

Making money out of life science patents

While assessing and valuing intellectual property rights, the first step must be to answer five questions, for then to turn to the professionals.

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In technology exploitation, especially in venture capital, the key questions associated with patents and intellectual property rights (IPR) are: are they worth anything – and if they are, how much – and how do you find out? Properly conducted due diligence, using a structured approach, answers these. For patents, quality, not quantity, is important. Over 90% of 'novel', 'better', technologies are nothing of the sort – despite many being patented. In IPR assessment and valuation, we use «ETeCH Technology Bridge™», which asks five simple questions in a deliberate order, to weed out the 90%+ of worthless ideas with minimum effort, and help towards a valuation. At all times look for evidence, not enthusiasm, that the technology and associated business opportunities have validity.

Question 1: Is it actually novel, patentable, and owned by its claimants?

50%+ of "innovations" are not cleanly owned. Someone else, somewhere else, has disclosed and/or patented it. Thus, even if there is or could be a patent filed, this could be challenged, or its operation would require permission from the owners of the underlying IPR; there is no freedom of action.

How do you find out? You conduct a patent search. Search engines enable sophisticated searching using keywords. From the European Patent Office website, esp@cenet is free (<http://ep.espacenet.com/>). Intelligence is needed to cover spelling variations and synonyms, but the database is reasonably complete and extends back beyond 1900.

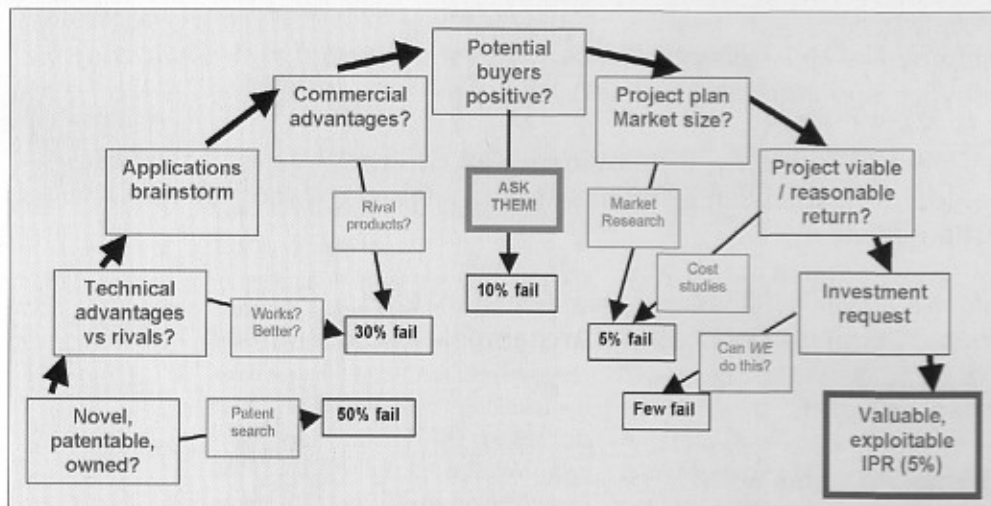
With skill, searching rapidly leads to any blocking prior art – and sometimes freedom of action is obtainable simply by purchasing or licensing the relevant IPR. Particularly if the ownership of IPR is critical, a professional prior art search is recommended in due course: patent agents and patent offices offer such services.

Question 2: Does it actually work, and is it actually better than existing products?

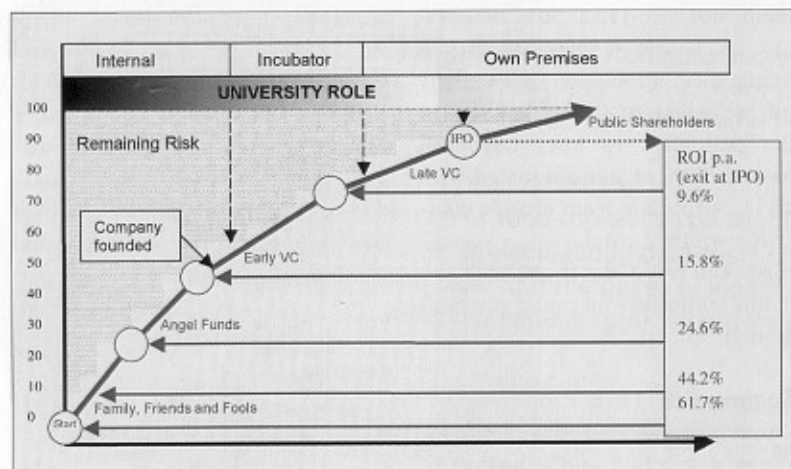
30% of "innovations" fail here. Cases of scientific fraud are few (but do occur): more frequent are misinterpreted results, or simply that a better product already exists.

How do you find out? You conduct a peer review: under suitable non-disclosure agreements, opinions should be sought from other leading professional scientists in the relevant technical field. They should also inform you about rival technologies.

Then you do a web search, e.g., with Google. Again, with skill, searching swiftly leads to prior products if they exist. Searching should be done for each application of the technology separately, and in two ways; firstly for the exact product, and secondly for products which perform the same function. Which offers commercial benefit - faster, cheaper, easier? Remember the market is indifferent to how the technology works, but buys the benefits that technology can provide. Purchasing industry reports is of limited value, yet, since the market will have moved, but their Web-published content lists are a good



Critical Questioning – Attrition Rates in Screening IPR Value



Typical Technology Value Build Trajectory

source of companies and technologies to check.

Question 3: Who will actually buy this: what do they want to buy, how do they want to buy, and what will they pay?

This is the critical question. With no customer, there is no market, and if the product is not what the customer wants, there is no customer. How do you find out? You must ask the potential buyers directly – and you can do so before making any investment. Don't talk technology. You need to talk to the commercial representatives of the potential buyers, in commercial terms, and in terms of the commercial benefits to the buyers and their organization. Since the technology is rarely fully developed yet, the key question is not 'What is it worth now?' (normally nearly nothing) – but 'What would it be worth were it to be developed into something this organization could value and acquire?' – and 'What is that something?'. The potential buyers create the specification to be met, and a target value.

Half the time buyers simply do not want to buy, and can say why – usually either the company or market is undergoing downturn and/or reorganization, or there is insufficient advantage (or too much cost of change) versus existing and in-development products. Some companies will buy patents directly: the value is

already apparent to them. Then the question for the patent owners is the price offered, and if this can be improved, beyond the costs involved, by undertaking the next development steps themselves.

Question 4: Can a project plan be sensibly pulled together – and will the potential market justify its cost?

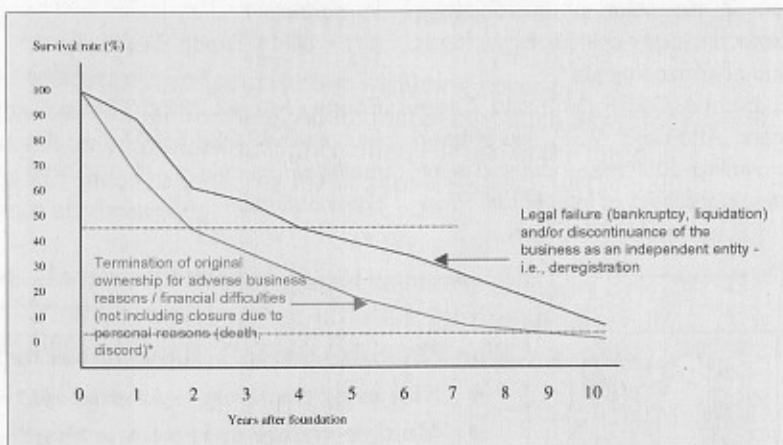
From consulting the potential buyers you have an end-point specification: from the current state of the technology you have a starting point. Thus a project plan to get from the one to the other can be devised, resource-planned, and budgeted; and this cost (over time) then compared with the end-point value – which you derive from the price the potential buyers are willing to pay, together with a market survey (from industry reports; or, better, a direct customer survey) to ascertain the true market size realistically able to be captured.

Just make sure the costs and values are realistic – typically only half the surviv-

ing projects make commercial sense when using realistic figures.

How do you find out? Again, ask. Whether this is an in-house, incubated, or start-up proposition, the costs for premises, equipment, consumables and staff are all reasonably straightforward to discover from those who have already done it, or the various business, local and government organizations whose role is to help provide such information. All investors in technology development – including the originators – wish to see a return on their investment. The following graph shows the typical build of value to the originators over time; the increasing value of the project being offset by the dilution as later-stage-funding is brought in. Importantly, the greatest increases are near the start: and again importantly, the project need not be taken all the way to IPO – a trade sale or licensing at an intermediate point is acceptable and even usually to be recommended 90% of the time: it is better to have the market leaders working for you than against you.

Knowing how much cash is needed to reach the end-point – and how much of the final specification has already been met – is also one of the sounder bases for valuing the technology/patent in its current state, also bearing in mind desired returns, the degree and nature of the risks



Survival rates for incorporated registered employers (at least one employee, not sole traders) 1985-1998 (pre dot.com): data from US, UK, European and Australian Small Business statistics bureaux.

* For this only Australian (Williams, Savage & Reynolds) and UK (Churchill; Star & Massel; Hill; Storey; Keeble) data was available

(technical, commercial, managerial) and the expected final value. This basis is sounder than 'sunk costs' (how accounted, and were they spent wisely?), 'last valuation' (under what circumstances?) and 'similar deals' (market- and time- dependant) – although these all can be used to cast light upon the valuation.

Question 5: Can we (and should we) run this?

Out of the initial offerings typically 5% make it through the due diligence process and are suitable candidates, with strong IPR, clear benefits and buyers, and executable project plans, for investment – the whole is based on fact, not hope; evidence, not enthusiasm.

The final question, not the first, is 'can we run it?'. Only when the tasks are defined should qualified staff be appointed to conduct these: too many start-ups compromise project success by starting with 'the team' and then building the project around

them, not vice-versa. 50% of start-ups fail within 4 years because an unqualified proposition (particularly unchecked as to the willingness of the customers to buy) has been backed; 50% of those initiated with an inappropriate team change ownership within 2 years.

If you can run it, do: if you can't run it, find someone who can: if you can't do that, sell.

Summary

Properly conducted due diligence allows a selection and valuation of viable business opportunities based on IPR. Structured techniques (Artley et al. 2003) enable the evaluation of IPR, deciding on its commercial value, and planning how it should be developed into products and services. It requires intelligence, hard work, and direct customer contact – for which there is no substitute – to assemble the evidence on which to base decisions. Much of the evidence can be gathered using on-line

resources, but professional advice should be sought at key points, and especially when asking buyers about requirements, when commercial buying criteria, not technical dialogues, are needed. Properly conducted, the technique leads to high success rates of 95%+, and good commercial returns. □

References

Artley, R.A./Dobrauz, G./Plasonig, G./Strasser, R. (2003): Making Money out of Technology: Best Practice in Technology Exploitation from Academic Sources. Wien: Linde.

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