctoral Mentorship Plan.
III. Guidelines for Hiring and remuneration of Research/Project Assistants.
IV. Guidelines for Data Management, Protection and Storage.
V. Guidelines for Cataloguing, Maintenance, Disposal and Trade-off of Research Equipment.
VI. Guidelines for Awards to Researchers and Research Groups, Centres and Institutes.
VII. Guidelines for collaborating with the industry on Research and Development.
VIII. Guidelines for the Reward Scheme for Exceptional Scholars.

ACKNOWLEDGEMENTS

The Research and Innovation Policy was motivated after a presentation of planned activities of the Research and Innovation Office in August 2015, in which the Vice-Chancellor, Prof. Rahamon A. Bello, among other decisions, directed that a Research and Innovation Policy be drafted. Several drafts were presented for Management's review, until the final draft was shared to the Deans of Faculties, for their inputs. This extensive consultation process that began in August 2015, culminated in the approval of the policy by the University's Senate at its meeting of April 26, 2017.

The Research and Innovation Office developed the policy under the able leadership of Prof. Rahamon A. Bello, Vice-Chancellor. Members of Management at the time of approval were: Prof. Oluwatoyin .T. Ogundipe (Deputy Vice Chancellor [Academics & Research]), Prof. Ben. E.A. Oghojafor (Deputy Vice Chancellor [Management Services]), Prof. Mrs. Folasade .T. Ogunsola, Deputy Vice Chancellor [Development Services]), Dr. Mrs Taiwo Ipaye (Registrar), Prof. F. E. A. Lesi (Provost, College of Medicine), Dr. Mrs. Olukemi Fadehan (University Librarian), Dr. Lateef Odekunle (Bursar), Dr. Solomon O. Okunuga (Director, Academic Planning), Prof. Lucian O. Chukwu (Director, Quality Assurance), and Engr. Dr. A. E. Adeniran (Director of Works).

The Research and Innovation Policy started during the tenures of Professors B. I. Alo and Duro Oni, immediate past Deputy Vice Chancellors, Academic and Research, and Management Services, respectively. They both made significant contributions to the Policy. Others who made useful inputs to the Policy are Deans of Faculties in the University: Prof. S. Akinboye (School of Postgraduate Studies), Prof. 'Muyiwa Falaiye (Arts), Prof. Rasheed Ojikutu (Business Administration), Prof (Mrs) O. A. Magbagbeola (Basic Medical Sciences), Prof. J. D. Adeyemi (Clinical Sciences), Prof. O. O. Sofola (Dental Sciences), Prof. Olasupo Jegede (Education), Prof. Funso Falade (Engineering), Prof. Timothy G. Nubi (Environmental Sciences), Prof (Mrs) A. V. Atsenuwa (Law), Prof. B. O. Silva (Pharmacy), Prof. I. Oni (Social Sciences) and Prof. Ademola Adeleke (Students Affairs).

Finally, The Senate of the University of Lagos is commended for approval of this policy.

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