



Commercialization of IP

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Commercialisation options

- Outright sale or assignment
- Technology Transfer
Agency/Broker
- Direct sale of products and services
- Research collaboration
- Open source route
- Licensing
 - To existing company
 - To spin out company (new venture)



Choosing a commercialisation

route

- Commercialisation route depends on:
 - Financial investment required
 - Potential return on investment
 - Nature of the technology/product/process
 - The status of technology
 - The target market and how it can best be reached
 - The stage of market development
 - The market concentration
 - The availability of management
 - The aspirations of the inventor



Outright sale or assignment

- Give up all rights to the IP, usually for a fee or for shares / equity
- Problem:
 - You lose control over what happens to the IP in the future
 - You lose your use of the IP for further development
 - No real involvement by inventors
- Not generally used by public research institutions



Technology Transfer

Agency/Broker

- IP is assigned to a technology transfer agency or broker who will do the commercialisation
 - The agreement usually provides for the sharing of royalties between the institution and the broker – the institution's share is then shared with the inventors
- Advantages:
 - Costs are borne by the agency
 - Agency usually has a good network of potential licensees and extensive experience in the field of technology licensing
- Limited scope for involvement of the inventors through the institution



Direct sale of products and services

- Can produce a product or offer a service directly from the institution/laboratory
 - Share capital costs
 - Inventors sell the product or service directly
- Need to be careful of unfair competition with private sector: depends on market



Research

collaboration

- Swop IP for a research grant
- Institutions usually end up getting more money through this route than through convention licensing, though it usually involves a royalty-free license
- Inventors should be able to provide input on their needs and whether they agree with this approach
- e.g. Stellenbosch University – R5 million grant in exchange for a technology

Open source

route

- Software can be provided through an open source model
 - Source code is provided and open to all to use and adapt
 - Licenses for use can still be applied but usually royalty-free
 - Include clauses to share income if sold commercially by others
 - Can get income from Help desk function (e.g. inventor)
- Dissemination of information on new technologies or improvements to existing technologies through manuals and practical training programmes e.g. manual on agricultural practices for rural farmers

Main commercialisation

routes

- Licensing to existing company
- Licensing to spin out company
 - Inventors may join company
 - May hire new staff (management team)



TTOs will:

Avoid assigning IP to companies

- Can lose IP if company fails
- Lose control of IP and use

Licensing vs. assignment

- A licensing agreement is a contract between an intellectual property rights owner (licensor) and another who is authorised to use such rights (licensee) in exchange for an agreed payment. The licensor retains ownership of the intellectual property rights.
 - A license for early stage / unproven technology will typically contain clauses that limit the liability of the licensor
- Assignment of intellectual property rights is a transfer of ownership of intellectual property rights from one entity to another.

Non-exclusive / exclusive

- Non-exclusive licensing preferred as ensures broad uptake, spreads risk
 - You grant more than one licence for each piece of intellectual property
- Exclusive needed when significant investment needed to achieve implementation
 - Should grant just those rights necessary to encourage development of the technology
 - Not for all fields of use for the life of the licensed patent
 - Licensee may not be able or willing to develop the technology in fields outside of its core business
 - Licensee must commit to develop technology
 - Development must be defined and monitored



Other licensing

considerations

- You can grant licences containing several IP rights
- Must minimise impact of exclusive license on further research
 - If you are granting a licence on university intellectual property it is important to retain the rights to use the IP in research and teaching

Licensing terms

- Description/definitions
- Exclusive/non-exclusive
- Territory
- Field of use
- Support
- Payment
 - Royalties
- Minimum performance
- Adequate exploitation
- Patent details
 - Decisions; payment; litigation
- Improvements
- No warranty
- Indemnification
- Reports and records
- Assignment
- Sub-licences
- Maintenance
- Term
- Licence back for university use
- Access to audit information
- Rights on termination

Licensing to an existing

company

- Advantages

- Infrastructure in place, including management
- Funds to develop the invention
- Distribution channels
- Brand name and market access
- License agreement is much easier than spin out agreement
- Potential conflicts of interest far less likely



- Disadvantages

- Difficult to get the attention of an existing company with new but unproven inventions
- Existing companies have their own research agenda and priorities
- Difficult to find a “champion” who will support a new technology that is not his or her own
- Risk that the company will lose interest in the technology

Licensing to a spin out

- Advantages

- Spin out will be dedicated to developing the invention as its first priority
- Will work closely with one or more of the inventors
- Research institution knows the people involved
- Financial arrangements may include shares so upside even if technology doesn't work

- Disadvantages

- Substantial risk of conflict of interest
 - Concessions on future IP
 - Misuse of institutional resources or staff time
- Must find management talent and raise investment money
- Difficulty in marketing and developing distribution channels

How to decide

- Spin out
 - Need to raise investment to advance research
 - Technology is basis for new industry
 - Barriers to entry for new company is low
 - Fits within value / supply chain
 - Reward is high
 - Access to expertise to fulfil company roles
- Existing company
 - Creating a company will add no value to commercialisation process
 - Licensee is dominant market player
 - Few licensees
 - Technology capable of being developed by a licensing partner
 - Barriers to entry are high

Spin out preferred

if

- Invention is a platform technology that may have many products
 - Spin out company more likely to exploit all potential applications of the technology, while an established company will more likely focus on a single addition to its existing product line
- No existing industry making similar products
 - difficult for a new company to compete in an established market unless the technology is overwhelmingly superior
- The market is large enough to justify the risk, particularly if require substantial investment in development
- Strong IP protection exists in the country in which the spin out exists and/or in the major markets to which it intends to export
- At least one credible inventor will join the company



License fees

- License to existing company
 - License issue fee
 - License maintenance fees usually creditable against royalties (= “minimum royalties”)
 - Patent cost reimbursement
 - Milestone fees if technology risky and requires significant investment
 - Running royalties
- License to spin out company
 - License issue fee
 - License maintenance fees
 - Patent cost reimbursement
 - Milestone fees
 - Running royalties
 - Shares of stock in the company
 - May be major source of return for the institution



Taking equity from licensees

- Allows for additional revenue beyond royalty or licensing fees
- May be seen as a risk premium to induce the licensor to license to start up company vs. more established company
- Allows a licensee who is cash poor and equity rich to substitute shares for cash payment (i.e. in place of upfront licensing fees, or to get a reduced royalty rate)

- Need to manage risk
- Minority shareholders have little input in buying and selling shares because transactions are determined by the majority buyer and seller
- Difficult to value equity as high-risk start up company with no marketable value and few tangible assets
 - Does one include R&D costs?
 - If one assumes investment is zero then complacent about risk capital, ROI, etc.