

Technology Transfer To Practice Barriers to Faculty Members

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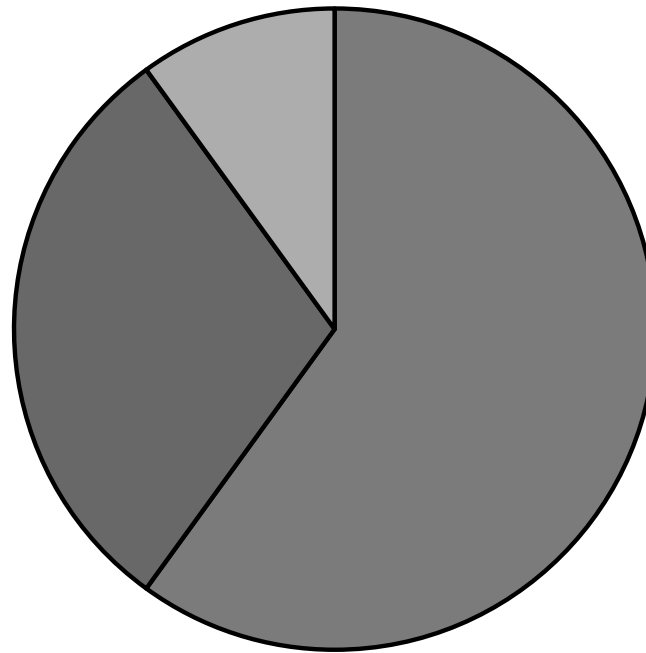
So, why engage TTP?

- Expand the impact of research
- Diversify your research
- Expand/extend NSF funding
- Profit
- Form long-term industry connections
- Opportunities for students
- Etc.



Faculty Workload

The Academic 60-30-10 Model

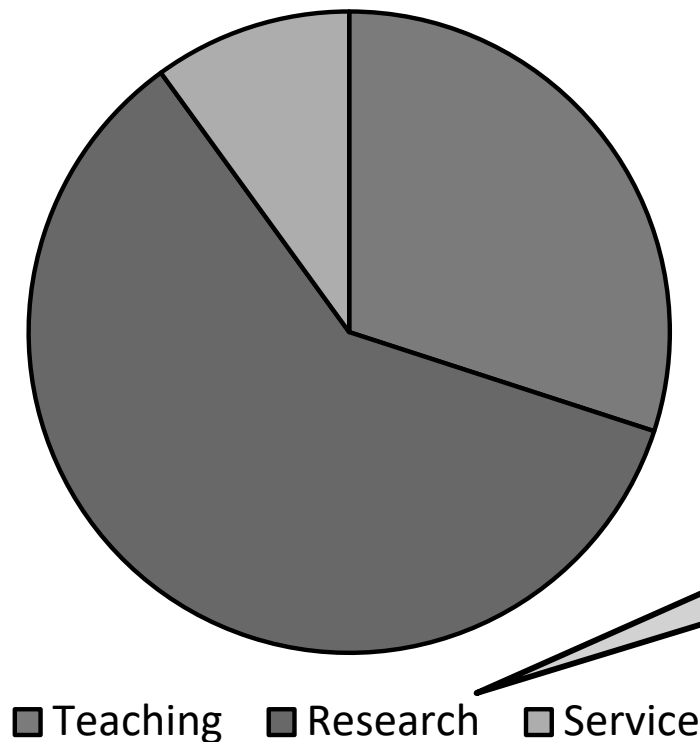


■ Teaching ■ Research ■ Service



Faculty Workload

The Academic 30-60-10 Model



What's missing?



Key TTP Impediments

- “Faculty incentives are not well-suited for TTP”
 - Anup Ghosh, TTP Workshop, Jan 12, 2023
- “Faculty incentives are not well-suited for TTP”
 - Angelos Stavrou, TTP Workshop, Jan 12, 2023
- Is it fixable in the short term?
- How?



Key TTP Impediments

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- Is it fixable in the long term?
- What are the right faculty incentives for TTP?
 - Reduced publication requirements?
 - Reduced teaching loads?
 - Durable, tenure-like, research faculty positions?
 - Fully funded or mixed soft/hard money



TTP Impediments

Risks to the faculty member

1. Career impact
 - a. Tenure
 - b. Promotion
 - c. Raises
 - d. Continue employment

Should tenure-track, but not-yet tenured, faculty ever engage TTP?



TTP Impediments

Risks to the faculty member (cont)

2. Financial liability

a. Company

b. Personal

3. Reputation

4. Loss of family time

5. Stress

6. Etc.

Anything missing?

What's the greatest risk?

Did you know going in?

Sweat
Equity



TTP Impediments

The Academic Model

- “Universities are ill-equipped for TTP”
 - Anup Ghosh, TTP Workshop, Jan 12, 2023
- “Universities are ill-equipped for TTP”
 - Angelos Stavrou, TTP Workshop, Jan 12, 2023
- Is it fixable?



TTP Impediments

The Academic Model

1. Time is measured in *semesters*
 - a. Students are largely hired on semester boundaries
 - b. Midterm and final exam schedules may dictate student work schedules
 - c. Student hours are limited and enforced
 - d. Students work over breaks may be limited



TTP Impediments

The Academic Model (cont)

2. The word *profit* is not in the vocabulary
University administration is not motivated
by your potential profit/loss
3. *Uniform guidance* is not *uniform* and it is
not *guidance* (it is mandatory*)
 - a. Accounting is expensive
 - b. Being audited is time consuming
 - c. Uniform guidance creates massive oversight
overhead

**If federal funding is involved*



TTP Impediments

The Academic Model (cont)

4. *Custom contracts* are painstakingly slow
 - a) University financial processes are not structured to support business-pace contracting
 - b) There are lots of steps in the contracting process
5. *All contracts are custom contracts*
 - a) Most any contract change requires backtracking multiple, if not all, steps



TTP Impediments

The Academic Model (cont)

5. *Research faculty* is not well-defined
 - a. May be designated *staff* or *faculty*
 - b. May be 9 month or 12 month contracts
 - c. May have a teaching assignment
 - d. Could negatively affect international team members



TTP Impediments

The Academic Model (cont)

6. You can't just *pay students*
 - a. They may be hourly or salaried by policy
 - b. There may be a directed rate by policy
 - c. You may have to pay tuition by policy
 - d. There may be fringe benefits by policy
 - e. There may be fees (like athletic fees, by policy)



TTP Impediments

The Academic Model (cont)

7. Must have iron-clad separation of business and academic use of resources
8. *Conflict of commitment* can be onerous
9. *University space is sparse & expensive*, which may limit flexibility and growth



Key TTP Impediments

1. Finding the customer (matchmaking)
2. Building the team (HR)
 - Ad hoc processes for #1 and #2 do not work, or at least are highly inefficient
 - For academic TTP to ever be efficient, these two processes should be systematic.

Agree/disagree?



Matchmaking/HR

Systematic approaches illustrated

1. Finding the customer (matchmaking)

- South Alabama Center Director
- Contact 100 business/yr
- Meet with 25-30/yr
- 2-3 new partners/yr

2. Building the team (HR)

- A2E: Finding a CEO
- Many prospects invited
- 25 on the group call
- Narrowed to 4
- Repeat



TTP Impediments

The Tech Transfer Office

- TTOs walk a fine line
- Of course they want faculty members to succeed and royalty payments are a good thing
- TTO's first priority is to protect the university
 - Protecting IP means protecting the University's rights to its share of future revenue
 - Liability protection means protecting the university from lawsuits
 - The best interests of the university and the investigator aren't always in alignment



TTP Funding

STTR

NSFCA

TTP

VC

- **Coming up next**

FFF

Industry

Angel

iCorps

IUCRC

SBIR



Questions?

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