Good practices in university technology transfer

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THANK YOU!

Beverly and John

Challenges

- Get more invention disclosures
- Capacity building in terms of business competencies
- Create long-term financing model for TTOs
- Strengthen cooperation between academia and industry
- Ensure proper funds to cover IP costs
- Proof-of-concept financing
- Recognize innovation results in the academic career system
- More incentives for inventors (tax burden)

New call – Eligible activities (non-exhaustive)

- Formation/operation of technology transfer offices
- Revision of the IP policy
- Identification, marketing and exploitation of institutional capacities
- Establishment of an institutional fund dedicated to IP protection
- Raising technology transfer awareness among staff and students
- Capacity building in technology transfer
- Setup Proof of Concept programs
- Creating university spin-offs, business development

IP policies

An IP policy needs revision on a regular basis

Sources:

- IP policies at other universities (WIPO database)
- WIPO – IP Toolkit for universities:

  https://www.wipo.int/about-ip/en/universities_research/ip_policies/

  - IP Policy Template
  - Guidelines for Customization
  - IP Policy Writer's Checklist
- Comparative analysis of IP policies in Hungary, 2018

  (Study published by the Hungarian Intellectual Property Office)

IP policies – most common issues

- Personal scope
- Scope of application
- Ownership rights
- Procedure rules
- Conflict of interest

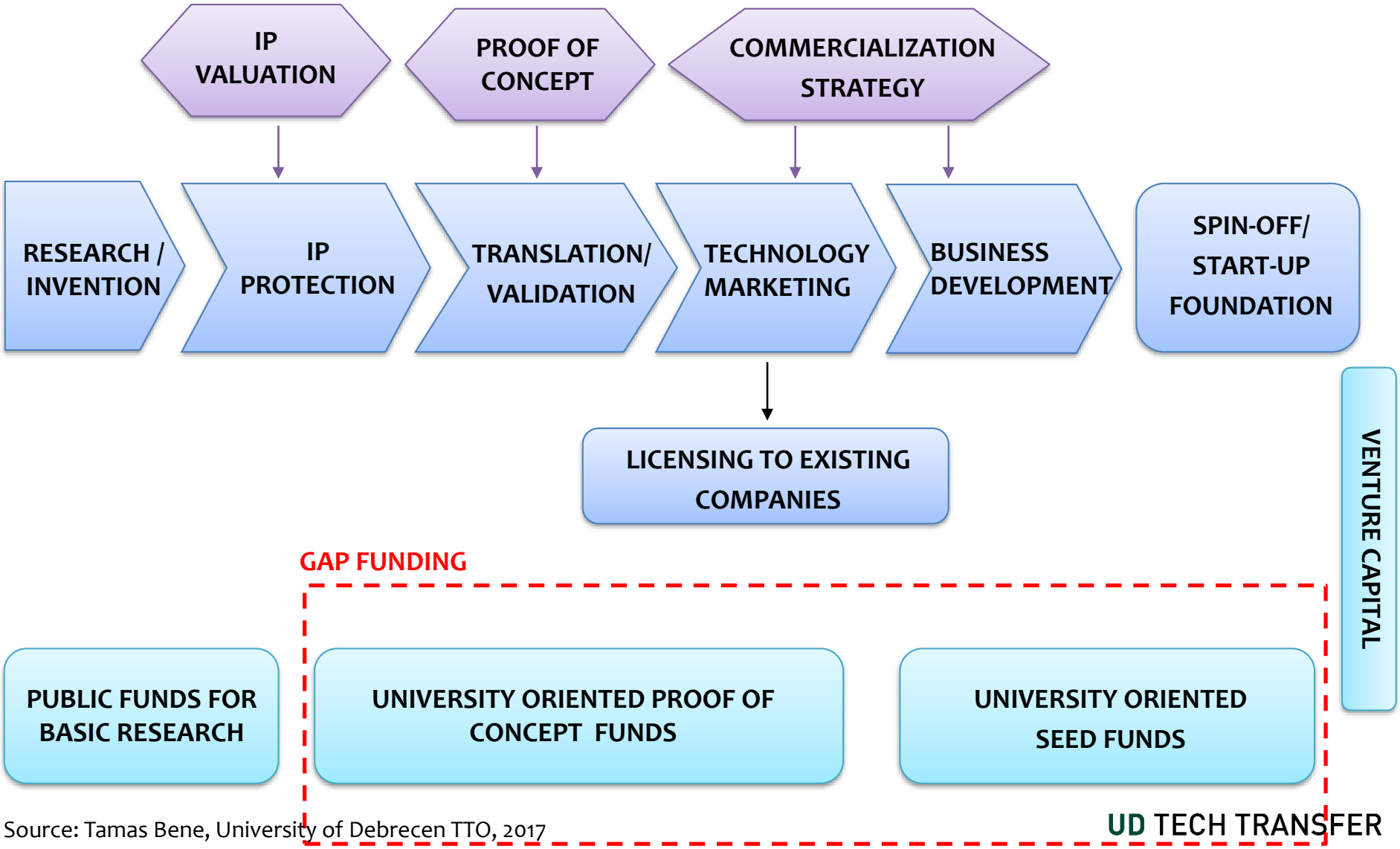
Identification, marketing and exploitation of institutional assets & capacities

WIPO Tool: Academic Intellectual Assets Map
https://www.wipo.int/about-ip/en/universities_research/ip_knowledgetransfer/

- Patented & other protected technologies
- Software, databases
- Other copyright works (e.g. teaching materials)
- Trade secrets, know-how

- Research-related & lab services
- Expertise in various fields
- Access to patients
- Trademarks

Key stages in technology commercialization



Source: Tamas Bene, University of Debrecen TTO, 2017

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Key questions in technology commercialization

- Is the invention original and distinctive?
- What is the stage of development?
- Is the invention patentable and could a patent be enforced?
- **Are there available resources to help further develop the technology?**
- **Is there a market for the invention?**
- Can we find a business interested in licensing, developing and commercializing this technology?
- Is there a dedicated team to start a new company?

PoC review documents

Mind the Gap Report
University Proof of Concept and Startup Gap Funds (by innovosource)

Financing Technology Transfer
Working paper by the European Investment Fund, 2009/002

Bridging the University Funding Gap: Determinants and Consequences of University Seed Funds and Proof-of-Concept Programs in Europe
Working paper by the European Investment Fund, 2015/27

Review of UK Proof of Concept Support
Review by Innovate UK, the UK's innovation agency, 2015

- 25 national funds
- 14 regional funds
- 23 internal organization specific funds

Characteristics of typical university PoC financing

- Precedes company formation
- Government money (or the university's strategic fund)
- No equity or ROI is expected
- ~ 10k – 100k EUR per project with milestones
- Application process is short
- Not another research grant!

Definition of Proof of Concept (PoC)

Activities

- Technical feasibility studies
- Prototyping
- Specialist testing and/or demonstration testing
- Market research, testing and competitor analysis
- IP protection and IP position assessment
- Investigation of production and assembly options

Stage of development

Technology readiness levels

- TRL 2 - Technology concept formulated
- TRL 3 – Experimental Proof of Concept
- TRL 4 – Technology validated in lab

Source: Review of UK Proof of Concept Support, 2015

Proof of concept funding – Common issues

- Type of application
- Role of TTO in the procedure
- Co-owned inventions
- Evaluation process
- Decision-taking
- Follow-up activities

University of Debrecen – Innovation Fund

New financial instrument to support innovative research and other third mission activities

Proof of Concept Fund

- First projects started in Jan, 2019
- Funding up to 30k EUR for 9 months
- Available for university research groups
- Research and business development activities
- The technology must be registered within the TTO and the commercial potential must be clearly identified

Evaluating Commercial Potential Through Market Research

- Is there a clear product?
- Does it solve a significant problem?
- Will the customer pay for it?
- What is the market size?
- What are competitive products?
- Who are likely licensees?
- What are legal and regulatory barriers?

Understanding the market is critical!

Commercialization is Teamwork

How inventors can help:

- Remain available and accessible
- Provide any potential leads
- Provide broad pointers for tech positioning e.g. market segment, application field etc.

TTOs responsibility:

- Research market segment or field to identify right prospects
- Prepare summaries and contact companies
- Follow ups, conf. calls, CDAs, licensing negotiations, post-licensing compliance etc.

This slide was kindly provided by Nirdesh K. Gupta, PhD, CLP
Tech Transfer Office, Cedars-Sinai Medical Center

Decision on whether to invest in the intellectual property

Launching protection and exploitation is basically a **business decision**, therefor proper scientific and economical **evaluation** is critical.

In an ideal case, inventors give **reasonable assistance** in evaluating, protecting and commercially exploiting the Intellectual Property by providing information, attending meetings and advising on further development.

As a **result of the evaluation**, the university might:

A) Accept and approve the invention disclosure
B) Release it back to the inventors
C) Suggest to further develop (and refrain from publishing), e.g. to gain commercial value

Technology evaluation

Competitive intelligence databases / matchmaking platforms

Competitive Intelligence Tools for University-Based Technology Transfer Offices (Minde I. Willardsen at al. In: Technology Transfer and Entrepreneurship, 2014, 1, 132-137)

4 tables:

- Free Resources
- Market reports
- Searchable databases
- Additional resources

Packaging and Selling Your Technology

Writing Effective Non-confidential Summaries

- Highlighting your technology: Include possible application
- Tailor it to the specific needs of your marketing target: How your tech may be enhancing the company's portfolio
- Why is yours better than the existing solutions: Competitive Advantages
- A Picture is worth a thousand words: Include key data figures
- IP and Publication Status

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Commercialization routes

1. **License strategy:** license the technology to an existing business.

2. **Spin-off strategy:** create a new company and contribute the technology to the spin-off in exchange for equity and royalty payments.

3. Dedicate to public (e.g. software)

4. Assign/sell – in exceptional cases

Industry relations & research agreement

- Common types of agreements:
  - NDA/CDA
  - MTA
  - Research service agreement
  - Collaborative research agreement
  - License agreement
  - Option agreement
  - Consultancy Agreement (good practice: CUTS, Cambridge)

  - Inter-institutional agreement

Consultancy Agreement

Through the University	In a private capacity
Contractual arrangements are between the client and the University.	Contracts are between the client and the individual liable for the work.
Cover from University's insurance policies including professional indemnity.	Individuals need to consider their private insurance cover needs and, as necessary, ensure cover is maintained at an appropriate level for an adequate period after the completion of their work.
Use of University's address and affiliation.	Home address and use of personal letterhead.
Use of University's facilities	University staff performing work in a private capacity do so entirely at their own risk and must make a clear distinction between their private work and their University duties.

Source: Cambridge University, CUTS;
https://www.enterprise.cam.ac.uk/our-services/academics-researchers-and-students/be-a-consultant/

Key success factors

University:

- Support from higher management
- Clear policies, procedures and responsible persons for proper daily routine
- Short decision making process
- Changing researcher's mind via education (rather than mandatory rules)

TTO:

- Fast response to both research and business community
- Effective and fast preparatory work to support decisions
- Minimize the administrative work for scientific staff
- Proper, unbiased valuation of inventions
- "One-stop-shop" operation

Thank you.

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