

# **Importance of Intellectual Property (IP) for Universities & The WIPO EIE Project**

**Dr. Richard S. Cahoon**  
**WIPO Sr. Expert**  
**President, Bioproperty Strategy Group, Inc.**  
**Adjunct Faculty,**  
**Cornell University, International Programs**

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

# 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

9

University of Karueein,

Fez, Morroco founded 859 AD (1<sup>st</sup> university)



## 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 (1<sup>st</sup> university)
- 970 Al Azhar University (Cairo)
- 1088 University of Bologna (1<sup>st</sup> European university)
- 1096 Oxford University (1<sup>st</sup> UK university)
- 1134 University of Salamanca
- 1160 University of Paris (la Sorbonne)
- 1209 Cambridge University
- 1222 University of Padua
- 1224 University of Naples

## Unique Social Role

### **A Community of Teachers and Scholars**

- 1611 U. of Santo Tomas (1<sup>st</sup> Asian university)
- 1636 Harvard U. (1<sup>st</sup> U.S. university)
- 1850 U. of Sydney (1<sup>st</sup> in Australia)
- 1858 Keio University (1<sup>st</sup> 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 <sup>12</sup>

## Creators and Keepers of the Written Word



## Unique Social Role

Creators and Keepers of the Written Word

A Community of Scholars and Teachers

## A Community of Scholars and Teachers



## 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)

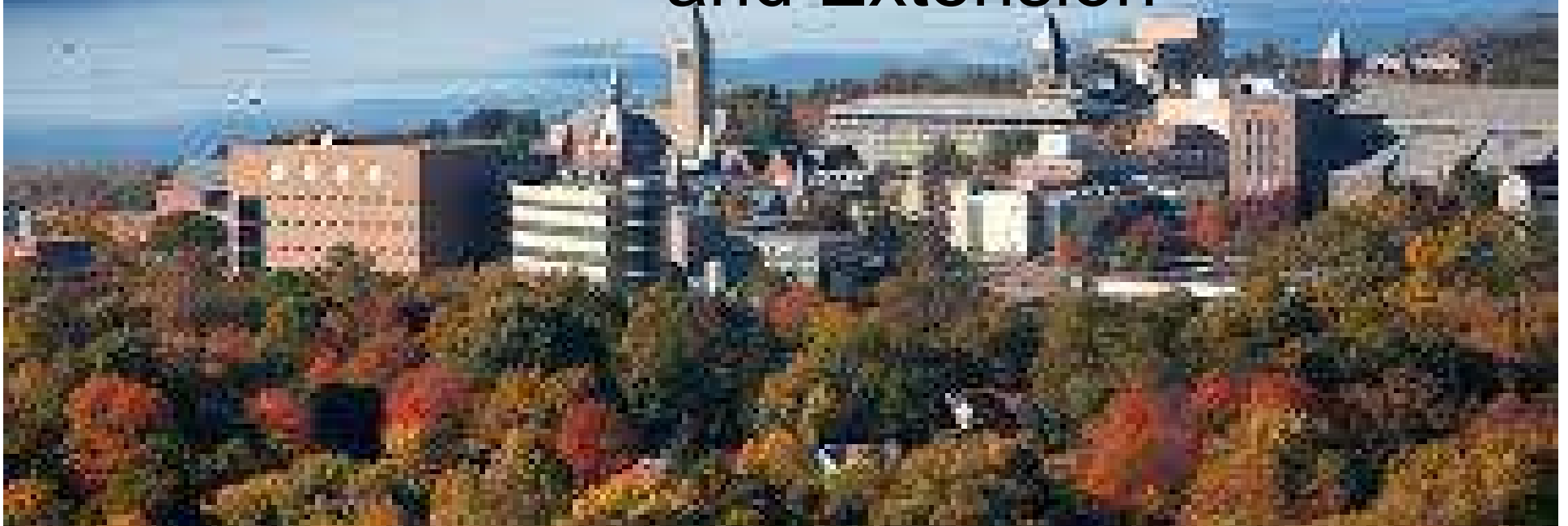
and disseminators of Solutions



# Cornell University

Since 1865.....

Teaching, Scholarship, Research  
and Extension



## Extension (bringing technology to users)



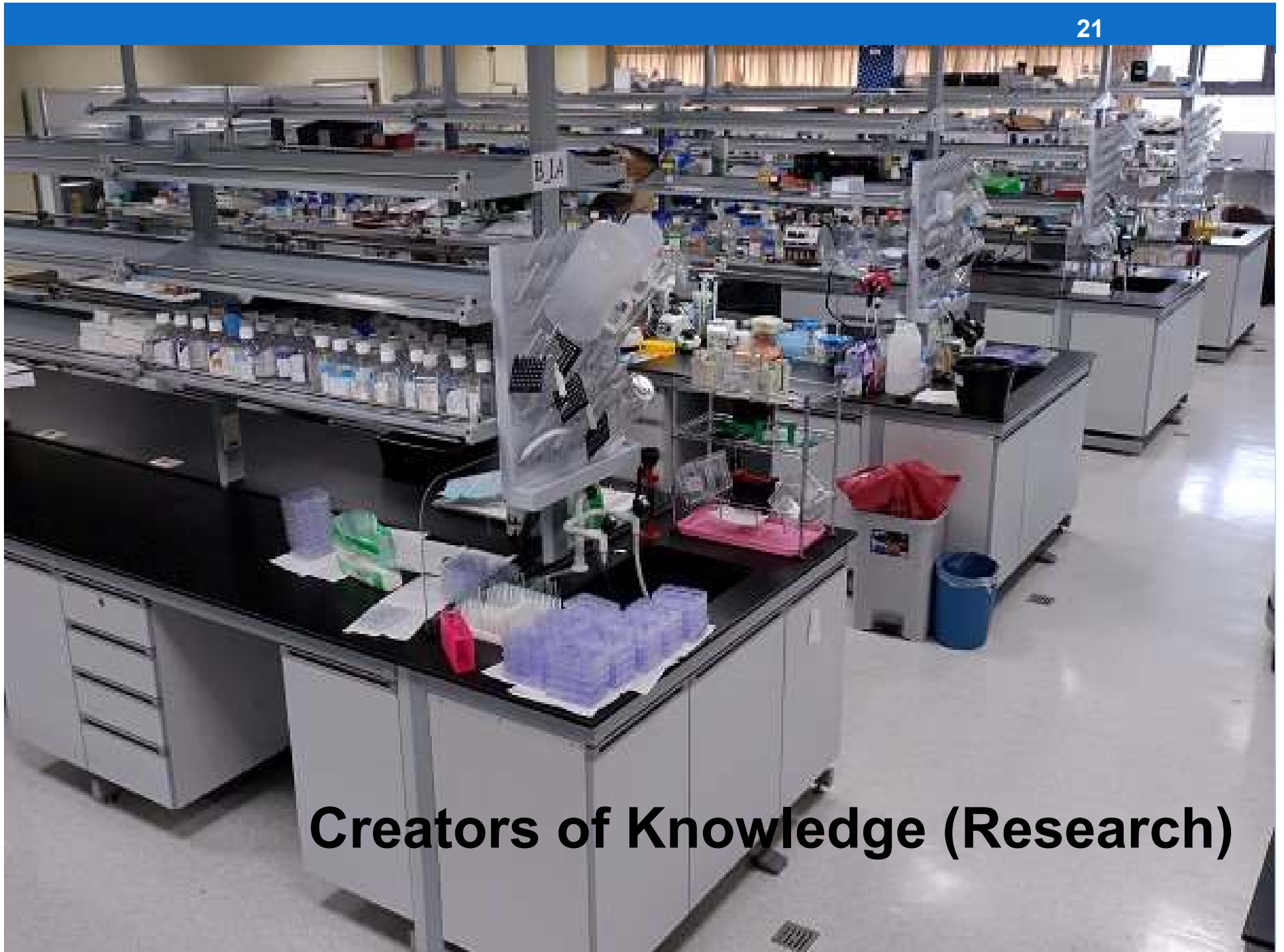
## Unique Social Role

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



## 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.,.....



gettyimages®  
LawrenceSawyer

157180551

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

## Technology Creators & Society's Economic Needs

- 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)

## Technology Creators & Society's Economic Needs

### **Why University IP-based Technology Transfer?**

- Development and dissemination of university technology satisfies its basic mission
- new technology development requires investment;  
..... and commercial partners
- IP is the essential tool to connect new technology to investment by private sector

## Technology Creators & Society's Economic Needs

### **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

# University IP-based Technology Transfer

## **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!



# University IP-based Technology Transfer

## **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”

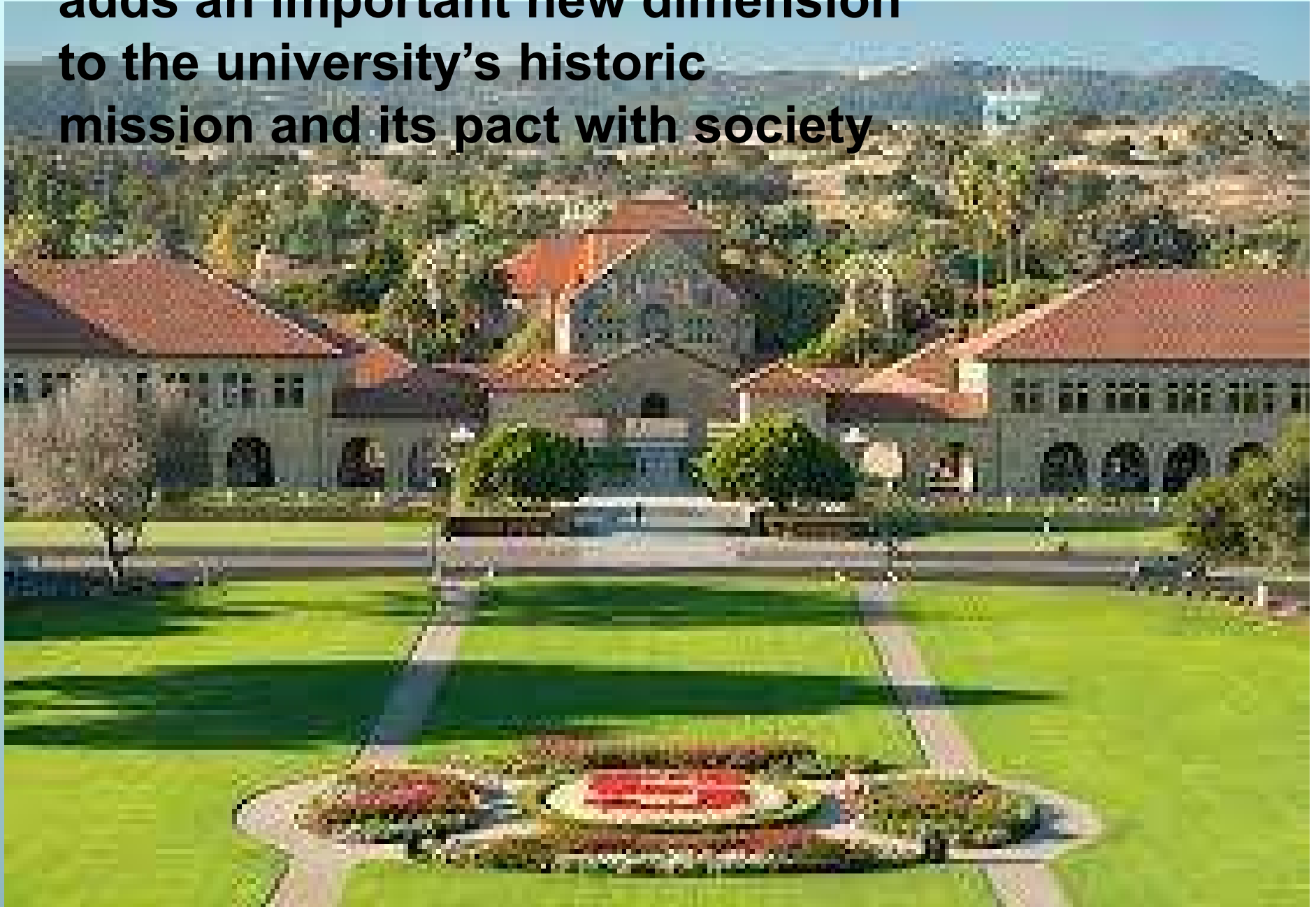
## lessons learned

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.

## 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**



## 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



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

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

## WIPO's EIE Project: the underlying premise

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

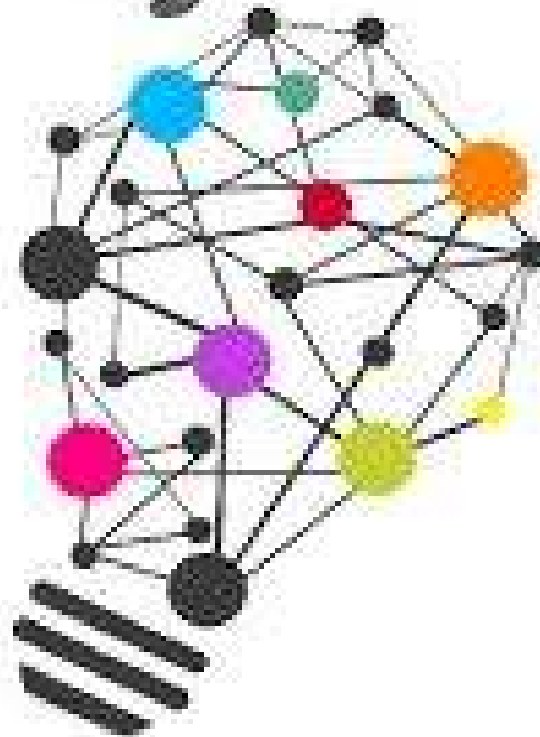
The ***PROCESS*** itself generates

a “creative economy” of innovators,  
entrepreneurs, investors and supporters.....  
motivated by IP and commercialization....

**linked together**

The ***PROCESS*** itself generates  
a thriving.....

innovation  
ecosystem



# 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  
&  
The WIPO EIE Project**

**Thank You**

# Technology Transfer & The University Mission

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

**Dr. Richard S. Cahoon**

**WIPO Sr. Expert**

**President, Bioproperty Strategy Group, Inc.**

**Adjunct Faculty,**

**Cornell University, International Programs**