

# **Regional High-Level Summit for University Presidents and Senior Policy Makers: Creating an Enabling Innovation Environment (EIE) for Intellectual Property and Technology**

**Osaka, Japan  
26-28 November 2019**

organized by  
World Intellectual Property Organization (**WIPO**)  
Japan Patent Office (**JPO**)

# **The Summit: Purpose and Content**

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# Purpose of the Summit

Inspiring a shared vision,

Developing a common purpose

Facilitating action

# **Purpose of the Summit**

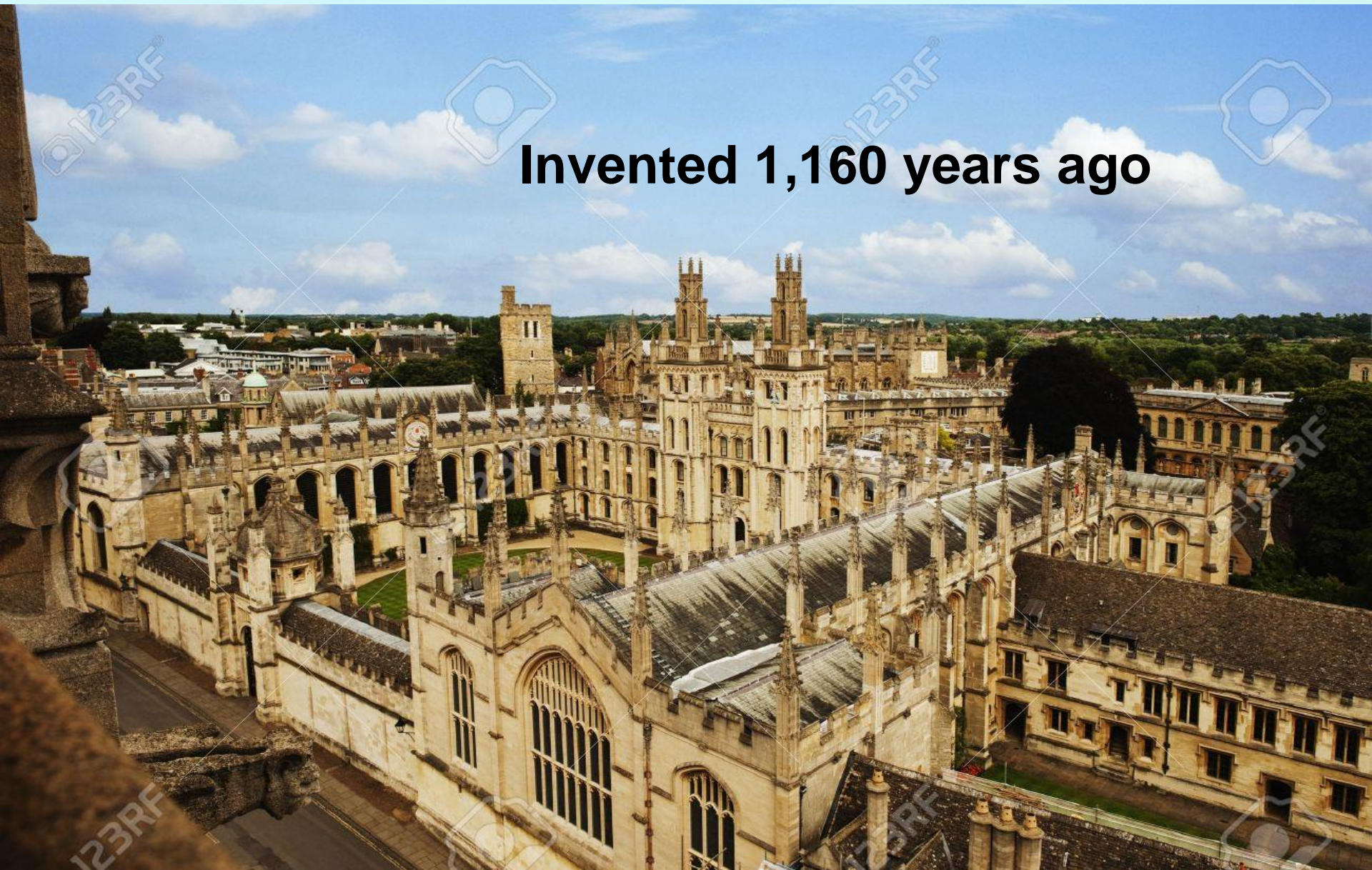
## **a shared vision**

One of humanity's great inventions

An improvement on that invention

# The University

**Invented 1,160 years ago**



## Evolution of its' unique Social Role

### **Scribes 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)

### **Keepers of Knowledge & the Written Word**

# Keepers of the Written Word



## and its' unique Social Role

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### **Keepers of Knowledge & the Written Word**

### **Creators of Knowledge**



## Creators of Knowledge



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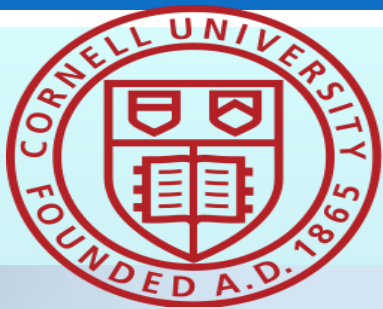
### **Keepers of Knowledge & the Written Word**

### **Creators of Knowledge**

### **Extension (bringing university technology to users)**

**The Morrill Act (U.S.) 1862  
applied science & technology taught,  
and brought to farmers**





# Cornell University



# Extension (bringing technology to users)



## and its' unique Social Role

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### **Keepers of Knowledge & the Written Word**

### **Creators of Knowledge**

(original research)

### **Extension**

(bringing university technology to users)



**Creators of Knowledge (Research)**

# Researchers/Teachers (advancing knowledge)





- Scholarship and Education
  - creation, preservation, transmission of knowledge
- A Sacred oath:
  - the pursuit of truth
  - the public good
- Not just to archive knowledge..... to advance it
- University education not about replication
  - Research & Education inextricably linked
- The goal of hastening and improving the future



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# The University's Social Duty

**To produce the next generation of creators**

art

law

civil society

science, engineering, technology

business

education & philosophy

etc., etc.,.....

citizens

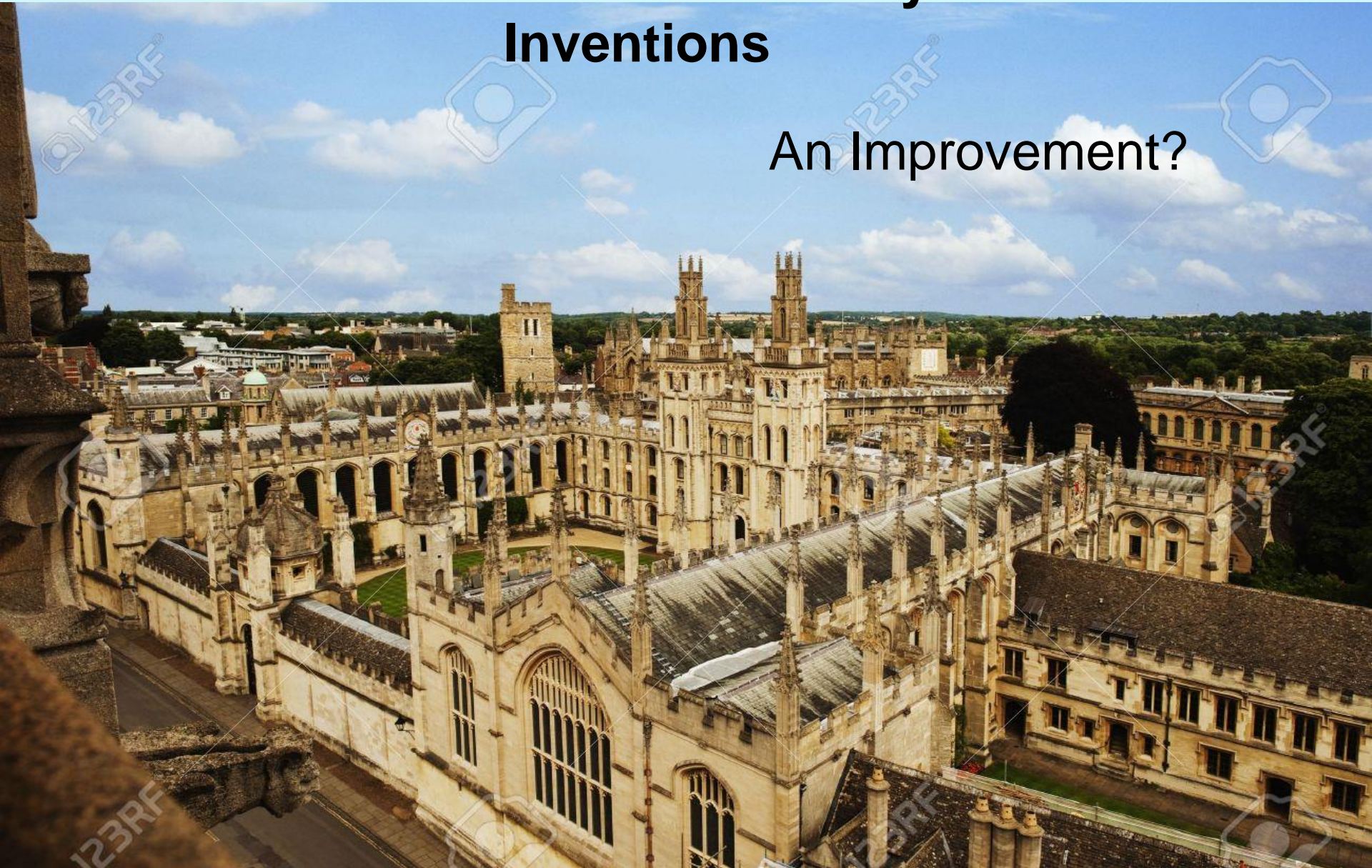
- Education
- Knowledge creation, archiving and access,  
& dissemination
- Bringing solutions to social challenges,  
creating opportunities

All to serve

**The Public Good**

# The University One of Humanity's Greatest Inventions

An Improvement?



# Improving on the University “Invention”

The 1980 experiment of Bayh-Dole

IP-based technology transfer

The purpose:

patentable inventions of university transferred to the private sector for commercialization

Why?

universities cannot bring their inventions to fruition to benefit the public

private sector implementers & investors required

IP ideally suited for the purpose

# Intellectual Property enables a new and additional type of university technology transfer

University researchers have been inventing in their research programs for a very long time

However, these inventions are almost never converted into useful solutions for society.

Why not?

Transforming inventions into practical solutions requires commercialization know-how, business infrastructure, and investment

Example: essentially no commercialization of university inventions in US prior to 1980

# The Experiment of IP-based University Tech Transfer

## The Fears:

- changing the character of the university
- commercialization of the mission
- distortion of our basic nature & culture

## The Reality:

- trial and error
- mistakes were made
- it works

An Ideological “battle” for the “soul” of IP-Tech Transfer  
\$\$ vs Public Mission



# The Experiment of IP-based Tech Transfer

## The Outcome

- IP-Technology Transfer evolves.....
  - from an “peripheral” endeavor.....
  - ..... to woven into the university mission
- It is intertwined with the research mission
- Can become a part of educational experience
- Enhances university’s reputation
- Like extension, it serves the university’s goal of providing solutions to social needs
- The goal of maximizing revenue is misguided and dangerous

# Improving on the University “Invention”

## Lessons learned in 4 decades of University IP based Technology Transfer

- Can be accomplished with no harm to university’s basic mission of education and research
- IP mechanisms highly effective in facilitating & assuring university technology brought to public
- Through Tech Transfer, university IP is basis for:
  - new products & services
  - companies
  - jobs

## IP-based Technology Transfer

***Requires strict adherence to certain rules:***

academic freedom

education & research come first

commercialization considerations secondary

university ownership of its IP

technology advancement & dissemination is  
the primary

Ethics, Conflict of Interest & Commitment

No activities that might damage reputation

# Driving the Innovation Economy academic technology transfer in numbers

From 1996 to 2015...

**\$1.3** trillion

contributed to  
U.S. gross  
industrial  
output



**\$591** billion

contributed to  
U.S. gross  
domestic  
product



**4.3** million

jobs supported



**380,000+**

inventions disclosed...

**80,000+**

U.S. patents issued...



to research institutions in the past 25 years

**11,000+**

startups formed  
since 1995



**70%**

of university innovations  
licensed to startups and  
small companies



**200+**

drugs and vaccines  
developed through  
public-private  
partnerships since  
Bayh-Dole Act  
enacted in 1980



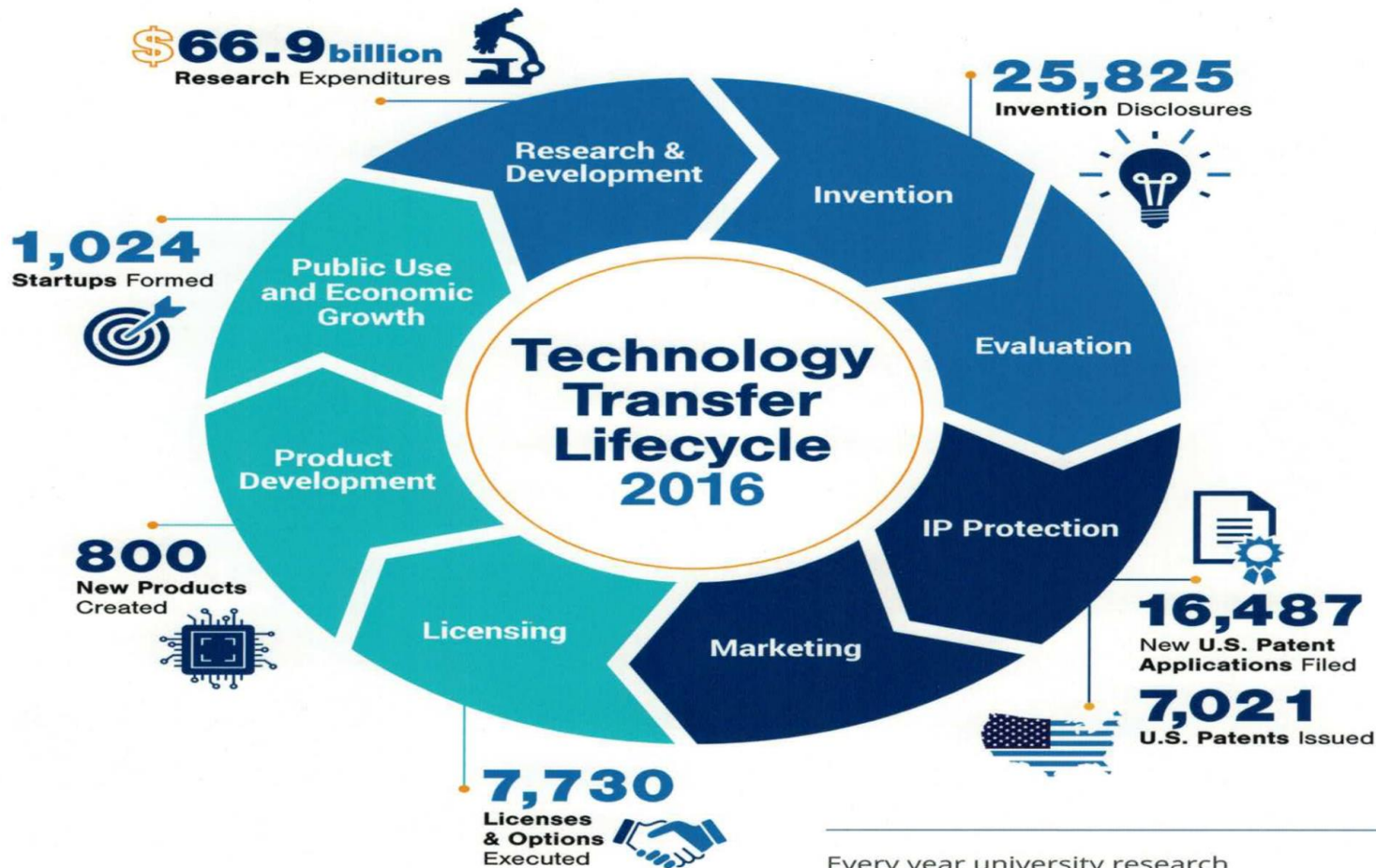
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Advancing Discoveries for a Better World™

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The Association of University Technology Managers (AUTM) is a nonprofit leader in educating, developing, promoting and inspiring technology transfer practitioners to make the world a better place through the commercialization of academic research. AUTM's global community of 3,200 members represent businesses and government organizations, and more than 350 universities, research institutions and teaching hospitals.

This information was compiled from Association of University Technology Managers (AUTM) and the Biotechnology Innovation Organization (BIO): The Economic Contribution of University/Nonprofit Inventions in the United States: 1996-2015; June 2017 as well as the AUTM U.S. Licensing Activity Survey Highlights 2016 and AUTM Statistics Access for Technology Transfer (STATT) Database, [www.autm.net/STATT](http://www.autm.net/STATT), and the Academic Patent Licensing Helps Drive the U.S. Economy, IPWatchdog.com, June 20, 2017.

# Benefiting Society and the Economy academic technology transfer for 2016

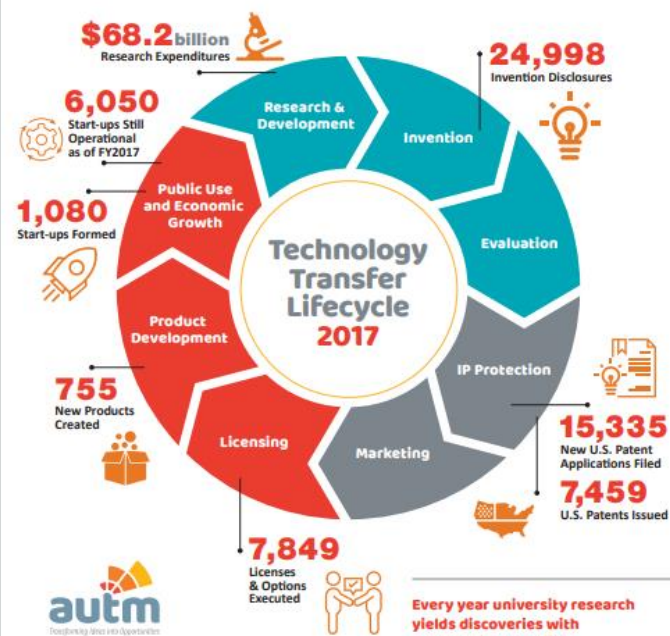


For more information  
visit [www.autm.net](http://www.autm.net)

Every year university research yields discoveries with commercial potential.

Technology transfer professionals associated with universities and other academic institutions manage the complex process of shepherding ideas from the lab to the marketplace — from evaluating and protecting discoveries to commercializing the inventions through new and existing companies.

## Benefiting Society and the Economy academic technology transfer for 2017



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# Improving on the University “Invention”

## Surprises from 4 decades of University IP based Technology transfer

- Stimulates a culture of innovation on campus students, faculty, & staff
- University engagement with industry rises to a new level
- University as source of entrepreneurs
- University as “nursery” for start-ups
- IP-TT capability a factor in new faculty hires
- University becomes an dynamic actor in economic development

# Improving on the University “Invention”

## Surprises from 4 decades of University IP based Technology transfer

- The university reputation is significantly enhanced
- The public develops a new appreciation for the value of the university
- Aside from all the benefits, something transformative takes place:



# Purpose of the Summit

## a shared vision

However, active participation in university IP-based technology transfer has a much more profound effect than the creation of new products, services, companies, and jobs

The ***PROCESS*** itself generates a “creative economy” of innovators, entrepreneurs, investors and supporters.....  
... a thriving

**“innovation ecosystem”**

# Purpose of the Summit

## Establish the Understanding that:

Universities and public technology creators, can play this essential societal role through proper implementation of IP-based technology transfer policy and practice...

**IF....**

Sound IP/Tech Transfer operation is in effect.

and, more importantly....

Executive leadership, vision, support, and governance for sustainable viability

is in place

# Content of the Summit

- Defines IP-based university technology transfer
- Explains its role in serving the university's basic mission
- Describes how university IP-based technology transfer catalyzes an innovation ecosystem and economic development
- Defines good management practices for IP policy, governance, and operations

# Content of the Summit

- Illuminates the history and evolution of university IP/TT and lessons learned from 4 decades of (US and UK) experience
- Describes link between philosophical principles of university IP/TT and practice
- Identifies benefits for university, its personnel, and stakeholders
- Describes the basic elements of a sustainable, university IP/TT function

# Content of the Summit

- Overview of typical structures, operations, management, and practices
- Outlines the IP/TT commercialization process
- Defines necessary investments and infrastructure
- Explains special issues
- Illustrates with case examples
- Description of WIPO's EIE Project

# Purpose of the Summit

## A Final Word:

A successful, university IP-Tech Transfer program

**MUST** have the understanding, support, engagement, and enthusiasm of the institution's senior leadership

# The Summit: Purpose and Content

Thank you