

Asia Technology Commercialization: Malaysia as an Example

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My Assignment

- Review Malaysian Universities and Research Institutes Capacity and Capability for Technology Commercialization
- Prepare and Report Findings and Recommendations
- Assist in Implementing Recommendations

My Relevant Background

- 19 years Commercialization Experience with the Stanford Office of Technology Licensing (1984 - 2003)
- Since 2003, visits to many regions of the world (Africa, Asia, Middle East, Latin America, Europe) to help them understand better how to commercialization innovations and technologies to create jobs and improve economies

My Sponsor and My Approach

- Sponsor: Malaysia Biotechnology Corporation; A Government Agency
- In addition to two comprehensive surveys (100% response rate), my sponsor arranged visits to leading Research Universities and Research Institutes for all day meetings (September 2008, November 2008, June 2009: Each visit was for two weeks)
- Prior to visits, I reviewed web sites to gather background information

Malaysia: Challenges, Issues, and Recommendations

- ☞ Challenges for TTOs as reported by a Director of a TTO at University in Malaysia at November 2008 National Technology Transfer Forum
 - Lack of experienced and competent staff in technology commercialization and staff turnover
 - Lack of understanding of IP licensing culture among inventors and licensees
 - Conflict of Interest in devotion to research and spending time on technology commercialization
 - Lack of support from university senior staff due to long time frame to benefits with high risk and lack of funds for proof of concept and technology development
 - Lack of incentives for inventors to participate in technology commercialization

Malaysia: Challenges, Issues, and Recommendations

☞ Issues for TTOs in my June 2009 Report

- Leadership of TTOs are Professors who return to academic careers after 2 or 3 years, causing disruptive change in leadership
- All universities have holding companies with overlapping responsibilities with in-house TTO that can lead to confusion as to who is responsible for what
- Major focus is on creating start-up companies and thus important and valuable inventions that do not have characteristics to be a start-up may be overlooked and lost

Malaysia: Challenges, Issues, and Recommendations

- ➔ More Issues for TTOs in my June 2009 Report
 - Patent committees of Academics without business experience evaluate invention disclosures to determine which ones will be patented
 - Marketing is not pro-active but mainly creating data-base listings of patents and some trade show attendance
 - All universities reported that there are laws, policies, or procedures that inhibit technology commercialization and many government agencies have rules and requirements and difficult and time-consuming to deal with

Malaysia: Challenges, Issues, and Recommendations

- ☞ My Recommendations in my June 2009 Report
 - Create a Malaysia Commercialization Support Network (MCSN) to provide training, professional development, networking through meetings and a member directory, and a forum to bring about change in laws and regulations that are harmful to technology commercialization - with members from universities, research institutes, industry, and government
 - Begin planning for a Malaysian Technology Commercialization Resource Center that would provide high quality support services for all the research organizations in Malaysia
 - That when professors who are now TTO Directors/CEOs leave to return to their academic career, that a professional with business skills and experience be considered as a replacement

Malaysia: Challenges, Issues, and Recommendations

- ☞ More of my Recommendations in June 2009 Report
 - The MCSN create a keyword searchable data base of companies on a global basis where researchers and TTOs would provide the names of companies (and individuals within companies if known) that might have interest in invention disclosures from Malaysian research organizations that would not be the basis for a start-up company in Malaysia. Existing company/marketing contact data bases such as the one at Stanford University could be used as a model
 - The MCSN lead an effort to bring a one year grace period and a provisional patent system to Malaysia

Malaysia: Some Positive Things

- ☞ The Triple Helix web site (started in 2009) where technologies from all universities and research institutes will be listed and can be accessed by anyone anywhere in the world for possible collaborative research projects or licensing
- ☞ The Bionexus Partners Program providing for shared access to research facilities and research equipment
- ☞ Multiple funding sources (almost all government funds) for seed funding to move ideas and research results to a stage where investors and companies can see the potential for commercialization
- ☞ The Formation (in early 2010) of a Technology Commercialization Network/Association to promote networking and professional development and training of people involved with research commercialization activities

Components of TTO Success

- ☞ A Pipeline of Innovation with an environment and incentives to encourage disclosure and then the participation of inventors in the commercialization process
- ☞ An Efficient and Effective and Responsive Process for commercialization
 - Evaluation of disclosures
 - Developing an I/P strategy
 - Developing a Marketing strategy
 - Efficient Negotiation of Licenses
 - Monitoring compliance and making amendments
- ☞ Manage expectations and have patience

Patience: Stanford's Experience

- Cumulative Income: 1969 - 1980 = \$4 million
- Cumulative Income: 1981 - 1990 = \$40 million
- Cumulative Income: 1991 - 2000 = \$400 million
- However: Over 98% of the \$400 million came from inventions disclosed in the 1970's
- Other example: A study published in the AUTM Journal found that the only common characteristic among the top income earning TLOs in the U.S. was they all had been in business over 20 years

Comments on some other regions

- Thailand: Ed Rubesch's revolutionary proposal
- Japan: Four areas needing change if technology commercialization (including formation of start up companies)
 - A functioning patent filing grace period
 - Institute a provisional patent option
 - Solve the serious co-inventorship problem
 - Provide sufficient time to do a rigorous evaluation before the patenting decision is made
- Singapore: Probably the best model for effective technology commercialization in Asia (my two comprehensive reviews of the National University of Singapore's technology commercialization program and five consecutive years as a speaker at their annual Technology Commercialization Forum)

THE END

☞ Thank You for your Attention!