Creating a Virtuous Circle: Developing Intellectual Property and Innovation Policy and Strategies in Public Research and Development Institutions and Universities to Facilitate the Transfer of Technology to Industry

The Importance of Universities and Technological Research Institutions in the Transition to Knowledge- and Innovation-based Economies in Africa

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## What is the Mission of a University?

The mission in general of any University –Private/Public "is to advance knowledge and educate students in science, the arts, technology, and other areas of scholarship that will best serve the nation and the world at large. " - MIT

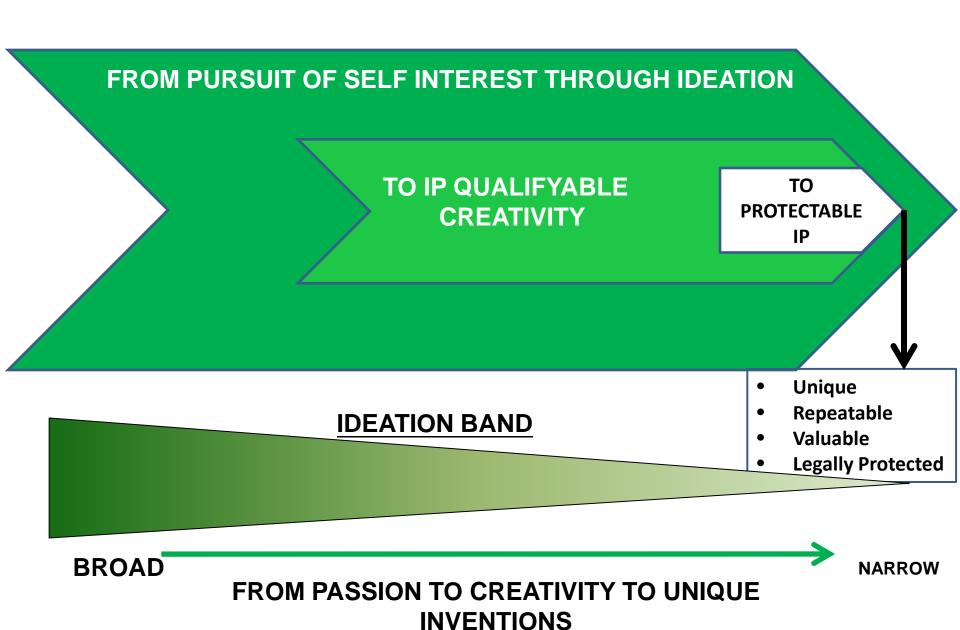
The University should also commit to generating, disseminating, and preserving knowledge, and to working with others to bring this knowledge to bear on the national and global great challenges.

## What is the Mission of a University?

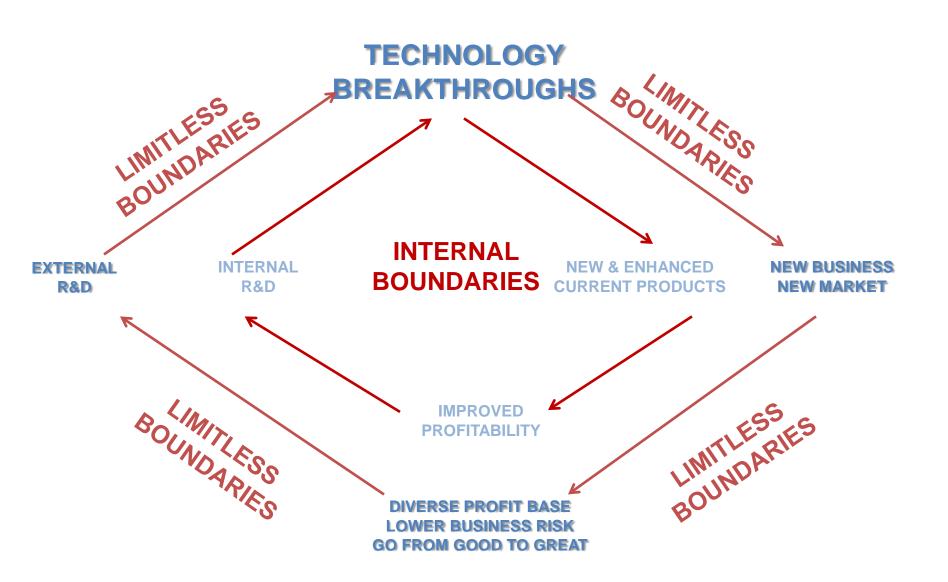
The secondary mission is then to bring about, through technology/inventions licensing, commercial investment in the development of inventions and discoveries from R&D at the Universities.

It is through these investments – and the economic development and new products that follow from them – that university inventions provide direct benefits to the public.

#### From Individual Passion to National Wealth Growth



#### OPEN INNOVATION UNLEASHING GLOBAL PROSPERITY



### **Technology/Invention Transfer**

#### What is technology transfer?

Technology transfer is the movement of knowledge and discoveries to the general public.

#### How does it Occur?

- through publications,
- educated students entering the workforce,
- exchanges at conferences, and
- Relationships with industry.

# Why would a researcher want to participate in the technology transfer process?

The reasons vary for each researcher. Below are samples of whys:

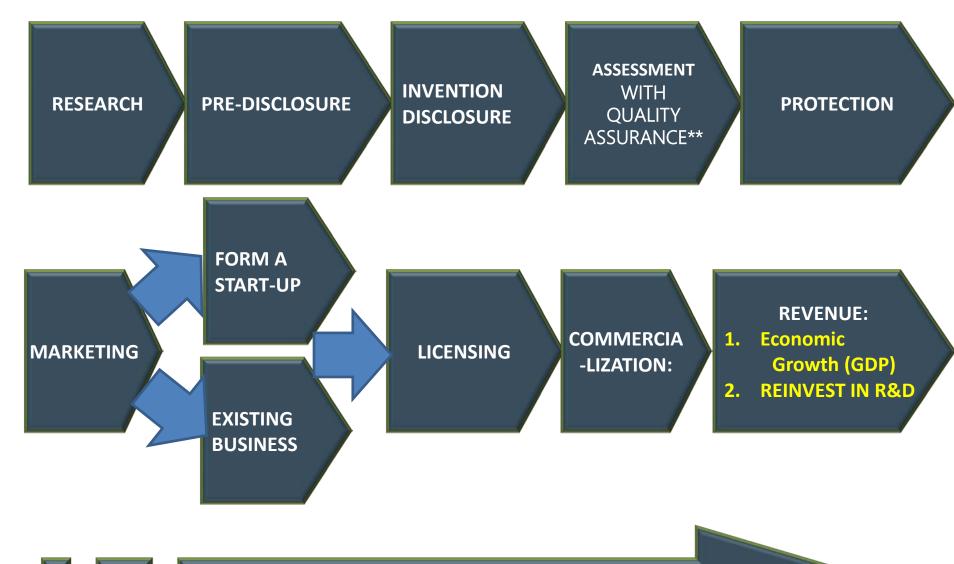
- Making a positive impact on society
- Feeling a sense of personal fulfillment
- Achieving recognition and financial reward
- Generating additional department/center funding
- Meeting the obligations of a research contract
- Attracting research sponsors that see value in the inventions
- Creating educational opportunities for students
- Linking students to future job opportunities

### How is technology transferred?

Typically transferred through an agreement in which the university grants to a third party a license to use its intellectual property rights in the defined technology/inventions, sometimes for a particular field of use and/or region of the world.

- The grant may be exclusive or non-exclusive.
- The licensee (the third party licensing the technology) may be an established company or a new business start-up.
- Licenses include terms that require the licensee to meet certain performance requirements
  - to make financial payments to the University. These payments are shared with the inventors and also distributed to departments and research centers to provide support for further research, education and participation in the technology transfer process.

#### STEPS TO COMMERCIALIZATION



Path to Local Economic Growth and Global Prosperity
Via INVENTIONS/TECHNOLOGY Transfers

# The Impact of Innovation when technology is transferred for public Good....

"MIT's founding charter sets forth its purpose of 'aiding the advancement, development and practical application of science in connection with commerce. Technology licensing is part of that mission, helping to transfer the results of our research into new products for the public and into the economic development of our community."

—Susan Hockfield, Former President, Massachusetts Institute of Technology

"Extrapolating from our survey results (see Appendix for methods and information about the follow-up survey of non-respondents), we estimate that MIT alumni of both undergraduate and graduate programs have been among the founders of at least 30,000 currently active companies. We estimate that these enterprises employ <u>4.6 million individuals</u> and generate annual global revenues of \$1.9 trillion, which is roughly equivalent to the GDP of the world's 10th largest economy as of 2014. "

—Entrepreneurship and Innovation at MIT Continuing Global Growth and Impact