Importance of Intellectual Property (IP) for Universities

&

The WIPO EIE Project

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Intellectual property (IP) is the foundation of a “new” university mode:

- IP-based technology transfer (IP/TT)
- IP/TT provides a new way for the university to:
  - disseminate its knowledge and creative solutions for the good of society
  - actively participate in the innovation ecosystem,
  - and economic development
- reward inventive faculty & staff
• What characterizes this new mode?
• What is its’ relation to the university’s traditional mission?
• Is this new way good for universities?
• Why is it important?
• Some lessons learned from 40 years of university IP/TT
• The role of WIPO’s EIE Project
What characterizes this “new “ IP/TT mode?

- Awareness of IP’s role in serving the university’s overarching social goals
- University protection of and transfer of commercialization rights to its IP
- Implementing an IP Policy that carefully integrates IP with traditional university mission, values, and activities
- Collaborative engagement and contracts with private sector for IP commercialization
- An active university role in entrepreneurship, new ventures, economic development
- Added dynamism to the university mission
- Rewards for inventive faculty and staff
What characterizes this “new” IP/TT mode?

• Renewed interest by alumni
• Enhanced student entrepreneurship
• University inventions converted into new products, services, and companies
• New career opportunities for faculty, staff, and students
• New revenue sources
What is the relation of this new mode to the traditional university mission?

Let’s consider the University as extraordinary social invention
universitas magistrorum et scholarium,

A community of teachers and scholars
Unique Social Role

Creators and Keepers of the written word

- 3500 BP Sumerian scribal schools
- 500+AD Cathedral Schools (e.g., Toledo)

A Community of Teachers and Scholars
A Community of Teachers & Scholars

University of Karueein,
Fez, Morocco founded 859 AD (1st university)
Evolution of the University's Unique Social Role

Creators and Keepers of the written word
- 3500 BP Sumerian scribal schools
- 500+AD Cathedral Schools (e.g., Toledo)

A Community of Teachers and Scholars
- 859 AD University of Karueein, Fez, Morroco (1st university)
- 970 Al Azhar University (Cairo)
- 1088 University of Bologna (1st European university)
- 1096 Oxford University (1st UK university)
- 1134 University of Salamanca
- 1160 University of Paris (la Sorbonne)
- 1209 Cambridge University
- 1222 University of Padua
- 1224 University of Naples
Evolution of the University’s Unique Social Role

A Community of Teachers and Scholars

- 1611 U. of Santo Tomas (1st Asian university)
- 1636 Harvard U. (1st U.S. university)
- 1850 U. of Sydney (1st in Australia)
- 1858 Keio University (1st in Japan)

The *Times Higher Education Rankings*

= 1,002 Universities world-wide

**Google:** 16,000+ - 26,000+ Institutes of Higher Edu.
Evolution of the University’s Social Role

Creators and Keepers of the Written Word
Evolution of the University’s Unique Social Role

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Unique Social Role

Creators and Keepers of the Written Word

A Community of Scholars and Teachers

Creators of Knowledge (Research)
University Research (knowledge creation)

The Morrill Act (U.S.) 1862
Applied Science & Technology taught,

...and brought to farmers
Unique Social Role

Creators and Keepers of the Written Word
A Community of Scholars and Teachers
Creators of Knowledge (Research)
and disseminators of Solutions
Extension (bringing technology to users)
Evolution of the University’s Unique Social Role

Creators and Keepers of the Written Word
A Community of Scholars and Teachers
Creators of Knowledge (Research)
and disseminators of Solutions (Extension)
Creators of Knowledge (Research)
Researchers as Teachers
advancing knowledge
not just replication of knowledge
Evolution of the University’s Unique Social Role

Creators and Keepers of the Written Word
A Community of Scholars and Teachers
Creators of Knowledge (Research)
Extension (bringing university technology solutions to users)
Researchers-as-Teachers (advancing knowledge)
• Research, Scholarship and Education
  creation, preservation, transmission of knowledge
• A Sacred oath: the pursuit of truth
• Not just to archive knowledge….. to advance it
• The goal of hastening and improving the future
  not simply guarding ancient truth
• University education not about replication

  Research & Education inextricably linked
To produce the next generation of creators in:

- art
- law
- medicine
- agriculture
- civil society
- science, engineering, technology
- business
- education & philosophy
- etc., etc.,.....
The University’s Social Duty

To create and disseminate knowledge, invention and technical advancement
to enhance the standard of living, and quality of life

for the public good

To be society’s arbiter of truth
• Universities as Creators of Technology Solutions (Invention)
• Society’s growing economic expectations of universities

How to create a linkage?

Invention & Intellectual Property
• In the US (1970’s), growing awareness of the untapped university intellectual asset in addition to graduates and publications

...... new technology!

• Based on universities as technology creators
  - but, this technology unharnessed (undeveloped)

• Society’s growing economic needs

• IP the tool to harness new technology development

• The Experiment: Bayh-Dole Act 1980

Almost 40 years of success (trial & error)
Why University IP-based Technology Transfer?

• Development and dissemination of university technology satisfies its basic mission
• New technology development requires investment;
• IP is the essential tool to connect new technology to investment by private sector
Why University IP-based Technology Transfer?

• University ownership of patents maintains essential, close link between inventors and patent use, and provides control for:
  - technology stewardship,
  - philanthropic concerns
  - assures diligence in development

• IP also allows value capture for university and inventor benefit
Why is this mode important?

• Bringing new technology to fruition requires investment; IP is the essential tool

• Investment in university invention by commercial partner through the licensing mechanism makes it available to the public

• IP in combination with licensing, entrepreneurship and intrapreneurship spawns new products, services, new ventures
  – all for the public good!
Why is this mode important?
Individual IP/technology transfer transactions are important....... however,
it is the overall engagement in the process of IP/TT by the university that truly accelerates its role as
source and catalyst
in the economic
“innovation ecosystem”
lessons learned

The process of using IP to catalyze the transformation of laboratory discovery to product, service, or new company

Can* naturally fit within, and enhance, the university’s mission

*if done properly
adds an important new dimension to the university’s historic mission and its pact with society
lessons learned

Adds an important new dimension to the University’s historic mission, and its pact with society

• But, it **MUST** be based firmly on, and totally aligned with, the university mission of teaching, research, and extension...... for the public good

• Otherwise, there is a danger of a mutation in the university’s basic character, and of harming its fundamental social role, in the process.
University IP/Technology Transfer:

**lessons learned**

- Produces many new products, services, companies, jobs
- Done right, it satisfies university’s mission of disseminating knowledge/solutions for the public good
- It can be accomplished with no harm to the university’s basic mission of education, knowledge creation/archiving, dissemination
- The university has a new role in the “innovation ecosystem”
The university becomes a key source, catalyst, and participant in the dynamic “innovation ecosystem” of economic development.
University IP/Technology Transfer: lessons learned

Universities should embrace and actively engage in the IP process, to widely disseminate its’ technology for the public good and to reward inventors......

NOT

as a source of revenue
Invention and IP, new products and services, entrepreneurship and new ventures spawned by the university’s IP-technology transfer.....

.....fulfills the university’s mission, ..... and enhances the university’s reputation,
Stimulates a creative and entrepreneurial campus culture,

Revives Alumni engagement
Continues the university’s ancient tradition

.....and adds a vital new means
to serve the public good
Generates new university ways:

- IP creation, ownership, management
- Direct interaction with private sector
- Proactive role in new technology development
- Entrepreneurial culture and atmosphere
- New revenue sources
- Ethical choices, questions, and dilemmas
These new ways must never hinder or negatively alter the university’s traditional *modus operandi* or its basic social undertaking.
always firmly based on our fundamental values
University IP/Technology Transfer: firmly based on our fundamental values

- An open community of discourse, and freedom of exchange of ideas and information
- No secrets, no censorship
- A public resource, a “commons” of knowledge creation, education
- Academic freedom, free intellectual exchange
- Research freedom
- The university is not for sale
- Institutional sovereignty
University IP/Technology Transfer: firmly based on our fundamental values

- The primacy of the “public good”
- Scholarship, education, and research always primary
- IP-Technology Transfer secondary
- Stewardship of knowledge and technology
- The university always non-profit, not a marketplace participant
- The supremacy of truth and the search for it
- Academic freedom an absolute
WIPO’s Enabling IP Environment (EIE) Project is based on this premise:

Universities can play an enhanced role in the economic development of a country, through implementation of proven, sound policies and practices of IP management and technology transfer, and appropriate partnering with the private sector.....

..... and all this ultimately benefits the institution, its inventors, and society.
WIPO’s EIE Project Goal:
Firmly establish universities (and government research agencies) as strategic drivers in the innovation ecosystem, in their role as technology creators ......
......while protecting the university’s interests, its’ enduring basic nature, and its historic pledge with society
Active participation in university IP-based technology transfer has a much more profound effect than IP, licensing, and the creation of new products, services, companies, and jobs.

The **PROCESS** itself generates a “creative economy” of innovators, entrepreneurs, investors and supporters..... motivated by IP and commercialization.....

**linked together**
The **PROCESS** itself generates a thriving…….
University IP-based Technology Transfer

and the EIE Project

Universities can effectively add this new mode to their traditional mission, and become active in the innovation ecosystem IF:

• effective IP Policy and practices in place
• sufficient investment in IP/TT capacity
• knowledgeable professionals to manage
• creative faculty & staff
• valuable technology/IP
• willingness to partner with private sector
• good private sector partners
Universities as key drivers of the “innovation ecosystem”

Institute Best Practices for IP management and tech transfer at universities through policy development, professional education, training, mentoring; real case study advisory

Create an institutional “platform” for technology flow from the “Hub & Spoke” structure

Establish linkages between tech creators and private sector (entrepreneurs, intrapreneurs, investors & implementers)

Establish a community of professionals

Build a lasting institutional framework
Importance of IP for Universities &
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Thank You
Technology Transfer & The University Mission

40 Years of University IP-Technology Transfer: Some Myths & Facts

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