Technology Transfer & The University Mission

40 Years of University IP-Technology Transfer:

Some *Myths* & Facts

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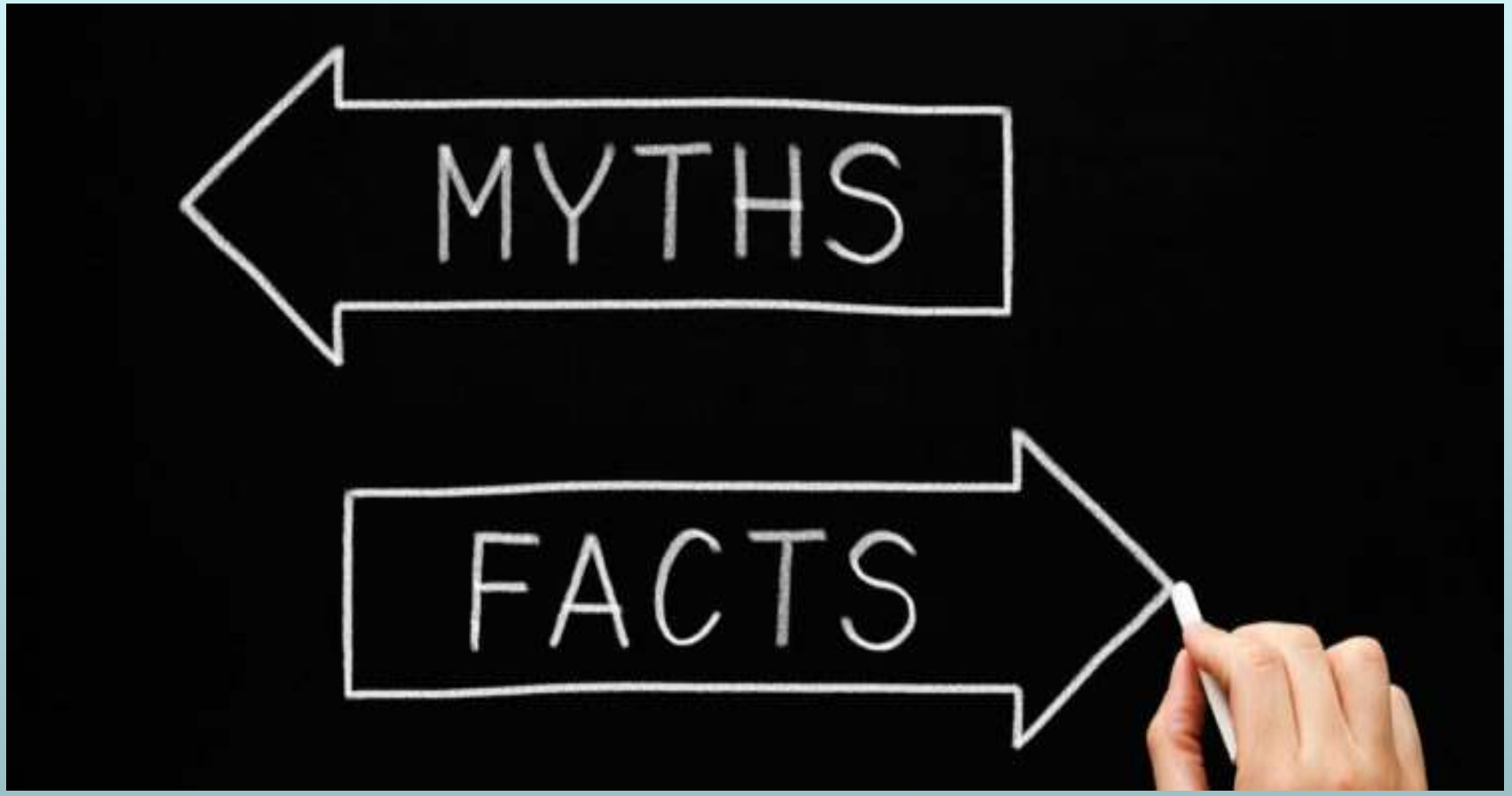
University IP/Technology Transfer



University IP-Technology Transfer

Myth: *university IP/technology transfer will transform the university into a commercial-minded institution*

Fact: A university with a successful IP/technology transfer program will:

with proper IP Policy and practices, retain all its traditional ways, culture, and values of education, scholarship, academic freedom, and focus on the public good

University IP-Technology Transfer

Myth: *university IP/technology transfer only requires an IP Policy and a patent budget*

FACT: A successful, university IP/technology transfer program:

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

University IP/Technology Transfer

Myth: *IP/Tech Transfer is a good way for a university to make money*

FACTS:

- The goal should always be technology dissemination for the public good, never financial return
- With good management, it's reasonable to expect TTO to eventually break-even
  - ★ However, good TTO management, governance, leadership support, investment, and patience….

    is likely to produce significant revenue……. eventually

As a by-product of a successful process

***Myths*:**

Universities are filled with valuable inventions, just waiting to be picked like "low  hanging fruit"

Practically anyone with a basic level of skill can commercialize these inventions

The Cornell TTO example:

Over a span of twenty years:

3000 inventions submitted

1500 (~ 50%) filed as patents

750 (~25%) licensed

650 (~20%) generate revenue

50% of Cornell's patent expenses reimbursed by licensees

Compare: 95% of all US patents produce NO revenue!

How did we do it?

*Triage *judgement *built a business case *good IP management *proactive technology marketing *some luck

Facts:

- There are many fewer "commercializable" university inventions than many realize

  (typically: 1 disclosure/$2million in research/yr)

- Most university inventions will never be commercialized because they:

  don't solve an economically important problem

  aren't better than what's currently available

  can't be scaled-up

  aren't cost-effective

  have some insurmountable flaw

  don't allow meaningful IP

Examples: Invention "failures"

- **"Buffering Capacity" measurement apparatus**

  could not be scaled up

- **Unique Ceramic Composite Process**

  solution much costlier than any problem (satellites?)

- **Bacterial Control of Wheat Fungal Disease**

  works in greenhouse but only sometimes in field (75%)

- **New Biofuel Crop (Pennycress)**

  seeds cannot be cost-effectively harvested

- **Farmed Shrimp Disease Diagnostic**

  not novel

- **Impact-Resistance Layer**

  not sufficiently superior to existing methods

- **LED light manufacturing process**

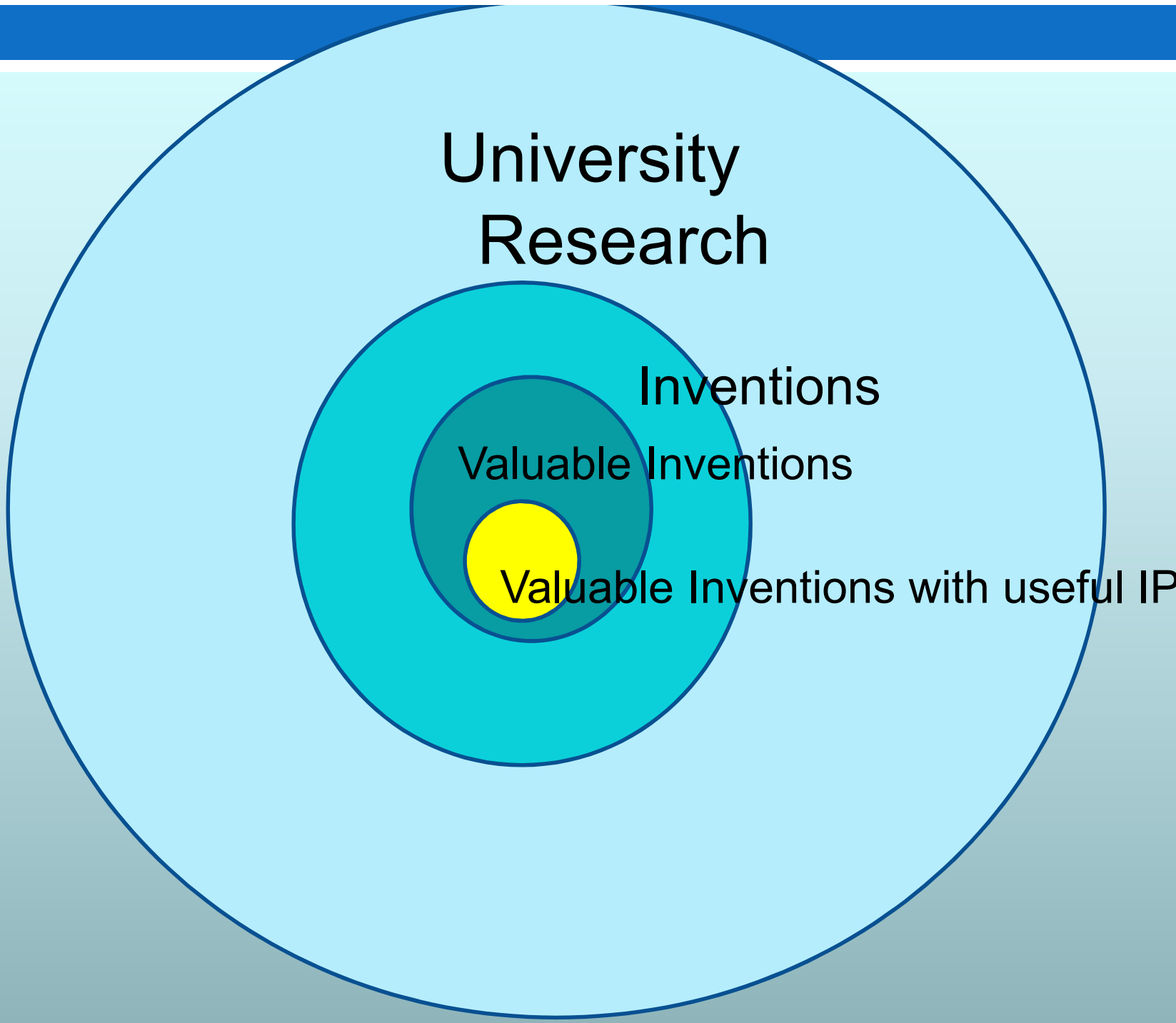
  too disruptive

University IP/Technology Transfer is more about the process than its results

While a well-managed IP/TT function is striving to break even, and ….

…….the combination of good TTO management, governance, sr. leaders' support, and patience, will eventually produce significant revenue……

…… the university is actively using its IP assets to catalyze an innovation ecosystem, spawning economic development, and a ripple-effect of societal benefits


University
Research
Inventions
Valuable Inventions
Valuable Inventions with useful IP

Valuable Inventions with useful IP

For universities, this is both goal and launch point.

With these…..

skilled, creative, and motivated

technology transfer/commercialization

professionals,

entrepreneurs and intrapreneurs,

visionary supporters, accelerators,

and investors….

Create new products, services, companies,

jobs, revenue, and……

Economic Development

Myth: *University researchers are motivated by the $$ success of their invention*

Facts:

- Only a small % of university researchers want to get-rich through IP/TT
- A few don't want to make any $$ from their invention
- Most won't refuse $$ if their invention is successful

  but……

- **100% want their invention to be used to solve real-world problems!**

Myth: *The number of inventions/researcher/year will remain constant*

Fact:

- Outreach and promotion of tech transfer, and successes will increase invention disclosure rate

Cornell example:

1990: 90 disclosures/2700 researchers/year

= **0.03 inventions**/researcher/year

2010: 350 disclosures/2700 researchers/year

= **0.13 inventions**/researcher/year

4X increase in disclosures/researcher/yr in 20 years

Myths: ***Establishing an effective university IP/TT function requires little investment; staffing a TTO is easy; the IP/TT function is peripheral to university Interests***

Facts:

- Effective IP/TT requires dedicated and qualified staff
- Good people and good IP require significant and long-term investment
- IP/TT will evolve into one of the pillars of the university mission
- Investment in IP/TT will transform the university into a more proactive participant and patron of the innovation economy for the widest public good

Facts:

- Successful IP/TT will enhance the university's reputation
- Many faculty will embrace IP/TT;
- Local/regional/national company creation will result
- There will always be challenges

Thank You