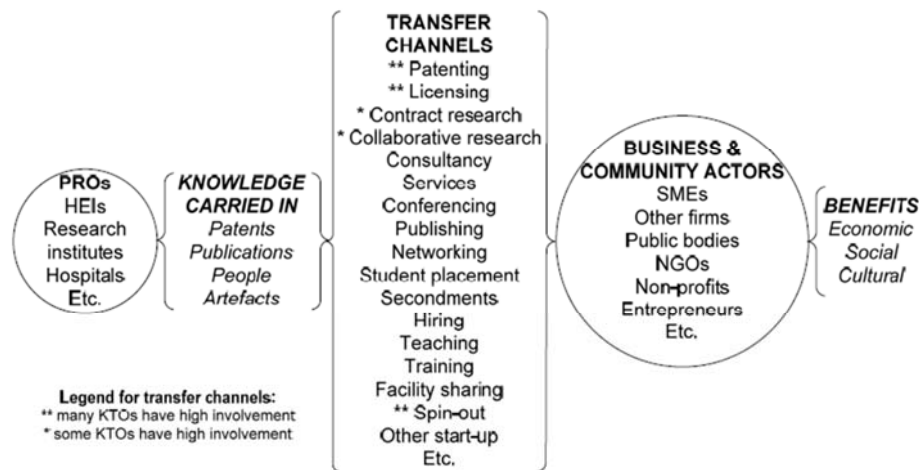


## Innovation Infrastructure: How to Establish the Technology Transfer Office - Practical Steps

Thomas L. Bereuter, CLP  
val»IP Ltd. & CoKG

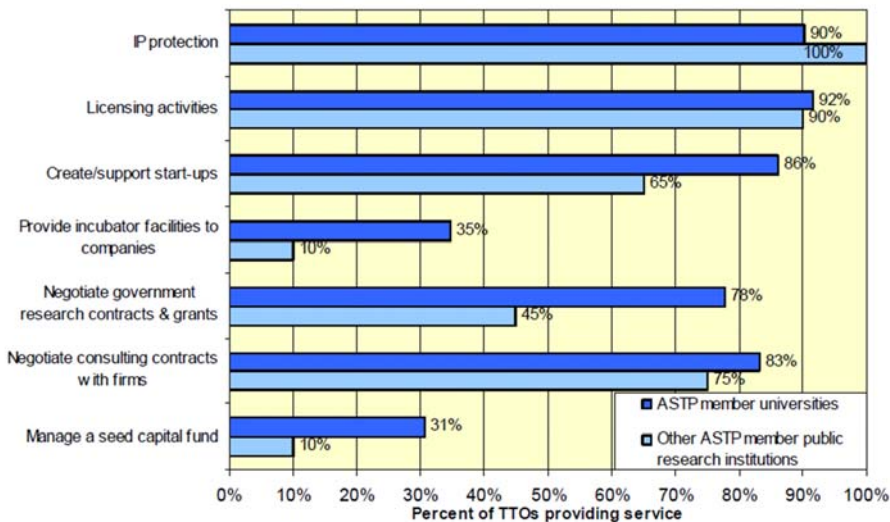
## IP Hub or Small Office? Set up and Operating Models



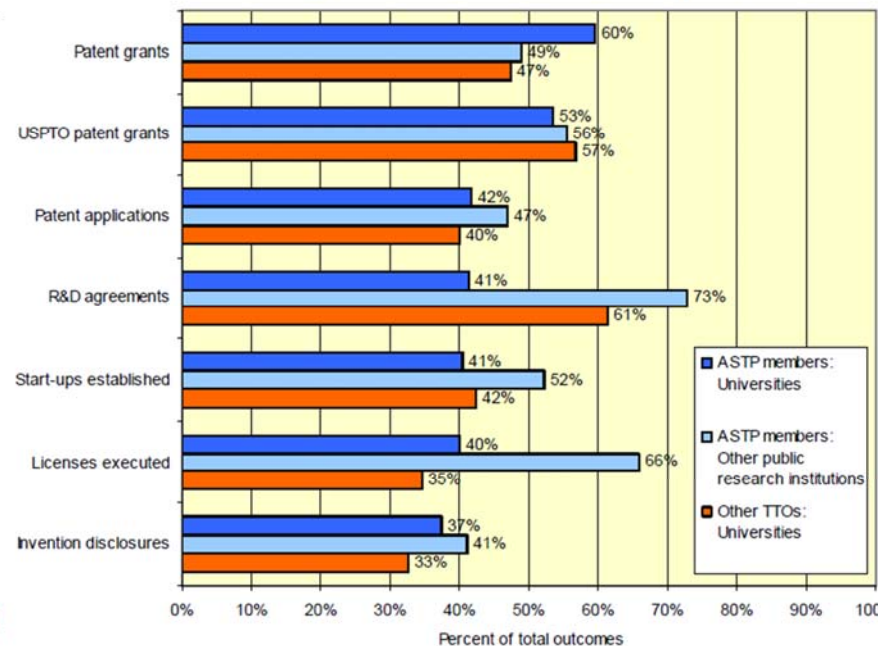
## ASTP Survey

- ASTP Association of European Science and Technology Transfer Professionals
- 3rd survey, published Oct. 2008:  
[http://www.astp.net/Survey%202008/Summary\\_2008\\_ASTP\\_report.pdf](http://www.astp.net/Survey%202008/Summary_2008_ASTP_report.pdf)
- Technology transfer (TT) activities of **universities and other public institutes**
- Response rate of 61.4% for ASTP members and 18.8% for non-ASTP members from 18 EU countries and 4 non-EU countries
- Content: Types of TT services provided + 7 metrics: invention disclosures, patent applications/grants, start-ups, license agreements, license income, and research agreements

Services provided to affiliated institutions by ASTP members



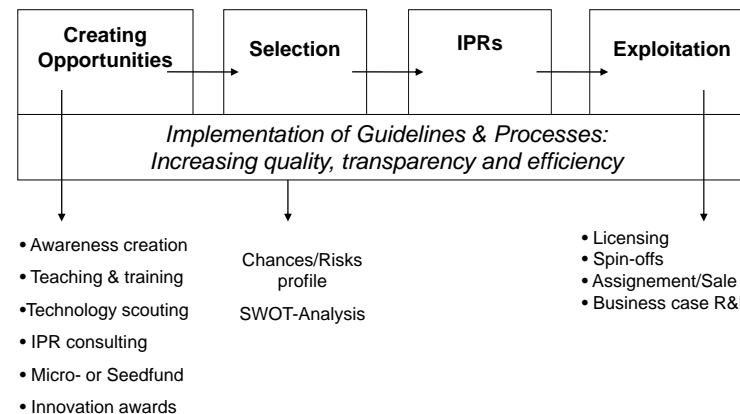
Percent of knowledge transfer outcomes from the top 10% performers



## Major Tasks

- » **TLO core tasks**
  - » IP scouting, evaluation, protection and commercialization/exploitation
- » **(IP-) Contract management**
  - » Especially for research collaborations, grant applications, service and R&D contracting, consulting
- » **Liaison office for industry contacts**
  - » Traditional partnering with industry
- » **Spin-off support**
  - » Spin-off coaching; Spin-off incubator; Seed funding of Spin-off

## Core Tasks of TLOs



## TechTransfer Value Chain

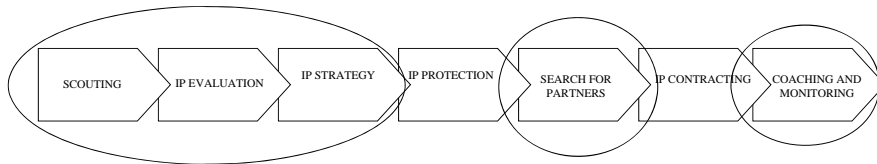


## Classical Administrative Approach



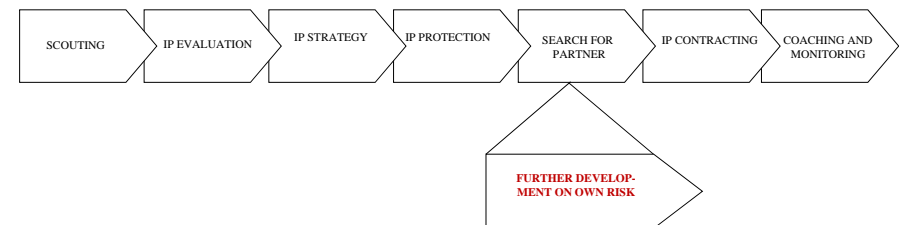
In most cases reactive and administrative service provider for IP protection and IP contracting.

## Business Focused TechTransfer



Covering the whole TT value chain based on a business and process oriented approach resulting in higher innovation rates!

## Innovation Focused Tech Transfer



Pro-active further development of the technology coordinated by the TTO to increase the success rate of the technology transfer!

## Additional TT Tasks

- » **Setting up and implementing TT guidelines and rules**
- » **Stake holder relations**
  - » Creating TT **awareness within** the institution
    - » Communicating/lobbying with inside players
    - » Teaching & training, workshops...for researcher
  - » Communicating/**lobbying** to **outside** partners
    - » Industry, politicians, local players, public sector...

## European TTOs

|                             | ASTP  | Non-ASTP |
|-----------------------------|-------|----------|
| Staff [FTE]                 | 8,8   | 10,7     |
| Age [years]                 | 9,3   | 9,6      |
| <i>Ownership of IPRs</i>    |       |          |
| Institution                 | 75%   | 72%      |
| Research funded by industry | 16,1% | 11%      |

## Operating Models for TTOs

- » **Classical: Part of the University**
  - » As a own unit, directly reporting to the rectorate
- » **Separate unit of the University**
  - » Own dedicated company owned by the university
  - » Service unit shared with other R&D organizations
- » **Partnership with private third party(ies)**
- » **Private-Public-Partnership**

## TTOs Need Support

- A „TT Champion“: senior licensing/CLP level!
- Strong long-term backing and commitment by the rectorate: financing, implementation of rules...
- Clear and transparent rulings and guidelines: reducing overhead and conflict-of-interest
- Simple and efficient reporting line: definition of meaningful and sustainable metrics (with focus on quality criteria and evolution over time)
- TT Advisory Board including external representatives from business and senior licensing experts

Table 3. Performance per 1,000 research staff in 2007

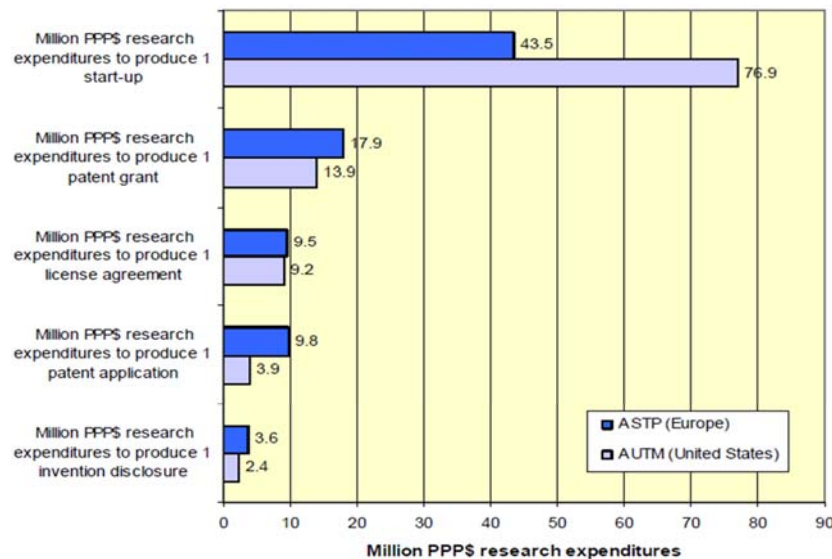
|                       | Universities |            |             | Other public research institutions |             |             |
|-----------------------|--------------|------------|-------------|------------------------------------|-------------|-------------|
|                       | ASTP members | Other TTOs | Total       | ASTP members                       | Other TTOs  | Total       |
| Invention disclosures | 18.0         | 15.1       | 17.3        | 23.1                               | 15.6        | 20.6        |
| Patent applications   | 5.7          | 7.9        | 6.2         | 7.9                                | 11.9        | 9.2         |
| Patent grants         | 3.3          | 1.6        | 2.8         | 6.5                                | 6.8         | 6.6         |
| USPTO patent grants   | 1.0          | 0.3        | 0.8         | 1.8                                | 0.2         | 1.2         |
| License agreements    | 4.8          | 3.0        | 4.4         | 10.9                               | 5.1         | 9.0         |
| License income        | 0.5m PPP\$   | 0.1m PPP\$ | 0.5 m PPP\$ | 1.1 m PPP\$                        | 0.1 m PPP\$ | 0.8 m PPP\$ |
| Start-ups established | 1.3          | 1.6        | 1.4         | 0.7                                | 1.2         | 0.9         |
| Research agreements   | 88.6         | 203.8      | 115.9       | 75.5                               | 114.4       | 89.4        |

Table 4. Unit outcome costs in million PPP\$ of research expenditure, 2007

|                             | Universities |               |              | Other public research institutions |               |               |
|-----------------------------|--------------|---------------|--------------|------------------------------------|---------------|---------------|
|                             | ASTP members | Other TTOs    | Total        | ASTP members                       | Other TTOs    | Total         |
| Invention disclosures       | 3.3          | 2.1           | 3.0          | 4.2                                | 6.6           | 4.8           |
| Patent applications         | 9.1          | 4.6           | 7.6          | 12.2                               | 8.7           | 10.7          |
| Patent grants               | 23.4         | 15.3          | 21.0         | 12.3                               | 15.2          | 13.5          |
| USPTO patent grants         | 54.0         | 107.1         | 61.0         | 44.8                               | 653.6         | 76.9          |
| License agreements          | 10.8         | 9.0           | 10.4         | 8.8                                | 26.7          | 11.4          |
| License income <sup>1</sup> | 76.0 m PPP\$ | 122.2 m PPP\$ | 82.9 m PPP\$ | 83.5 m PPP\$                       | 947.2 m PPP\$ | 120.6 m PPP\$ |
| Start-ups established       | 34.9         | 32.2          | 34.4         | 112.9                              | 186.7         | 134.5         |
| Research agreements         | 0.5          | 0.2           | 0.8          | 0.8                                | 0.9           | 0.9           |

1: This indicator equals the amount of research expenditures to earn 1 PPP\$ of license income.

Performance of ASTP and AUTM respondents (All respondents combined)



What is the Best Profile for Technology Transfer Managers and how do we Recruit, Train and Keep them?



Law



Science



Business

## Recruiting

- » From private/industry sector
  - » Very challenging: salary, working environment, career development
- » From graduate school or after post-doc study
  - » Challenge: ~50% drop out rate; costs of training; competition for talents
- » Experts from early retirements
  - » Availability, costs, age
- » Patent- and Innovation agencies

## Training

- Training on the job (need of expert or mentor)
- IP training by WIPO, LES, AUTM, EPA
- Legal/licensing training by private organizations
- Self Study: books, journals, databases, webinars/podcasts, e-learning
- Postgraduate education programs: MBAs, CLP
- Coaching by “Senior expert pool”, LES Mentors,...
- Sabbatical / visiting other TTOs

## Incentives

- » Development and career options
- » Success and performance based compensation (esp. for expert and senior level)
- » Metrics for short-, medium- AND long term view
- » Metrics have to reflect the objectives of the university, TTO, team and each employee
  - ⇒ Database: essential for implementation!
- » „More is not always better“ and „No size fits all“

## Financial and Political Expectations

## Wrong Expectations

**TTOs become within a couple of years self-sustainable**

- » Fact is that it will take many years and only if it was done the right way!

**TT will subsidize R&D at the institutional level**

- » Fact is that license income might sum up to low-% of R&D budget

**TT will contribute to the local economy**

- » Fact is that effects are not easy measurable and strongly dependent on additional efforts invested

**TT will create jobs through spin-off companies**

- » Fact is 1 spin-off per 100 million R&D Euro or 1,4 per 1000 researchers
- » Is strongly dependent on additional efforts invested!

**TTO has to represent the interest of the R&D organization**

- » Researchers have their own interests and TTO can't change the whole university culture!

## Q&A Questions & Answers

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