Knowledge & Technology Transfer

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Commercialization is a multi-stage Process

- **What is actually *Commercialization* of University-generated knowledge/technology?**
- It begins at the University research lab – Point A
- It may end as a new product or process produced by a firm – Point Z

Now we need to look at the whole picture, and in particularly at

- **The companies that will convert the inventions into products or processes**

- **The transfer process between the two ends**

The real issues

- **How to get from A to Z?**
- **How to do it systematically on a big scale?**

Metrics used to evaluate *Commercialization = University Output* indicators

Counts of:

- Inventions disclosures, patents
- Licenses granted, Royalty income received
- R&D contracts signed, R&D revenue received
- Start ups formed based on inventions

So far we have been looking at

The start of the Commercialization process - the university inventions:

How the TTOs handle R&D ontracting, Licenses, Patents, and the formation of Start ups

What does it take to get from A to Z?

- Universities that generate ***"good"*** inventions
- Companies that have the ***capabilities and resources*** to turn the inventions into products/processes
- Intelligence service that informs companies of new inventions
- Models of ***effective transfer processes and TT management***

Let's assume that

1. The majority of universities generate **enough *good* inventions**.
2. The majority of ***big companies*** have the resources and capabilities to learn of such inventions, and to turn them into products/processes.

Let's concentrate on

- How to make SMEs aware of new inventions, and of the business opportunities they represent
- How to assist SMEs with obtaining the resources and capabilities necessary to convert inventions into products/processes
- How to make the KTT itself more systemic and effective

How does University transfer knowledge to Industry?

- Scientific publications, conferences, courses
- Graduates and faculty
- Contracted R&D
- Licensing of patents
- Collaborative research projects
- Exchange of researchers

How does a company absorb the new knowledge and convert it into a product?

- Not enough information on the company side of KTT

Most effective KTT method

- Close R&D cooperation between the university researchers and the industry technologists working on solving a joint task
- Invention + Need = Innovation
- University-Industry KTT should be a declared/major objective
- More companies collaborate with academia

Some assumptions about universities

- How "good" are they really at generating "many good" inventions?
- Government should condition more academic research funding on collaboration with industry
- **Universities should be assigned the *Commercialization* tasks**