



Use of the PCT System as an Engine for Technology Transfer

Role of Patents: Catalyst for Innovation ?

- Heller, M.A. and R.S. Eisenberg, “Can Patents Deter Innovation?” *Science* Vol.280, pp.698-701, 1 May 1998

The “tragedy of the commons” metaphor helps explain why people overuse shared resources. However, the recent proliferation of intellectual property rights in biomedical research suggests a different tragedy, an “anticommons” in which people underuse scarce resources because too many owners can block each other. Privatization of biomedical research must be more carefully deployed to sustain both upstream research and downstream product development. Otherwise, more intellectual property rights may lead paradoxically to fewer useful products for improving human health.

- Ryan, M.P., “Patent Incentives, Technology Markets, and Public-Private Bio-Medical Innovation Networks in Brazil,” *World Development* Vol.38(8), pp.1082-1093, 2010

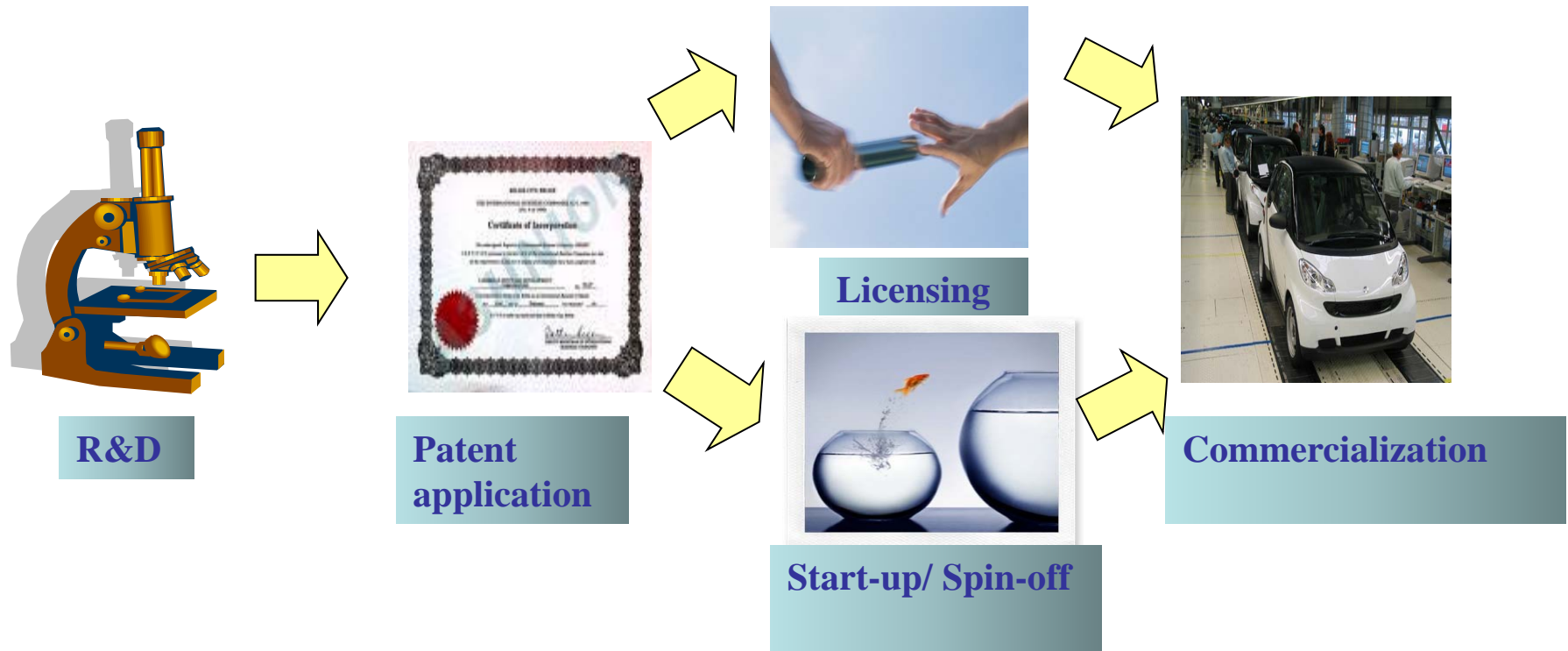
Summary. — Contested is whether patent laws promote indigenous technology invention and innovation in developing countries. Brazil reformed its patent laws in 1996 to permit pharmaceutical product patents. Study of five post-patent law reform bio-medical technology invention and innovation projects in the state of Sao Paulo supports the propositions that patents provide incentives to Brazilian bio-medical technology entrepreneurs to make risky investments into innovation and that patents facilitate technology markets among public-private technology innovation networks, both Brazilian collaborations and North-South collaborations. Brazil enacted a technology law in 2005 that encourages public-private technology innovation through patent incentives and patent-facilitated technology markets.

What is Technology Transfer?

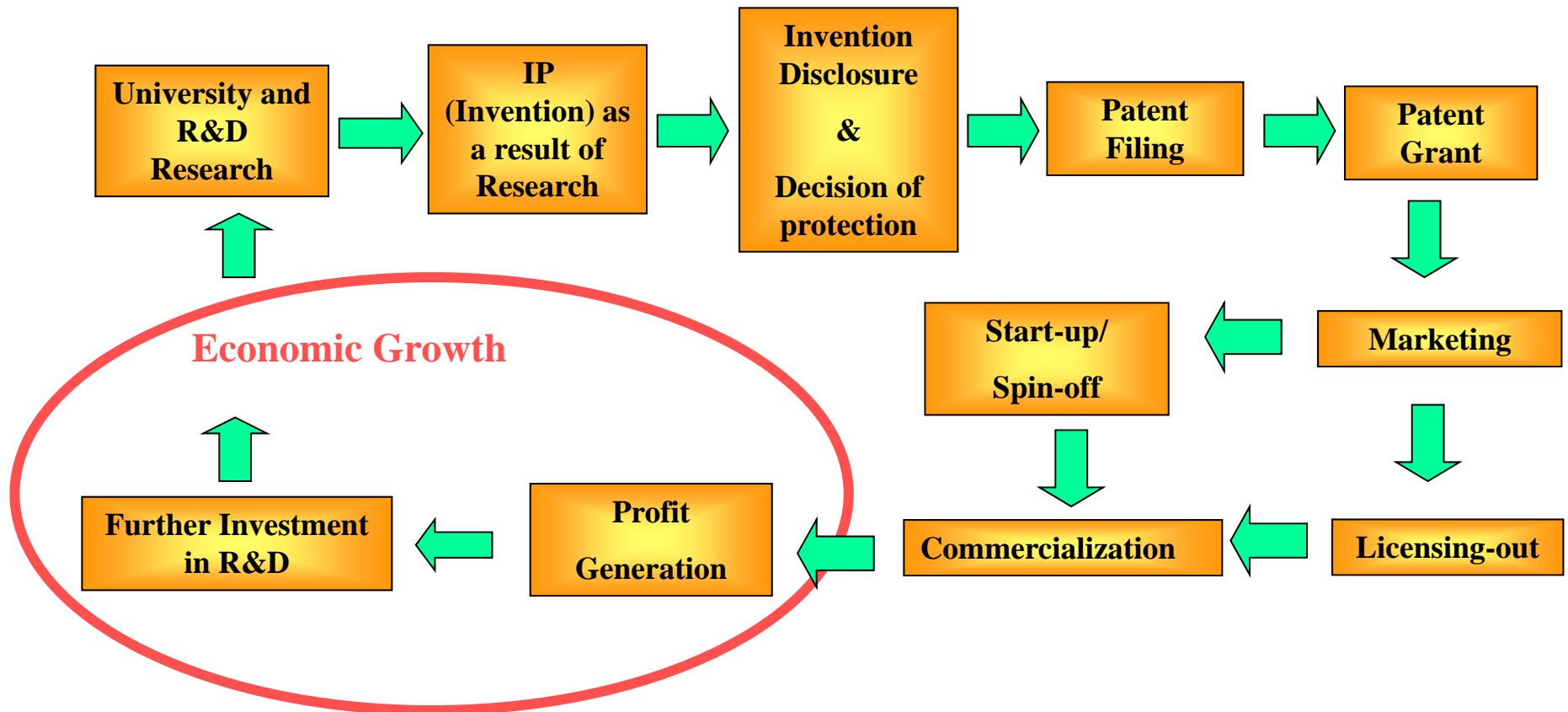
- Transfer of technology refers broadly to a series of processes enabling and facilitating flows of *skills*, *knowledge*, *ideas*, *know-how* and *technology* among different stakeholders such as university and research institutions, international organizations, IGOs, NGOs, private sector entities and individuals, as well as the international transfer of technology between countries
- Transfer of technology, which is often considered to include the absorption of new technologies, is sometimes also considered to involve the transfer of concrete knowledge for the manufacture of products, the application of a process or for the rendering of a service granting the improvement of domestic as well as the international competitiveness in the economic market

Reference: Project Document for
Recs. 19, 25, 26, 28, WIPO (2010).

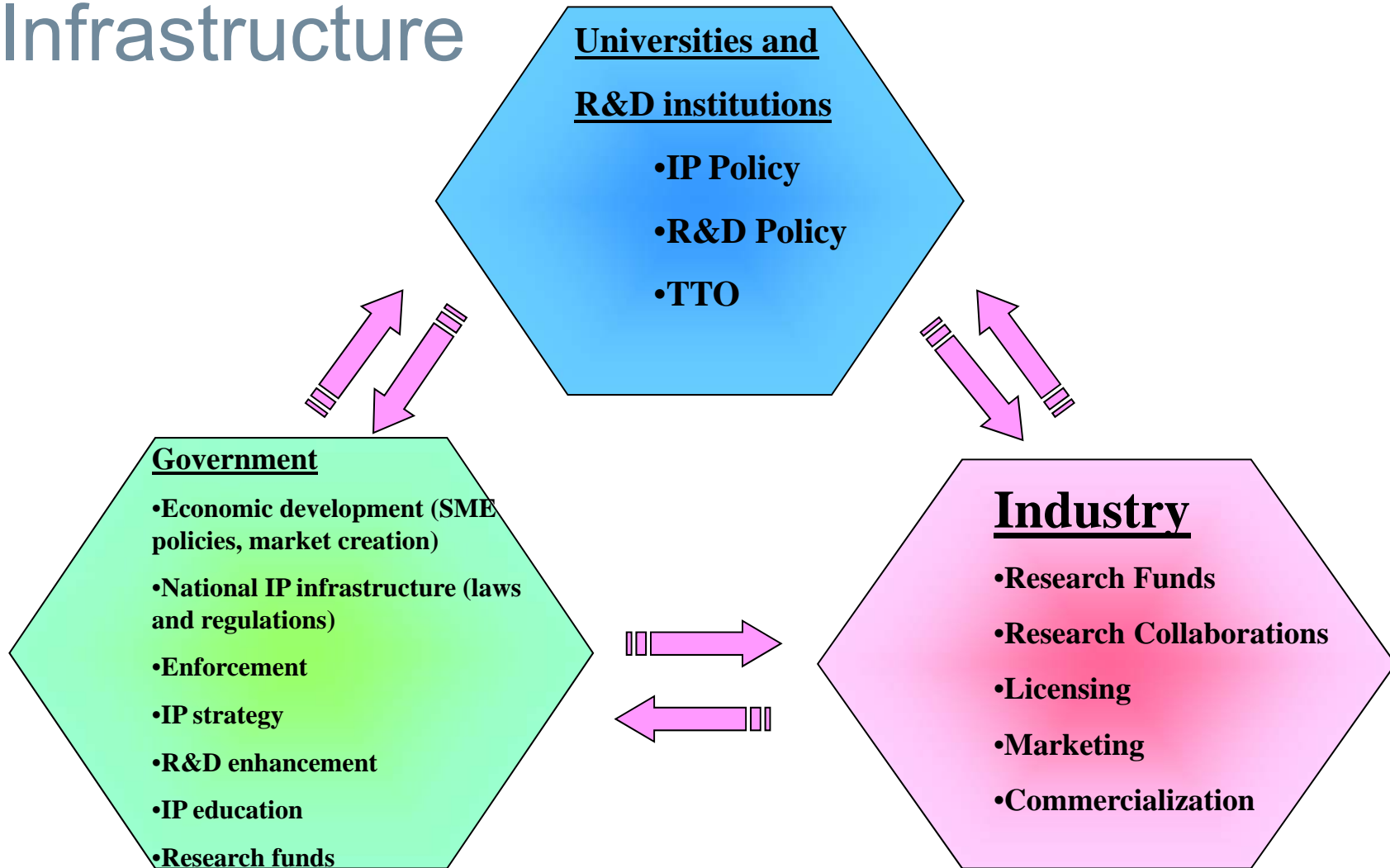
National Transfer: From Lab to Market



IP Creation and Economic Growth



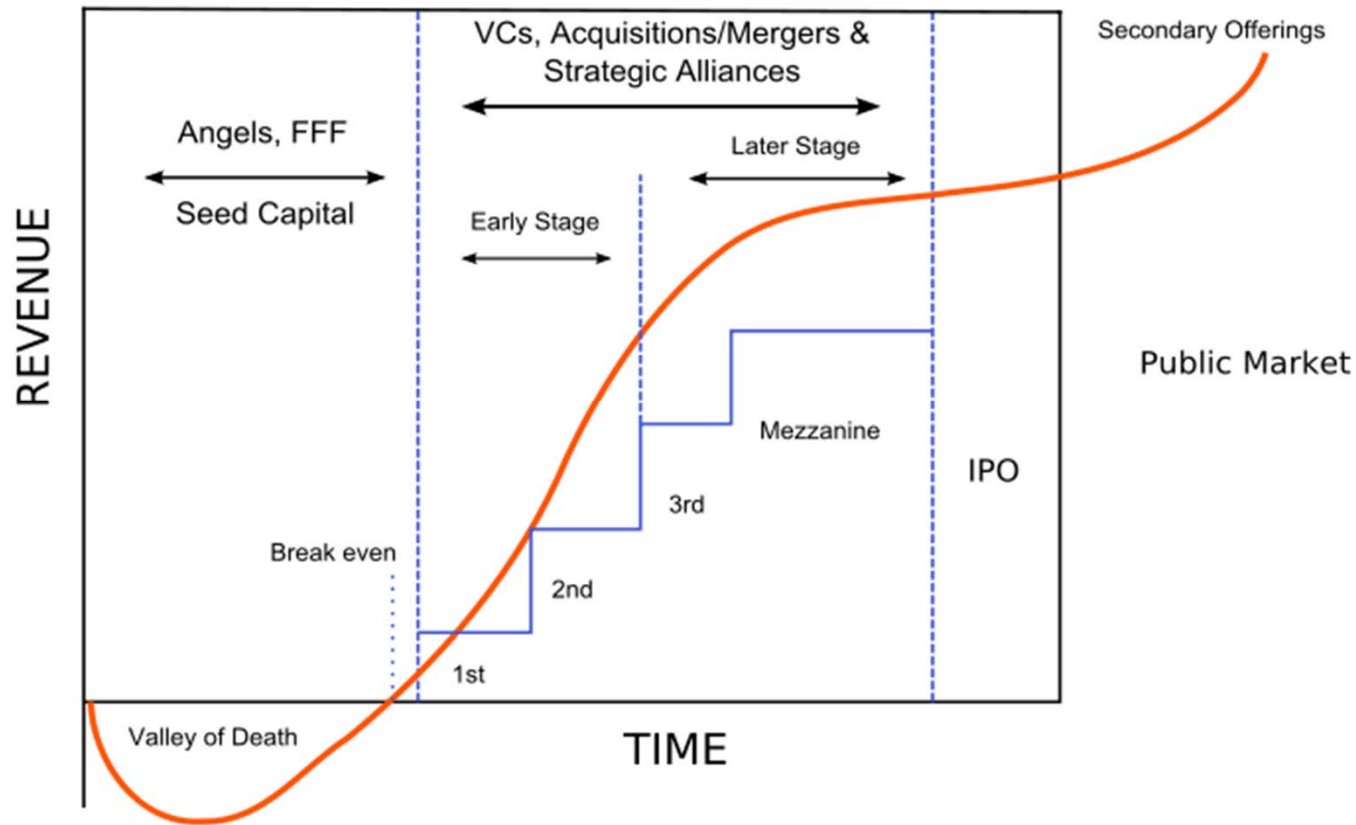
Technology Transfer Collaboration Infrastructure



Key Challenges for Technology Transfer

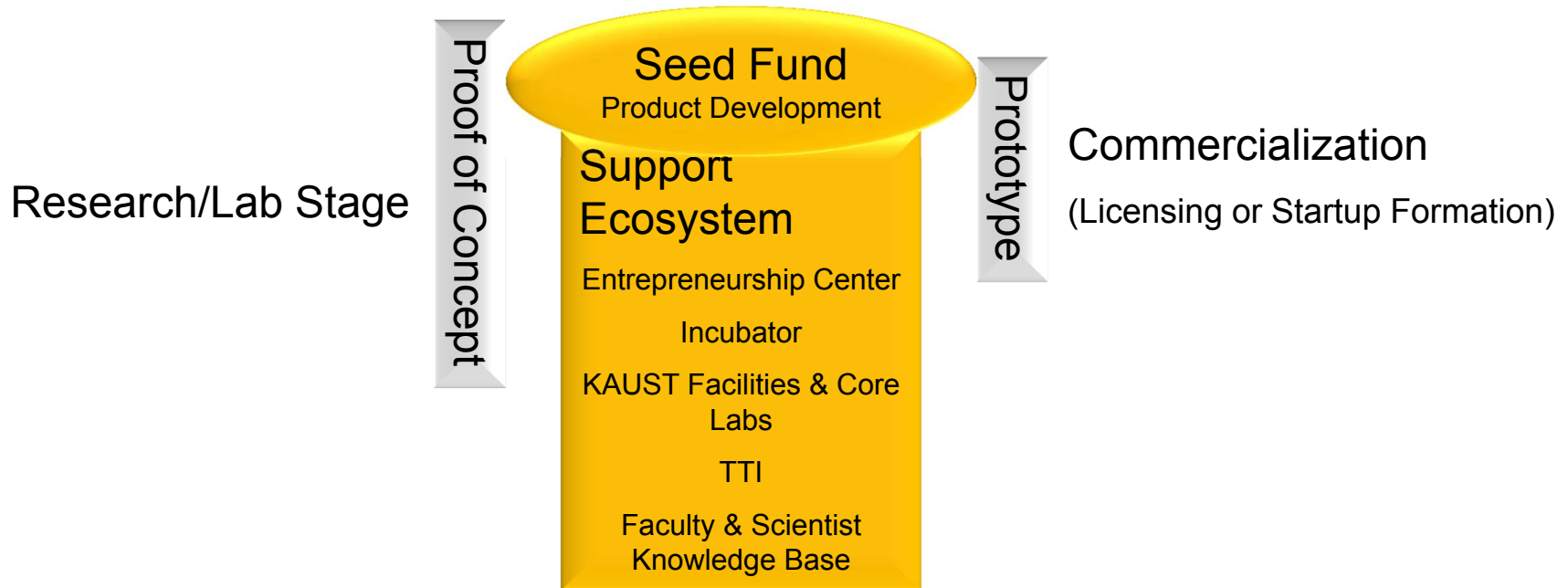
- Lack of IP management infrastructure
- Lack of strategic research planning
- Gap between basic research and market needs
- Lack of funds for IP protection
- Lack of IP knowledge
- Lack of expertise to manage TT and commercialization process
- Lack of entrepreneurial culture among researchers
- Lack of business skills
- Lack of marketing skills
- Lack of support (Government, senior managers) and incentive
- Culture gap (University vs. Industry)

Startup Financing Cycle



Reference: Kompere.

Seed Funding



- The seed fund is a catalyst for moving technological innovation from the lab to the marketplace, and for helping dreamers become entrepreneurs. The funding is up to \$200,000 over 24 months

Reference: [King Abdullah University of Science and Technology \(KAUST\) Seed Fund](#)

Technology Transfer – U.S. Activity in 2010

■ 20,642 Invention Disclosures

- Patent Filings and Patent/Legal Expenditures
- 18,712 total U.S. patent applications
- 12,281 new U.S. patent applications
- 1,116 non-U.S. patent applications
- \$323.2 million external legal fees paid
- \$155.7 million legal fees reimbursed

■ 4,469 Issued U.S. Patents

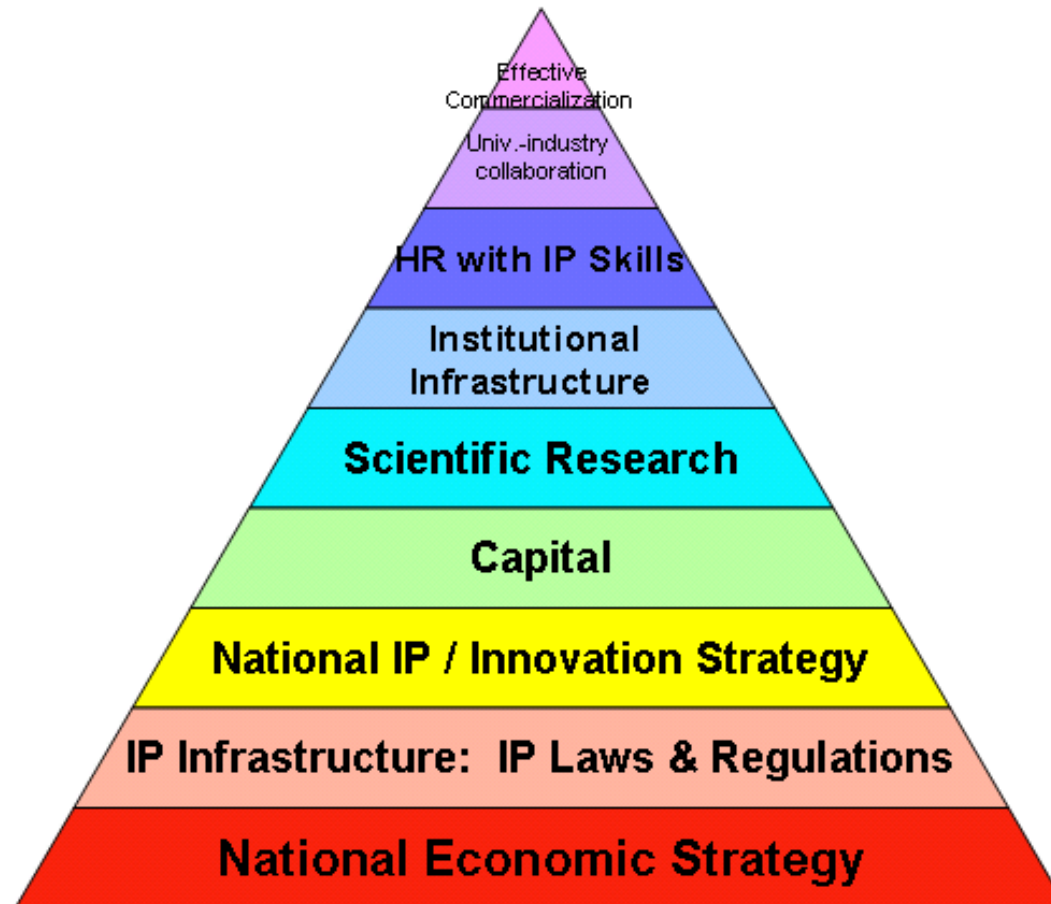
Source: 2010 AUTM Survey

Technology Transfer — Top U.S. Universities in TT-related Income (2010)

1. Northwestern University, \$180 million
2. New York University, \$178 million
3. Columbia University, \$147 million
4. University of California System, \$104 million
5. Wake Forest University, \$86 million
6. University of Minnesota, \$84 million
7. Massachusetts Institute of Technology, \$69 million
8. University of Washington/Washington Research Foundation, \$69 million
9. Stanford University, \$65 million
10. University of Wisconsin-Madison/Wisconsin Alumni Research Foundation, \$54 million
11. California Institute Of Technology, \$52 million
12. University of Rochester, \$42 million
13. University of Massachusetts, \$40 million
14. University of Michigan, \$40 million
15. University of Texas System, \$38 million
16. University of Utah, \$38 million
17. University of Florida, \$29 million
18. University of Iowa Research Foundation, \$27 million
19. Duke University, \$26 million
20. University of South Florida, \$17 million

Source: 2010 AUTM Survey

Requirements for an Efficient Innovation and Technology Transfer System





Where to Get Help

PCT information available on the Internet (1)

- PCT Treaty and Regulations (www.wipo.int/pct/en/texts/)
- PCT Administrative Instructions (www.wipo.int/pct/en/texts/)
- PCT Applicant's Guide (updated weekly)
(www.wipo.int/pct/guide/en/)
- PCT Newsletter (monthly) (www.wipo.int/pct/en/newslett/)
- PCT Brief (<http://www.wipo.int/pct/en/brief/>)
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- Official Notices
(www.wipo.int/pct/en/official_notices/index.html)

PCT information available on the Internet (2)

- PCT Receiving Office Guidelines
(www.wipo.int/pct/en/texts/gdlines.html)
- PCT International Search and Preliminary Examination Guidelines (www.wipo.int/pct/en/texts/gdlines.html)
- WIPO Standards
(www.wipo.int/standards/en/part_03_standards.html)
- PCT Minimum Documentation, Patents and Non-Patent Literature (www.wipo.int/scit/en/standards/pdf/04-01-01.pdf and www.wipo.int/scit/en/standards/pdf/04-02-01.pdf)
- Agreements between International Bureau of WIPO and International Searching and/or Preliminary Examining Authorities
(www.wipo.int/pct/en/access/isa_ipea_agreements.html)

PCT Applicant's Guide (1)

- Regularly updated, web-based publication, available free-of-charge at www.wipo.int/pct/guide/en/
- Free weekly e-mail updating service detailing updated information
- Contents:
 - International phase
 - instructions concerning the preparation, filing and processing of international applications
 - blank forms (request, demand, power of attorney, etc.)
 - “Annexes” setting out information relevant to each Contracting State and regional or international Organization and each Office and Authority

PCT Applicant's Guide (2)

□ National phase

- information on all acts that must or may be performed before the DO/EOs
- time limits
- fees
- blank national forms

PCT training options

- “Learn the PCT” Video Series

 - (<http://www.wipo.int/pct/en/training/index.html>)

 - A series of 29 short videos designed to provide a basic introduction to important aspects and issues in the PCT system (in English)

- PCT Distance Learning Course available in the 10 publication languages

 - (http://www.wipo.int/pct/en/distance_learning/index.html)

- PCT Webinars

 - (<http://www.wipo.int/pct/en/seminar/webinars/index.html>)

 - Free webinars on PCT topics for companies/law firms on request

- More information on the PCT resources website:

 - www.wipo.int/pct

Where to get help at WIPO on PCT-related questions (1)

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| Also for questions relating to RO/IB | Gijsbertus Beijer | +41 22 338 92 22 |
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The International
Patent System



PCT Information Service

The PCT Information Service answers general inquiries about the filing of international applications and the procedure to be followed during the international phase of the PCT. For an overview of the PCT system please see *Protecting your Inventions Abroad: Frequently Asked Questions about the Patent Cooperation Treaty (PCT)*.

Please note that correspondence relating to specific international applications should be addressed to the PCT Operations Division, preferably uploaded through ePCT: (this may be done through ePCT *public services*, which does not require you to obtain a digital certificate) or by facsimile: (+41-22) 338 82 70 or the specific fax number indicated on the forms issued by the International Bureau (IB), or you can [contact the "authorized officer" directly](#).

Specifically and only for inquiries relating to:

- international applications filed directly with the IB in its capacity as receiving Office, or
- international applications transmitted to the IB as receiving Office under [PCT Rule 19.4](#) (that is: where the national (or regional) Office with which the application was filed is not competent to receive the application concerned; where the application is not in a language accepted by that national Office; or for any other reason where the national Office and the IB agree that the procedure under this Rule should apply),

please contact the PCT Receiving and Processing Section of the IB: telephone: (41-22) 338 92 22, facsimile: (41-22) 910 06 10 or e-mail: ro.ib@wipo.int. Further information on [filing directly at the IB](#).

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Telephone opening hours are from 9.00 a.m. to 6.00 p.m. Central European time (from 3.00 a.m. to 12.00 p.m. (noon) US Eastern time zone).

Shortcuts

- For orders of or subscriptions to PCT information products or publications please use the [WIPO Electronic Bookshop](#) or contact the Marketing and Distribution Section: publications.mail@wipo.int or facsimile (+41-22) 740 18 12.
- [International Bureau closed dates](#)



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| | |
|--------------------|--------------------------|
| Team | PT09 |
| Coordinator | Simin Baharlou |
| Phone | +41 22 338 74 09 |
| Fax | +41 22 338 71 30 |
| Email | pt09.pct@wipo.int |

PCT case law database

■ Text-searchable PCT case law database available at:
www.wipo.int/pctcaselawdb/en

■ Contents:

- decisions from national courts
- decisions from regional administrative bodies
- abstracts and legal references added by IB

■ Any comments or submissions for addition can be sent to the IB at: pct.legal@wipo.int

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| | | |
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| | Fax | +41 22 910 00 30 |
| | E-mail | pct.legal@wipo.int |

| | | |
|------------------------------|--------------------------|------------------|
| PCT Legal Affairs Section | Matthias Reischle | +41 22 338 96 27 |
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| | Masanori Tachibana | +41 22 338 99 16 |
| | Zhilong Yu | +41 22 338 71 79 |
| | Ingrid Aulich | +41 22 338 95 77 |
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| Senior Counsellor | Ali Jazairy | +41 22 338 8173 |
| Offices Services Section | Rolando Hernandez Vigaud | +41 22 338 86 68 |
| | 'Nyalleng Pii | +41 22 338 81 48 |
| | Patrick Genin | +41 22 338 86 67 |
| | Mikhail Gavrikov | +41 22 338 70 22 |
| | Anjali Aeri | +41 22 338 70 66 |
| Technical Cooperation Section | Peter Waring | +41 22 338 85 21 |
| | Carlos Roy | +41 22 338 95 61 |

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