Business Models of Innovation – “Closed Innovation” and “Open Innovation” (Topic 7 (c))

NATIONAL WORKSHOP ON INNOVATION PROMOTION AND TECHNOLOGY TRANSFER

Belgrade, June 21 and 22, 2011
What is Open Innovation?

“Open innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology”.

Henry Chesbrough

Image - Henry Chesbrough presentation on the OECD Conference on New Business Strategies for R&D
What is the Difference - Practical Approach

Closed Innovation

Open Innovation

Benefits of the sandpit
- You don’t have to pay for all the toys
- You can use the toys others don’t want
- You can negotiate to play with other toys
- You can play alone or together

Source: Alexander Damvelt, Philips

Rules of the sandpit
- The toys must be shared
- You can’t have it all your way
- You must behave yourself
Models of Innovation and Intellectual Property (IP)

Closed Innovation

- Exclusive use of internal R&D
- Technology invented, protected, developed, brought to the market and distributed by the same company
- Full internal control of the innovation – from R to D to C
- Technology exploited only through internal business model
- IP generators of new technologies – mainly companies
- IP – barrier to entry – not source of revenue
- Huge IP non-performing portfolios
- Companies usually selling but not buying IPRs (advantage – no confusion about IP ownership)
- IP valuation method – Discounted Cash Flow – “Net Present Value” of the technology
- Lack of IP market.

Open innovation

- Use of internal and external R&D and inventions – corresponding to the particular business models
- Openness to external business models
- Variety of IP generators and collaborators – other companies, public universities and R&D institutions, users, customers, suppliers...
- Active IP asset management of the companies’ IP portfolio – matching technologies with innovative (inside or external) business models to add value to IP
- More proactive assertion of IP policy
- Development of Intermediate IP Markets – semiconductors, biotechnology, chemicals and consumer products and Innovation Intermediaries (facilitators)
- Use of more complex IP valuation methods – such as “Real Option” – imposed by very intensive and diversified IP commercialization models – reassignment of the IP to different partners during its legal life, selling/buying, licensing (to companies or start ups)
- IP - an asset which can (and should) be managed through an adequate business model in order to increase value and become a reliable source of revenue.
Intellectual Property and Open Innovation

How Intellectual Property influences Open Innovation

- Strategic IP asset management is the essence of the Open Innovation Business Model
- Protection of inventions and other creations of the human mind and IP ownership are the necessary preconditions for technology transfer and IP commercialization (we can manage only those assets which are owned by us or those to which we have the consent/license of the IP owner to use them).
- Transfer of technology in business transactions – is transfer of knowledge and IP rights – registered (patents, trademarks, industrial design, copyright) and unregistered (know-how, trade secret).
- One of the biggest advantages of the Open Innovation business model is access to the “know-how” of the other party.
- The intangible nature of IP and the ability to be the subject-matter of business relations with many partners, often at the same time, corresponds to the basic idea of Open Innovation – the ultimate use of inventions as solutions for multiple needs, incentives for innovation, maximum creation and extraction of the value of the IP asset through the application of different business model.
- The potentially most frequent source of collaboration conflicts in Open Innovation lies in undefined IP ownership relations – Who is going to own the IP in the jointly-developed technology? Joint ownership – who and under what conditions – is going to use the joint IP (different legislations impose different legal conditions – with or without consent of the other party)? It is necessary to clarify this at the beginning of the collaboration.
- Open Innovation – collaboration without territorial limits – in conflict with the territorial nature of the IPR (valid only in countries where protection is granted).
- Dispute resolution in the Open Innovation multiple collaborations – particularly complex because of the IP involved – Who is the owner of the final product developed through multiple collaborations? The potential risk of infringement is high. Litigation – what would be the applicable jurisdiction? Particular problem – lack of efficient enforcement systems in many countries, scarcity of IP skilled judges, etc. Professional Mediation and Arbitration can be a way out.
How Open Innovation Influences IP
- More dynamic and interactive use of IP – companies are not only selling but also buying technologies
- New ways of building up companies’ IP portfolio – through buying patents (Nortel, Alcatel)
- Creation of Intermediary IP Markets in different sectors (graphics on the right – Intermediary market in the IT hardware industry – source Henry Chesbrough – “Open Business Model – How to Thrive in the New Innovation Landscape”.

Balance and intensity of reassigned patent trade in the IT hardware industry, 1976-2003
Intellectual Property and Open Innovation

- Innovation Intermediaries – for searching and evaluating new technologies
  - The field of use of the technology is increasing
  - Increases total value of the technology – incentive for innovation
  - Innovation more productive – more users
  - Benefit for society – more solutions for different needs, job creation, diminishing of brain drain effect..

- New and More Efficient Financial Instruments for funding businesses based on technologies (IP) – VC funds, loans based on IP as collateral – necessary precondition for fostering local creation and innovation

- Introduction of new actors into innovation processes – companies, universities, R&D, users, suppliers – even governments and regional organizations (EU) are taking a more active role in order to create a supportive environment for the creation and transfer of technology

- Open innovation permits new global partnerships with actors such as universities, R&D and start-ups from developing and countries in transition, which encourages the local creation of IP in these countries

- IP is recognized and used as a valuable source of revenue and not only as a mean of exclusion.
Cisco I-Prize winners – so what’s the big idea?

The 2nd Cisco I-Prize was launched in January 2010 and at the close of submissions there were 824 ideas. After huge quantities of hard work, imagination, guts and a thin slice of luck one idea remained. The Cisco life account! Who was behind the idea? Team Rhinnovation – five students from the Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM) Guadalajara campus.
Open to ideas

P&G’s Connect + Develop open innovation strategy has established more than 1,000 active agreements with innovation partners. Connect + Develop enables us to share our R&D, commercialization and brand strength with partners worldwide, bringing great ideas to market—and into the lives of consumers—faster.

Could your INNOVATION be the next GAME-CHANGING DEAL?
<table>
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<th>Site</th>
<th>The Intel Innovation Open Lab</th>
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<tr>
<td>Location</td>
<td>Leixlip, Ireland</td>
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Ireland fosters cooperation between Intel, industry, and academia through joint research and innovation programs. The Lab's mission is to facilitate and engage in open research and innovation opportunities in Europe that can ultimately lead to value-driven technology solutions. The lab’s research and innovation focus areas include: Enterprise Computing/Cloud, ICT for Energy Efficiency, Context Aware Computing, Mobility, Supply Chain, Security, Visual Analytics and IT Management Frameworks. The Lab leverages a number of Open Collaboration models including EU FP7, Joint Innovation Programs and bi-lateral arrangements to scale its research agenda. The Innovation Open Lab Ireland joins with Munich as one of two ILE Open Labs launched in 2009 and the facilities include physical laboratories, office and meeting space as well as an innovation/collaboration studio.
Welcome to Open Xerox

Open Xerox is the place where you can experiment with technologies being developed in the Xerox labs around the globe. Some technologies are more mature than others but all can benefit from your testing and feedback – that’s precisely why the inventors have put them here. Tell them what you think, what works and what doesn’t. Use Open Xerox to help decide if you’d like to become an open innovation partner and make it even better.
Emerging, developing and countries in transition do have significant research results and know how to develop efficient technologies in the specific areas of their competitive advantage.

- **Major IP Generators** - universities and R&D institutions.
- Small percentage of businesses have their own R&D – only in particular areas of a state economy such as the oil industry in Brazil (“Petrobras”) or Malaysia (“Petronas”) have their own R&D.
- Small and medium size enterprises (SMEs), which represent a great majority of businesses – rarely base their business models on innovation – developed inside or outside of the SME.
- In most of the cases there is little or no collaboration between the public and the private sector in the domain of technology transfer.
- Businesses either do not have confidence in locally developed IP solutions or do not have the ability to absorb new technologies.

**What is Lacking?**

- Necessary Basic Preconditions for Efficient Technology Transfer System
  - Adequate Legal Framework (national and institutional level)
  - Organizational Infrastructure (technology management organizations and units)
  - Funding (government and venture capital)
  - Skilled professionals (scientists, technology managers, IP professionals, etc.)
  - Education – to provide sustainable flow of skilled people
  - Supportive IP System

- There is a lack a market economy experience and a developed private business community.
Intellectual Property and Open Innovation: Potential Benefits for Partners from Emerging, Developing and Countries in Transition

- New openings for technology development and IP commercialization through innovative business models, in particular for universities and R&D institutions (local businesses are not interested or do not have the capacity).
- Great learning opportunity – from the technology and business management point of view.
- Development of the necessary market experience with more experienced partners.
- Solution to one of the greatest challenges – how to find an adequate market and partners – intermediaries can help them.
- Potential entry to new markets.
- Access to Venture Capital instruments and management services that VC offers.
Intellectual Property and Open Innovation: Potential Challenges for Partners from Developing Countries

- Lack of IP asset management knowledge and practice, a market economy culture and skilled professionals – necessary for complex transactions.
- Scarcity of an adequate legal framework and guidelines how to negotiate - no clear institutional policies and strategies setting up a framework for technology management negotiations.
- Consequently, they can be potential victims of more experienced intermediaries or partners, in particular regarding the valuation of their technologies, IP ownership issues and disclosure of confidential information.
- Lack of compatibility with standards and platforms in certain areas – IT
- Existing perceptions about the quality of R&D results created and technologies developed in developing and countries in transition.
- Protection of their IP ownership interests and rights in the case of the use of unregistered IP – “know-how” and in the multiple collaboration agreements – “background IP” and “grant backs” of future improvements of the technology, are important issues for R&D institutions.
- Imposition of already defined and written contracts
- Lack of access to more sophisticated data bases can make them a target of trolls, even on the basis of false claims
- Imposition of dispute resolution mechanisms and jurisdictions – some countries are well-known for very costly litigations and different IP jurisdiction rules – which may have a decisive influence on the decision – “to enforce or not” or to place un informed party in a very difficult legal and financial situation.
Thank you!
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