

International

IP issues in open innovation and collaboration

Introduction

An engineer in Company A wants to enter into a research and development (R&D) collaboration within a research consortium. After considering the matter, Company A decides that the rules regarding ownership and licensing of the intellectual property created or developed within the consortium are not flexible enough and so does not participate in any collaborative research endeavour within the consortium.

Company B is an active participant in the same consortium. It appreciates that the R&D projects conducted within the consortium are subsidised and it has thoroughly analysed how IP ownership and licensing are treated within the consortium. After some internal debate, Company B decides to establish clear guidelines describing the types of R&D project that could be conducted within the consortium, notwithstanding its rigid rules on IP ownership and licensing. Company B understands that the rules were designed to ensure both the rapid execution of the necessary collaboration agreement and the speedy launch of the collaborative R&D project.

After two years of active participation in the consortium, Company B has realised that the benefits of such participation far outweigh any risks relating to the treatment of the intellectual property. In fact, Company B now employs brilliant researchers who were PhD students involved in certain projects and, because research conducted within the consortium is subsidised, it has been able to increase its internal R&D activity without allocating new funds to its R&D budget. Company B believes that these benefits will help it to remain an industry leader in the years to come.

This is merely an example of one type of collaborative endeavour that requires business executives and their advisers to think outside the box in order to embrace an open model for the development of innovations that can ensure continuous favourable and optimal market positioning. Marshall Phelps and David Kline commented on this phenomenon in *Burning the Ships – Intellectual Property and the Transformation of*

Microsoft: “IP-enabled collaboration can materially enhance the bottom line of a company and serve the interests of its shareholders”; “Because open (or collaborative) innovation involves the opportunistic leveraging of partnership projects with other firms, IP leaders will have to embrace a degree of flexibility and an avoidance of rigid tactical roadmaps not experienced by previous generations of IP management.”

This chapter explores alternate models of product, technology or IP creation or development (hereinafter referred to as IP development), and the legal and strategic issues inherent to their adoption. When dealing with these models, business executives must accept that IP rights can be much more than a fence protecting a company’s key technology and intangible assets, and that the pooling of such technology, intangible assets and human talent may offer unrivalled innovative potential. The key is:

- to understand the benefits of embracing these models of IP development;
- to have executives and board members agree on and commit to a clear business plan with respect to same; and
- to have the right people in place to execute the plan.

Different models of collaborative IP development are used today, including:

- participation in R&D consortia;
- collaboration between different companies for a variety of strategic reasons;
- collaboration with universities and other public research institutions; and
- the ‘open science’ model, where IP rights become superfluous as access is generalised and data is shared with little or no limitations.

Determining which collaborative model is best for a company’s needs requires specific considerations. The models have different inherent philosophies and different approaches, ranging from the research consortium’s more

industrial-based approach to open science's liberal access to data once thought to be sensitive. In addition, in dealing with universities or public sector partners, contrasting missions and institutional objectives are manifest and give insight as to the difficulties that may arise during negotiations.

We now address some of the challenges that stem from each collaborative model.

The research consortium model

For the purpose of this chapter, a research consortium is considered to be a group of companies, public research institutions and universities that conducts collaborative R&D projects funded in part by granting agencies, within a specific industry (eg, pharmaceuticals, aerospace).

Different corporate structures can be chosen when organising a consortium. Moreover, because the main purpose is R&D or related activities, many jurisdictions offer interesting tax incentives to encourage R&D endeavours. Benefiting from these incentives should be a core concern and particular attention should be paid to relevant eligibility requirements. Whether the chosen corporate structure is a joint venture, a corporation or a trust, tax optimisation should always be considered.

Specific rules, regulations and laws must also be scrutinised. For example, some countries' IP laws and policies have special rules pertaining to joint ownership and development of intellectual property (eg, the US CREATE Act of 2003, which contains particular disclosure requirements and addresses other co-ownership issues).

In our opinion, clearly defining the IP management model, including IP ownership and licensing issues, and getting members to sign up to a template agreement that deals with these issues as well as other sensitive subjects, such as representations and warranties on infringement and indemnification, will ensure that the R&D projects are not delayed, or worse cancelled, because the parties cannot agree on the terms and conditions of the collaboration agreement.

Furthermore, the agreement should:

- provide some form of access to background intellectual property during and after the project; and
- define who is responsible for the prosecution and enforcement of intellectual property developed during the project.

Often research consortia have the advantage of giving access to government and public sector funds that are not otherwise available to entities pursuing R&D in non-

collaborative models. However, access to these public funds requires particular vigilance from the consortium and its members, as such funds are often tied with restrictions or policy requirements emanating from the granting agency. Such restrictions may include:

- higher scrutiny of potential conflicts of interest;
- restrictions on international collaborations; and
- incorporation of research ethics standards.

Additionally, public funds may be tied to national benefit requirements that may have an impact on the downstream licensing of intellectual property or downstream manufacturing of goods covered by such intellectual property.

Furthermore, as recent good corporate governance trends indicate, transparency issues may be important to the consortium. As such, parties considering consortium-based research should be forewarned that sensitive budgetary information and information regarding corporate organisation may have to be shared with the other members of the consortium.

In addition, export restrictions on military or dual-use technology, as exemplified by the US International Traffic in Arms Regulations and the Export Administration Regulations, may further constrain the consortium's leverage when mapping out its strategies, as nationality and employment issues may prevent a partner from taking on certain parts of the R&D efforts. This issue will also arise in other types of collaboration.

Consortium-based research presents many advantages – namely, the possibility of fostering a positive, long-term partnership with key organisations and, because the projects are collaborative in nature, the possibility of participating in the training of PhD students who will acquire new skills and who may, as stated earlier, become key employees in a company's R&D department. The seeds of such partnerships are sown through transparency, a clear understanding of the rules of the game and clear, enforceable contracts that define each party's rights and obligations.

Strategic collaborations

Companies may decide to collaborate on different levels and for different reasons. There may be more than two companies involved in any given collaboration and each may reside in a different country.

Consider as an example the standardisation process. The aforementioned Company B (situated in Canada) may decide to collaborate with Company C (based in the United States) and Company D (located in Germany) to submit a joint candidate to a standard-setting organisation for standardisation purposes.

If the fruit of Companies B, C and D's collaboration becomes the standard and if Companies A, B and C own patents that are essential to the practice of the standard, they may not only gain market advantage by selling their own products based on the standard, but will also be able to derive revenue from the licensing of their essential patents to third parties practising the standard, all on a fair, reasonable and non-discriminatory basis as required by the standard-setting organisation.

Furthermore, Companies B, C and D may want to join a patent pool created to offer a single licence to patents that are essential to the practice of the standard and that are owned by different parties. Patent pools facilitate access to patents that are essential to the practice of the standard and further revenues may be derived by joining the pool.

Although risks are associated with international collaborations involving two or more parties, including risks relating to the exchange of confidential and sensitive data and risks relating to IP ownership, these risks can be mitigated through the negotiation and execution of a well-crafted collaboration agreement.

Such an agreement should:

- clearly define the purpose of the collaboration;
- address the issue of confidentiality;
- address how background intellectual property will be used during and after the collaboration;
- address in great detail foreground IP ownership, prosecution and enforcement issues, especially when considering the fact that the statutes of the countries where the parties may want to protect foreground intellectual property may also deal with the same topics; a proper understanding of the interaction between these statutes and the terms and conditions of the agreement is therefore essential; and
- clearly state what type of open source software, if any, can be used as background intellectual property in the collaboration (if the collaboration pertains to software).

Collaborative agreements with research institutions

A collaborative research agreement with a university or a public research institution can provide valuable access to state-of-the-art facilities, resources and 'brain power'. University research operates in a very definite context that differs in many respects from the corporate world. In most jurisdictions, universities are in intense competition for limited funding and research talent. Therefore, IP development and licensing schemes represent an interesting source of revenue. Contractually guaranteeing the continued non-commercial use

of intellectual property is another means by which universities may want to profit from the intellectual property developed during such collaborations.

Certain jurisdictions have adopted a more formal, hard-law approach in order to encourage universities and research institutions to enter into agreements with corporate partners. In the United States, such momentum was provided by the adoption of the Bayh-Dole Act in the early 1980s. Other jurisdictions have put forward a more informal approach to help foster these strategic relationships, such as policy statements. In any event, internal IP management policies and the creation of formal IP management offices within universities and public research institutions have helped to foster a proactive attitude towards IP development and commercialisation. Internal IP management policies often dictate how revenue sharing and licensing issues will be dealt with. As universities often consider their primary goal to be education and fundamental research, their IP management policies often aim to guarantee the graduation of students working on commercially based projects. Research institutions and researchers also have a great incentive to publish their work, which may lead to disclosure and prior art issues in respect to the developed intellectual property. However, these issues may be dealt with in the agreement between the parties.

Furthermore, contracts between universities and researchers or university policies may grant the researchers certain management rights or may include an obligation to consult the researchers when dealing with the commercial exploitation of intellectual property. Therefore, when collaborating with a university, the rights of the researchers and students involved are issues that should be at the forefront of negotiations.

Collaborating with universities and public research institutions is beneficial in many respects, including from a human capital perspective. Unfortunately, the differences in the policies, philosophies and goals of businesses and of universities or public research institutions often lead to lengthy and frustrating negotiations. In our opinion, academia and businesses must use all opportunities and forums available to discuss and try to eliminate the impediments to collaborative research so that these partnerships will not only continue to exist, but also thrive.

Open science

Open science may inspire a guarded reaction from most business executives as its main premise is that intellectual property and data should be accessed by all, with little to no restrictions. Open science does not suggest a negation of IP rights *per se*, but it does suggest

a different perspective on their use. It is based on the perception that the proliferation of IP rights has created bottlenecks in access to protected works and innovations. Developing an alternative conception of IP rights such as open science implies circumventing these negotiation barriers in the hope of furthering science and innovation.

‘Open science’ is an expression derived from ‘open source’ software, where computer programmers from all over the world can contribute to a computer program on an informal, decentralised basis. Open science offers a similar model, where researchers operating from different institutions and corporations may contribute data, assign tasks to be completed and pool the collected data. One particular restriction to open science agreements is that foreground intellectual property and data must be subject to the same access conditions as the initial data from which they are derived, so that the subsequent appropriation of intellectual property and denial of licence rights may trigger a contributor’s liability.

Open science allows for a reduction of innovation costs and gains in efficiency because a larger number of innovators contribute to the advancement of research in a decentralised context. Hence, different perspectives, ideas

and equipments that are not available to one sole innovator may be put to profitable use. Open science provides a basic thread of ideas on which to build and allows for better identification of promising areas of research, therefore reducing parallel efforts on similar subjects.

Examples of open science abound, from the international HapMap project to the Berkeley Wireless Research Centre. Open science shows all its promise in fields where common templates are present and where research can be conveniently partitioned into smaller tasks. Regardless of the field in which a corporation operates, spearheading research initiatives through open collaboration models allows the maximisation of research efforts and harnesses the potential of modern-day communication tools.

Conclusion

In the information age, where competition is truly global, companies must find innovative ways to develop and protect intellectual property. Being open to new IP development models, understanding how they can be beneficial and resorting to appropriate legal and strategic advisers when adopting such models are some of the key ingredients to continuous success on the marketplace.



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