

# TreMonti

## Academia and Industry:

### A Collaboration of Clashing Cultures

### (...and How to Make it Work for You!)

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# Overview

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- What is technology transfer
- What does research funding have to do with technology transfer
- Difference between university and industry research
- How do you engage with industry & why
- IP, Patents, NDAs, MTAs, and other nonsense
- Your friend, Technology Transfer and Contracts

# What is “Technology Transfer”?

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- Technology transfer is a term used to describe a formal transfer of rights to use and commercialize new discoveries and innovations resulting from scientific research to another party.

# What is “Technology Transfer”?

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- **Benefits:**

- Leads to new products and services that improve our quality of life.
- Adds billions of dollars to the U.S. economy
- Supports hundreds of thousands of jobs.
- Creates new businesses, industries and markets.

# Driving the Innovation Economy

## academic technology transfer in numbers

From 1996 to 2015, up to...

**\$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...

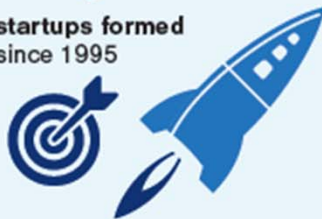
**80,000+**  
U.S. patents issued...



to research institutions in the past 25 years

**11,000+**

startups formed  
since 1995



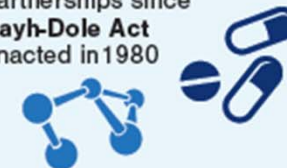
**70%**

of university innovations  
licensed to startups and  
small companies

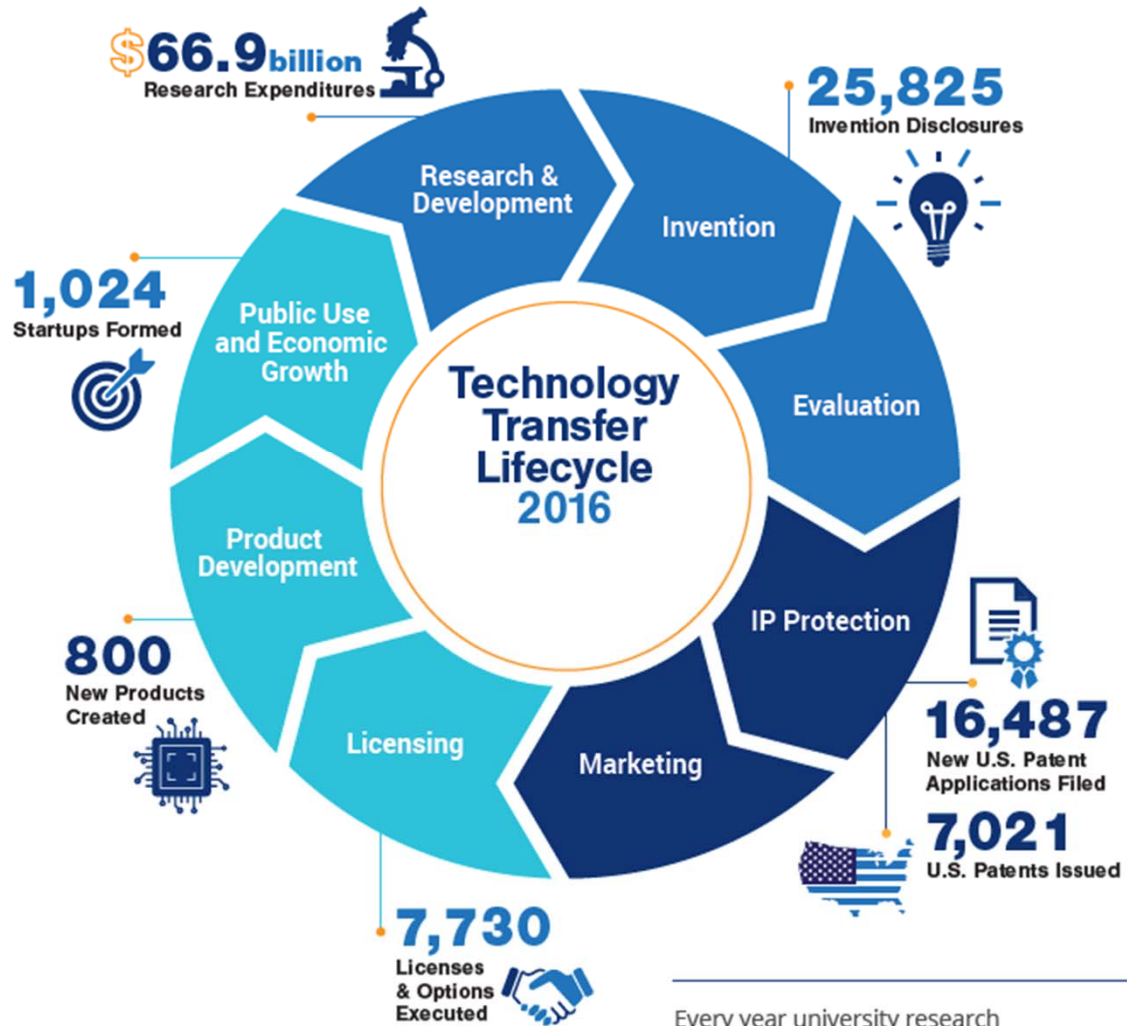


**200+**

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



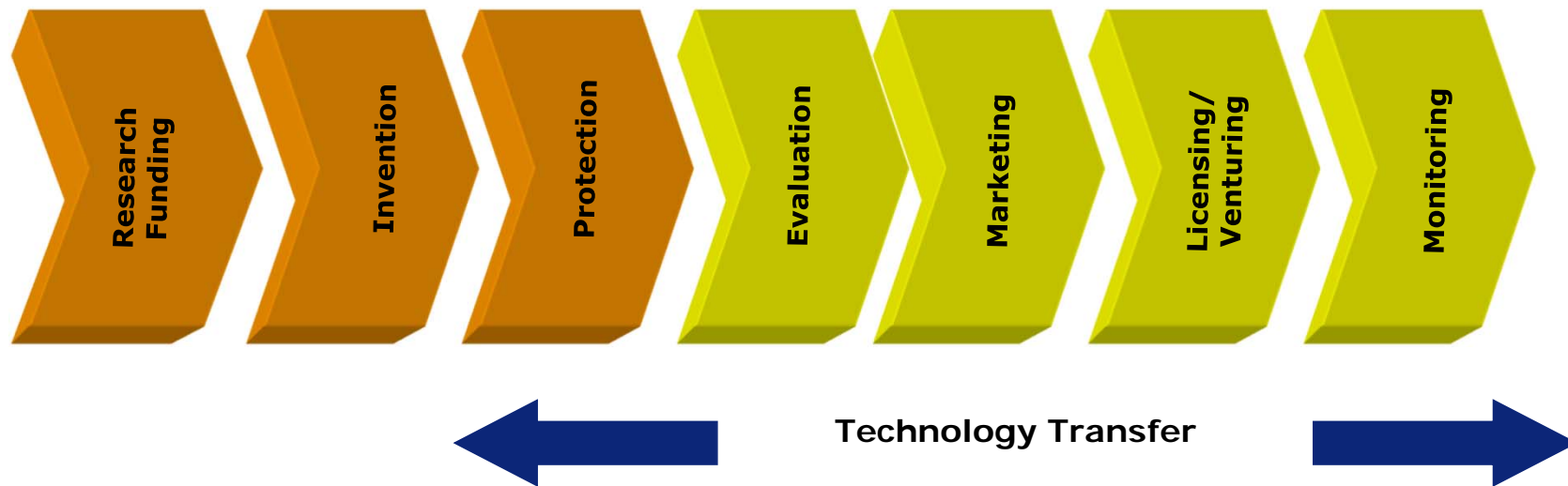
# Benefiting Society and the Economy academic technology transfer for 2016



Every year university research yields discoveries with commercial potential.

# What are the Stages of IP Development?

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# Invention

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- **When do you have an invention?**
  - Scientific/technical breakthrough
  - Concept or reduction to practice
  - Doesn't have to be a "big ticket" item
- **Should you disclose?**
  - Yes
- **Are there potential commercial benefits to the discovery?**
  - Better, Faster, Stronger, Cheaper, Greener
- **Talk to the TTC**
- **Scientific breakthrough ≠ Commercial opportunity**
  - Great science does not equal commercial interest
  - A patent ≠ a publication



## How Do Universities Commercialize Their Intellectual Property?

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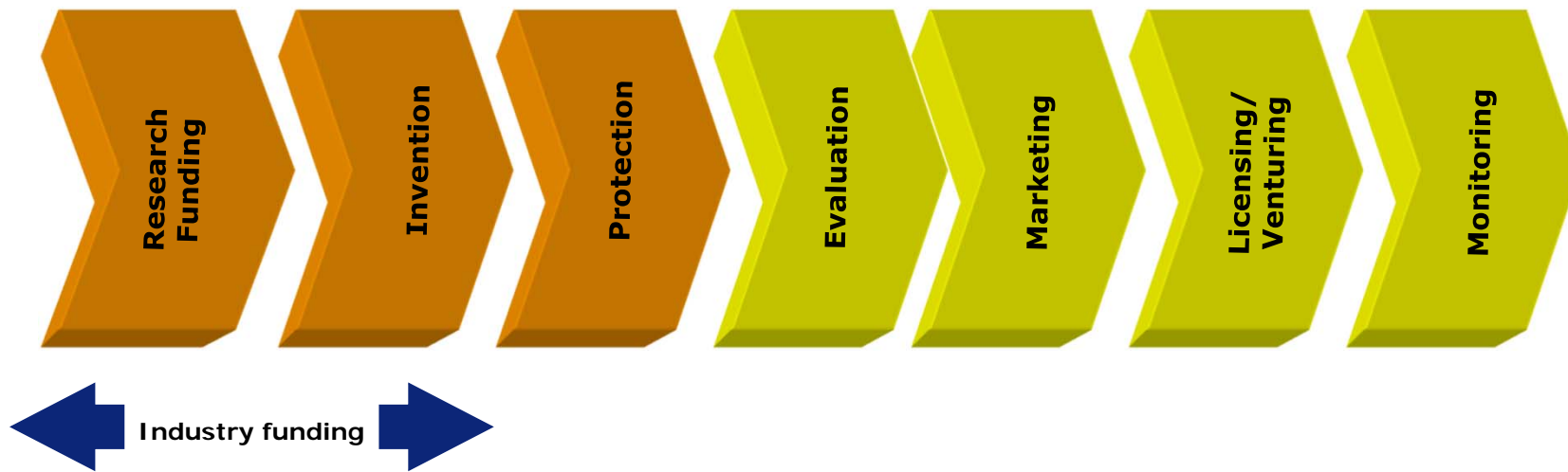
- **Universities typically transfer technology through protecting (using patents and copyrights) then licensing new innovations.**
- **Ways to transfer**
  - License
  - Sell
  - Spin Out
  - Give it away
- **Identify potential commercial partners**
  - Research Sponsor
  - Contact by Licensee
  - Marketing
  - Attending Industry Events

# Research Funding

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**So what do Technology Transfer and Intellect Property  
have to do with research funding?**

# What are the Stages IP Development?



# University vs. Industry Research - Differences

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- **Academic research is ... academic**

- The chief responsibility of a university is to produce and disseminate new knowledge. New knowledge is created through research. Research is based on primary and secondary sources, often together with original data collected via research "instruments" to produce new knowledge on a particular topic –  
University of Tampere, Department of Translational Studies
- Focus on basic science - causes, effects, and the nature of things
- Goal is to publish and share knowledge for others to build on
- Peer review is very important
- Personal goals may include academic advancement, peer acceptance, and increased grant funding

# University vs. Industry Research - Differences

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- **Industry research is focused on commercial opportunities**
  - Basic research is the starting point
  - Focus on applied science – answer and solutions to specific problems
  - Scientific inquiry is focused on solving a commercial problem
  - Goal is to solve problem in a “commercially viable” fashion before other companies
  - Greater secrecy
  - Corporate goals instead of personal goals
  - Government review instead of peer review

## Potential Opportunities

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- **If Industry and Academia are so different, why bother?**
  - Basic research may be linked to commercial opportunities
  - Commercial success can lead to additional research
  - Expertise may be needed by industry: more basic research is being outsourced
  - Industry can bring resources to the table that may be unavailable otherwise
    - Funding
    - Proprietary materials
    - Other expertise

# Potential Conflicts

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- **Access to industry resources comes with requirements**
  - Publication may be delayed
  - Different type of reporting
  - New inventions have to be disclosed
  - Secrecy may be required
  - The problem may not be interesting to you
  - Cannot mix funds
  - Limited use of materials
- **Entire process may move at a different pace**
- **Very different type of funding**

# How do I engage with Industry?

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- **What do you bring to the table**
  - ***Is there an invention or potential invention?*** How does it potentially relate to an industry need?
  - What would be the next steps? How much would it cost?
  - Steps beyond that?
  - Understand you, your lab, and your institution's expertise
  - Do you have specialized equipment?
  - What is the current direction of your research?
  - What is industry's?
  - How could industry use your expertise and facilities?



# Let's talk about Cash

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- How much money do you need to accomplish your (and the company's research goal)?
- Defined actions
- Have you taken into account the university's overhead?
- Do not fudge the costs!

# IP, NDAs, MTAs, and other mumbo jumbo

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- Interaction with industry (and others) is based around a series of legal constructs (concepts), whose goal is to protect the owners (inventors, university, and industry)
  - IP – intellectual property – patents, copyrights, trademarks, trade secrets, know how
  - NDA/CDA – Non-disclosure agreement – keeps secrets
  - MTA – Material Transfer Agreement – Keeps track of materials coming in and out of labs
  - Sponsored Research Agreement – Contract that outlines a specific line of research that is paid for by one of the parties
  - Option – Keeps a piece of intellectual property off the open market for a period of time
  - License – A contractual transfer of rights between parties
- Some or all of these may come into play

# Do you feel like this now?

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# Your Friend, Technology Transfer and Contracts

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- **Technology Transfer and Contracts is there to assist in navigating this process**
  - Allows you to focus on the science
  - TTC focuses on legal and business issues
  - Makes “investment” in your technology
  - Not focused just on \$\$\$

# Your Friend, Technology Transfer and Contracts

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- **University's position is not to hinder sponsored research or commercialization**
  - Protect rights – yours, university's, and industry's
  - Find the appropriate path for technology
- **Importance is in communication**

# Conclusion

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- Interaction with industry can be a useful platform to find research funding and access to tools, materials, and expertise
- It comes with limitations - be aware of them
- Can be a win-win
- University has resources to support you in these discussions