

# **KNOWLEDGE TRANSFER, INNOVATIONS DEVELOPMENT AND PARTNERSHIPS**

**BY**

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# Mission of Universities

Over the years, the mission of Universities has expanded from teaching and research to include technology transfer as key to societal transformation and economic development (Genshaft et al., 2016; Makerere University, 2008c, , 2008d; Sanberg et al., 2014).

In this regard, ideas emerging out of research contribute greatly to universities' missions. These comprise, however are not limited to:

- a) patent awards;
- b) licensing and commercialization;
- c) Etc..;

# Mission of Universities

For example, Makerere University is implementing the Strategic Plan 2008/09-2018/19 where the University has redefined her overarching enterprise strategy to be “***the leading institution for academic excellence and innovations in Africa***”.

- a) This is to be achieved by providing innovative learning and teaching, research and outreach responsive to national and global needs.
- b) However, the University employment policies do not fully address the issue of commercialization and technology transfer as criteria for recruitment and/or promotion of academia
- c) This shortfall dot argue well with the changing demand to expand the research enterprise beyond just basic research and to contribute directly toward tangible economic development

# Number of Intellectual Property Application Filed/Registered

**Table 1: Number of Intellectual Property Application Filed**

University	Type of Applications					Total
	Patent <sup>1</sup>	Utility Model	Trademark <sup>2</sup>	Industrial Design	Copyright <sup>3</sup>	
Makerere University	0	0	5	1	2	8
Kyambogo University	0	1	0	0	0	1
Gulu University	0	0	0	0	0	0
Mbarara University of Science and Technology	4	1	2	0	0	7
Uganda Christian University	0	0	2	0	0	2

Source: URSB (2018)

**Table 2: Number of Intellectual Property Registrations**

University	Type of Grants/Registrations					Total
	Patent <sup>4</sup>	Utility Model	Trademark <sup>5</sup>	Industrial Design	Copyright <sup>6</sup>	
Makerere University	0	0	3	1	2	6
Kyambogo University	0	1	0	0	0	1
Gulu University	0	0	0	0	0	0
Mbarara University of Science and Technology	0	1	Pending!	0	0	1
Uganda Christian University	0	0	2	0	0	2

Source: URSB (2018)

*Consequently, societal expectations of universities now go beyond just research, teaching, and public service!*

# Faculty Reward and Recognition

There is a fundamental disconnect between technology transfer activities and incentives to staff members in terms of promotion raises, tenure, and career advancement.

**Faculty advancement in several universities is based mainly on:**

- a) Years of teaching experience
- b) Graduate students supervised to completion
- c) Journal articles published

***Beyond the monetary benefit of patenting, which is small in most cases, there is hardly any benefit of technology transfer activities to academia***

# Makerere University Intellectual Property Management Function

Makerere University developed the Intellectual Property Management Policy (IPM) to:

- a) Stimulate and support innovative thinking among students and staff;
- b) Enable ownership and efficient management of intellectual assets and innovations produced at Makerere (Makerere University, 2008a).
- c) Provide an elaborate process map of protecting and patenting innovations

It was envisaged that implementation of the IPM policy would not only increase income arising from research activities but also increase the contribution of Makerere to the wellbeing of society.

However, the IPM Policy has not been fully utilized as was envisaged by the University.

Discussions at various fora indicate that the reasons why faculty and students are not registering their innovations include the following:

- a) Lack of support structures for the IPM function
- b) Lack of awareness about IPM
- c) Lack of clear guidelines of IPM
- d) Lack of incentives and reward systems for IPM



## Experiences from other universities

A quick electronic search indicates that not many universities in the region consider technology transfer for appointment and promotion of academia. For example, University of Rwanda (UR), awarded patents as well as knowledge transfer and income generation outputs are considered as evidence of Research Output and Considerations for Promotion of academia. The latter categories include:

- 1) Commercialization and Technology transfer
- 2) Significant income generated from industry, commerce and/or public sector
- 3) Innovative outputs applicable to and accessed by industry, commerce and public sector

## Experiences from other universities

However, many universities from the developed countries have adopted technology transfer for appointment and promotion of academia.

The technology transfer and innovations considered comprise, however are not limited to the following:

- a) creation of intellectual property;
- b) copyrights, and patents awarded;
- c) contribution of the candidate's work towards the needs of society;
- d) original designs, plan, inventions;

# Experiences from other universities

**Table A: Language used to incorporate entrepreneurial activities in tenure and promotion documents at universities**

Institution	Date founded	Public/private	Tenure and promotion language
Auburn University	1856	Public	"Evaluation of Research. . .Other indicators of research productivity which can supplement one's record include external grants and the creation of intellectual property, copyrights, and patents" (1).
Carnegie Institute of Technology at Carnegie Mellon	1900	Private	"Research: Measures of excellence in this area include the quality, volume, and impact of publications, including papers, research reports; evaluation of research by others; patents; prizes and monographs, books and awards for research; solicited and invited lectures; the amount of financial support; and the contribution of the candidate's work towards the needs of society" (2).
Clemson University	1889	Public	"2.) Scholarship (refereed scholarly work is weighed much more heavily), as indicated by the following possible supporting evidence: 2.6.) Patents awarded" (3).
East Carolina University	1907	Public	"Research/Creative Activity:. . .Patents" (4).
Florida Atlantic University	1961	Public	"Evidence of achievement in the appropriate discipline(s). . .where appropriate, patents and research grants" (5).
Florida Institute of Technology	1958	Private	"Research/Scholarly Activities:...List and describe briefly any disclosures of inventions or resulting patents" (6).
Florida International University	1965	Public	"Research/Scholarship/Creative Work: e. Patent Disclosures/Applications/ Awards: Patent disclosures, applications, and provisional and final patent awards should be listed. If there are co-investigators on the disclosure, application or award, these should be indicated" (7).
Kent State University	1910	Public	"Evidence of the scholarship of discovery, integration, application and teaching, as well as university citizenship. . .In addition, candidates are expected to provide documented evidence which may include. . . evidence of outstanding achievement, such as awards, patents, and copyrights" (8).
Lehigh University	1865	Private	"Publications and Creative Activities: Creative Activities:. . . Original designs, plan, inventions, and patents" (9).

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# Experiences from other universities

Institution	Date founded	Public/private	Tenure and promotion language
New Jersey Institute of Technology	1885	Public	"A complete curriculum vitae documenting publications and patent applications since appointment or last promotion. . . Applications for, and granting of patents and copyrights are recognized as a measure of importance and/or peer evaluation of the work in the field" (11).
North Dakota State University	1890	Public	"[T]he development and public release of new products or varieties, research techniques, copyrights, and patents or other intellectual property. . ." (12).
Northeastern University	1854	Private	". . . the receipt of patents represents professional recognition of research activities. In some fields technical, procedural, or practical innovations made clinically or professionally are evidence of productive scholarship" (13).
The Ohio State University	1870	Public	"2. List of creative works pertinent to the candidate's professional focus: . . . Inventions and patents, including disclosures, options, and commercial licenses" (14).
Oregon State University	1868	Public	"Authorship of a patent in the faculty member's field is considered as evidence of creative scholarship" (15).
The Pennsylvania State University	1855	Public	"Other evidence of research or creative accomplishments as appropriate (patents, new product development, new art forms, citation index analysis, etc.)" (16).
Purdue University (Consumer Sciences and Retailing)	1869	Public	"Benchmarking Excellence: . . . Patents and license agreements resulting from research done while at Purdue" (17).
South Dakota State University	1881	Public	"Examples (non-exhaustive) of publications or activities of research, scholarship, and creative activity: . . . patents," (18).
Stevens Institute of Technology	1870	Private	"Scholarly activities: . . . patents" (19).
Texas A&M University	1876	Public	"Patents or commercialization of research, where applicable" (20). . . Patents are listed under "Other Research, Scholarship, or Creativity Accomplishments," in the faculty summary table (21).

THANK YOU

# INTELLECTUAL PROPERTY REGISTRATION

## What is Intellectual Property?

Intellectual Property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce. Intellectual Property rights grant the owner of the work exclusive rights to exploit and benefit from his/her creation.

## Why protect Intellectual Property?

- To provide an incentive to the innovators to enable progress and development in technology.
- The legal protection of innovations encourages the commitment of additional resources for further innovation.
- The promotion and protection of intellectual property spurs economic growth, creates jobs and enhances the quality and enjoyment of life.

## Forms of Intellectual Property

The most common forms of Intellectual Property include: Copyright, trademarks, patents, utility models, industrial designs and geographical indications.

## Copyright

Copyright law grants authors, artists and other creators protection for their literary and artistic creations, generally referred to as "works".

The kind of works protected by copyright include, but not limited to; novels, poems, plays, newspapers, adverts, films, musical compositions, choreography, paintings, drawings, photographs, architecture, maps, technical drawings and Computer software, programs and databases

**Neighbouring Rights** - Protect works of performing artists, producers, and those involved in broadcasting.

## Trademark

A trademark is a distinctive sign that identifies certain goods or services produced or provided by an individual or a company.

A Trademark may consist of any word, symbol, design, slogan, logo, sound, smell, colour, label, name, signature, letter, numeral or any combination of them and should be capable of being represented graphically. The Trademark has to be distinctive and non-descriptive.

The Trademark owner has the exclusive rights to prevent others from using the same or confusingly similar mark.

## **Industrial designs**

An industrial design is the aspect of a useful object which is ornamental or aesthetic. The aspects that can be seen or felt. It relates to the appearance of a product.

The design may consist of three-dimensional features, such as the shape or surface of an article, or of two-dimensional features, such as patterns, lines or color. For a design to be protected it should be new and original.

Industrial designs protection lasts 5 years and can be renewed for two 5 year terms.

## **Geographical Indications (GI)**

A Geographical Indication means a sign which identifies goods as originating in a particular country, region or locality where a given quality, reputation or other characteristic of the goods is essentially attributable to its geographic origin.

GIs can be used as a tool to market goods that have special characteristics due to their origin. For example, specific qualities of a product may be due to human factors that can be found in the place of origin of the products, such as specific manufacturing skills and traditions e.g. Swiss watches from Switzerland, champagne is a sparkling wine produced from grapes grown in the Champagne region of France.

## **Patent**

A patent is an exclusive right granted for an invention which is either a product or process that provides a new way of doing something, or that offers a new technical

solution to a problem.

Examples of inventions include; walkie-talkie, light bulb, memory stick, chemical formula.

A patent gives the owner the right to prevent others from using the invention without permission for a limited period of time, generally 20 years. An invention must be new, non-obvious and have use to be granted a patent.

## **Utility Model**

A Utility Model just like a patent also protects inventions/innovations but for a shorter period and is granted for a new technical solution to a problem.

The main difference between a Patent and Utility Model is that the requirements for granting a Utility Model are less stringent than for Patents. A product or process which is new and industrially applicable passes for a Utility Model protection.

Registration for utility model costs less, is simpler and faster compared to obtaining a patent. The term of protection for utility models is 10 years.

There are three routes to file for IP protection;

- National- URSB the national IP office
- Regional- African Regional Intellectual Property Organisation (ARIPO)
- International- World Intellectual Property Organization (WIPO)