

Licensing in the age of open innovation and collaboration

In the multi-player world of new technology, collaborative strategies such as innovative clusters can connect the innovative capabilities of smaller companies to the market reach of large corporations

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Over the past 20 years, one business has grown faster than almost any economy worldwide: licensing. According to recent World Bank reports, global royalty and licensing fees have grown at a rate of 81% a year in that time. This statistic indicates how much collaboration has increased not only between different companies, but also between different continents.

Ireland is by far the world's biggest licence payer, at US\$38 billion a year. This figure is not the result of intensive licensing activity; rather, it reflects the special tax arrangements between Ireland and other countries. Excluding Ireland from the picture, East Asia and the Pacific region is by far the biggest contributor in terms of licensing fees, followed by Europe.

North America is overwhelmingly the top receiver of licence fees, at US\$109 billion a year. However, with more than 50% of all new patents worldwide being filed in Asia, this situation will change in the coming decades – Asia will develop from a net payer of licensing fees into a net receiver.

Europe boasts tremendous untapped potential for patent licensing. A joint survey conducted in 2007 by the Organisation for Economic Cooperation and Development, the European Patent Office and the University of

Tokyo highlighted that just 31% of large European companies use patent licensing as a way of sharing innovations, compared to 74% of all large Japanese companies.

The survey shows that Asian companies are much more active than their European peers in sharing their intellectual property with others and integrating the best innovations into their products – Europe seems to have a much bigger problem with 'not-invented-here' syndrome.

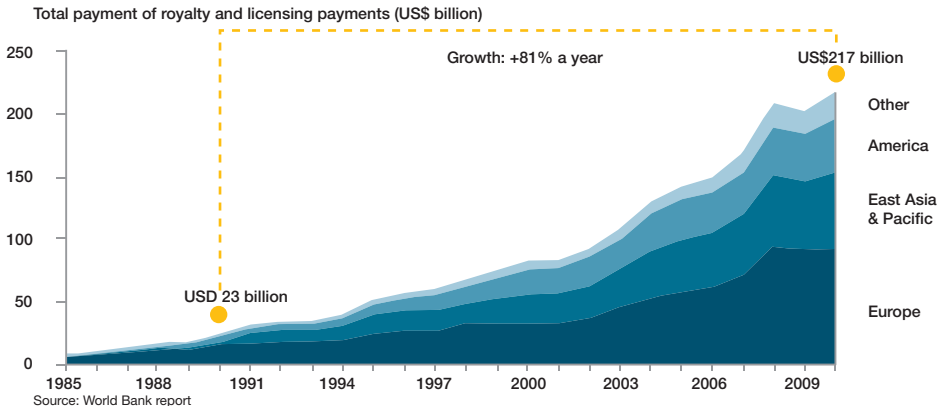
Open innovation models can be powerful tools for leveraging intellectual property. The most forward-thinking companies are turning this development process into collaborative and inclusionary efforts, thereby reducing threats and maximising value.

By in-licensing certain technology, companies ensure that their products are protected by enforceable intellectual property. This may not be enough to maintain a competitive advantage in the market, but it is essential to operate; without enforceable intellectual property, trolls and powerful competitors will ensure that you go out of market, irrespective of the quality of your company's products.

Open innovation is also fundamentally linked to value generation: it allows companies not only to generate additional profits by leveraging their internal IP portfolios, but also to maximise the value derived from M&A transactions and reduce taxes.

IP value proposition

The competitive landscape has been fundamentally altered by a shift in importance from manufacturing capabilities to know-how protected by IP rights. The increasing complexity of consumer electronics, the prevalence of coding languages in engineering



product development and the reliance on essential industry standards have led to the near-extinction of in-house innovation.

Computers, smartphones and tablets often require thousands of IP rights, most of which are not developed in-house. The standards-essential patents in products such as Blu-ray discs incorporate no less than 10 optical standards. Coding languages, including Java, have become instrumental to nearly every electronic consumer product, from refrigerators to cars.

Although incremental innovation is increasingly improving and leveraging existing technology, the total royalty fees required to produce cutting-edge products would often create commercially unsustainable situations, with such fees representing more than 50% of the total product price. Unsurprisingly, some companies are taking chances by infringing, rather than opening Pandora’s box.

Different solutions have been devised to combat these problems, relying on shared information and collaborative efforts in innovation. In the case of Blu-ray devices, patent pools have been the answer. One-Blue and Premier BD (formerly BD4C) have been formed to combine the relevant patents of their respective investors into accessible IP pools, reducing transaction and search costs and protecting against litigation while rewarding the R&D efforts of the companies that originally funded the knowledge creation.

Procter and Gamble has implemented

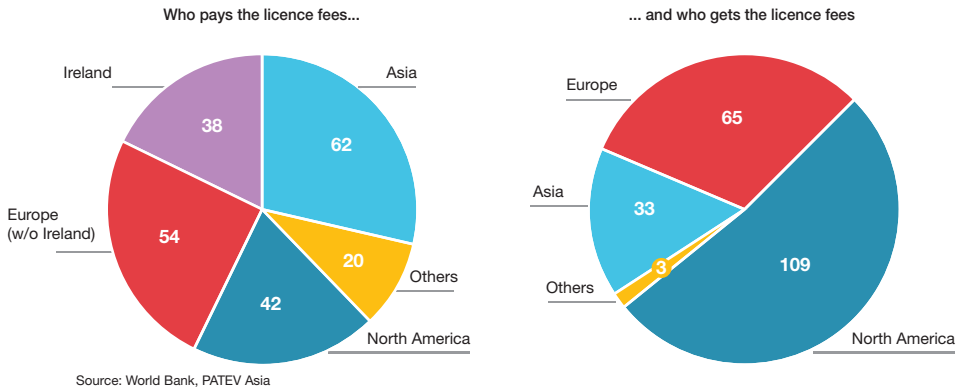
another approach, transforming its R&D efforts under the motto “Connect and develop”. This system relies on an extensive network that allows for the adoption of existing ready-made solutions through the R&D team, as well as new solutions by the team. By focusing on core competencies and leveraging resources within its network, the company has created innovation “proudly developed elsewhere”. This strategy has supported continued growth, reduced time to market and created an innovation process that is successful overall.

Setting your limits

Even the most openly innovative companies must limit the patents and know-how that may be shared. By understanding these restrictions and building firewalls, a company can progress beyond protecting intellectual property and start truly managing it.

The first step is to decide on the restrictions which must be placed on existing patents and possible partners, as well as preferred situations. There are many questions to answer, including the following:

- Is the company interested in licensing only pre-selected intellectual property or is the whole portfolio fair game?
- Will the company license to competitors or to parties that will indirectly benefit competitors?
- Is selling or licensing patents the preferred method?



- Which industries does the company prefer to license to and which are restricted?
- Will the company engage with non-practising entities (NPEs), such as universities, government-run institutions or patent trolls?

These considerations – and many others – must be discussed and agreed upon when identifying target industries and partners. The conclusions will ultimately determine how open the company wishes to be.

Most employees have a narrow view of the value associated with intellectual property. In order to prevent the leakage of proprietary knowledge, it is important to involve at least one staff member who understands the importance of the full breadth of IP assets and can establish barriers so that proprietary knowledge is properly managed during the project.

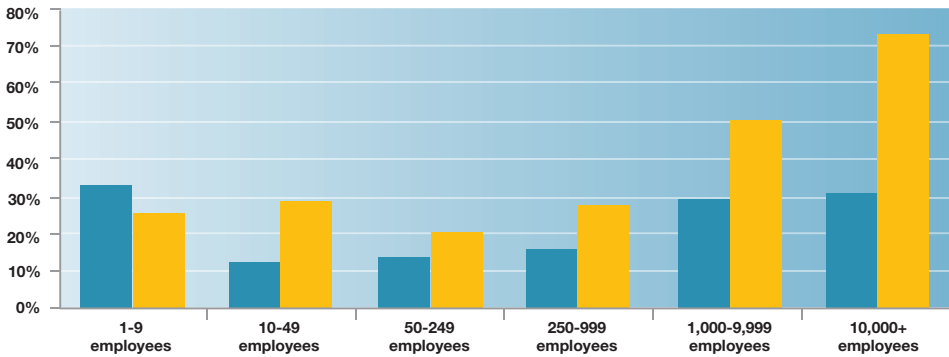
Several challenges must be addressed in order to create sustainable and successful innovative collaborations. The processes of finding the right partners, identifying the relevant technological fields, organising the collaboration to benefit both parties and managing ownership of developed intellectual property all conceal potential disasters that may delay or derail success.

Problems with licensing – a European perspective

Depending on the size and strength of an

organisational network, finding the best partner for licensing is considered the main challenge for both small and large organisations. As a global company with revenues exceeding US\$70 billion, Procter & Gamble has the luxury of countless existing relationships to exploit. By leveraging knowledge and trust shared between distributors, partners, suppliers, customers, universities and research institutions, it has created a network that ensures a connection to the person, company or institution that can solve its next big problem.

For smaller companies, establishing such connections is often cited as the most difficult task. The process of finding partners and technologies that are relevant to open innovation may require several combined solutions. IT systems such as infoPatent and IPwebS have been developed to find global intellectual property and manage its commercialisation, integrating invention activities while monitoring competitor and market patent activity. Online knowledge exchanges, such as NineSigma, Innocentive, Your Encore and Yet2.com, offer access to hundreds of thousands of researchers, engineers and scientists. Brokers and licensing agents have existing networks, abundant experience and insights into finding partners; they can also identify which relationships will have symbiotic effects and match congruent objectives and expectations while negotiating



Note: Out-licensing includes only deals between non-affiliated companies
 Source: PATEV Asia; OECD-EPO-TOKYO Survey on patent licensing

successful collaborations. Patent pools and industry clusters, some involving hundreds of companies, jointly focus on finding efficient solutions to the problems that arise through licensing and joint innovation.

One example of an innovative cluster is Competence Center Mechatronics BW, a collaboration between German mechatronic, mechanical engineering and electrical companies. This industry-initiated network was created to solve problems relating to renewable energy, a field in which Germany has the potential to dominate globally. The cluster has helped companies to pool their individual strengths, reduce production cycles and optimise the innovation process by linking small and medium-sized enterprises (SMEs) and large corporations. It has evolved into a European inter-cluster network, joining Italian and French clusters and involving more than 100 companies with different core competencies. All partners are easily accessible, and their size and scope demonstrate the range of topical expertise that the network enjoys.

This field presents innovative SMEs with an opportunity to establish themselves with game-changing innovations. However, it also allows large companies with reach and production capabilities to secure market share.

Organising the relationship

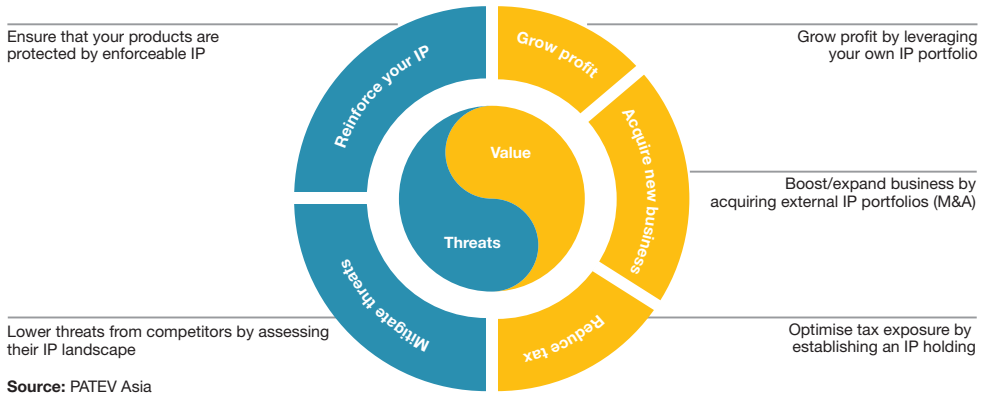
The issue of how to manage intellectual

property among the partners is more complicated, especially in collaborations between large corporations that already regard intellectual property as integral to their core business, speak a certain commercial language and expect elevated value propositions. In contrast, smaller, privately owned corporations, universities and research institutions generally have different goals and attitudes to licensing, and often do not share the same timeframes or sense of urgency.

In such cases the parties frequently rely on the expertise and experience of IP consulting firms, which can help to align expectations and objectives and, ultimately, the treatment of the intellectual property that is created through the collaborative process. Before intellectual property is created, all parties must understand and communicate their views on the options for owning and exploiting it. This can involve outright ownership by one party, but jointly owned patents are the more usual solution. In this case the parties identify the uses that they require and the right of exploitation is limited to those applications; they must also agree on licensing to outside parties and revenue sharing.

Communicating goals

Each project requires a unique set of objectives and expectations. Within most corporate structures, the treatment and perception of intellectual property differ greatly between



departments. In the legal office, intellectual property is viewed as a legal right and is managed to protect the company's patents, trademarks and copyrights. The technology office views intellectual property as a means to product development. The finance office is concerned about return on investment, while the sales division will be interested in new products. Marketing will look for a clear competitive advantage, whereas supply chain managers will want stronger links with their suppliers.

Intellectual property has evolved from an exclusionary tool to an integral part of business development, strategic planning and branding. As such, it requires C-level consideration. Larger corporations are increasingly likely to have a chief intellectual property officer (CIPO) on their staff, but many smaller enterprises must rely on the CEO or chief technology officer to adapt to this viewpoint. The evolution of the value perceived from intellectual property must be reflected in the role, responsibility and organisational structure; if it is not, collaborative innovation cannot be successful or sustainable. Involving one or more IP consulting firms can smooth the process and help to ensure efficient and long-term engagement with aligned expectations.

Open innovation models

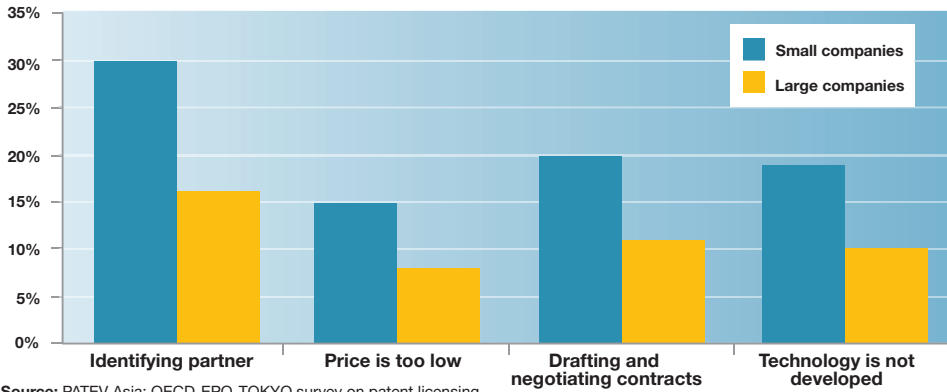
As the importance of intellectual property has grown, the corporate structure of large organisations has evolved to decentralise

R&D and emphasise open innovation. This has led to free-flowing lines of communication between industry leaders focusing on cross-licensing opportunities.

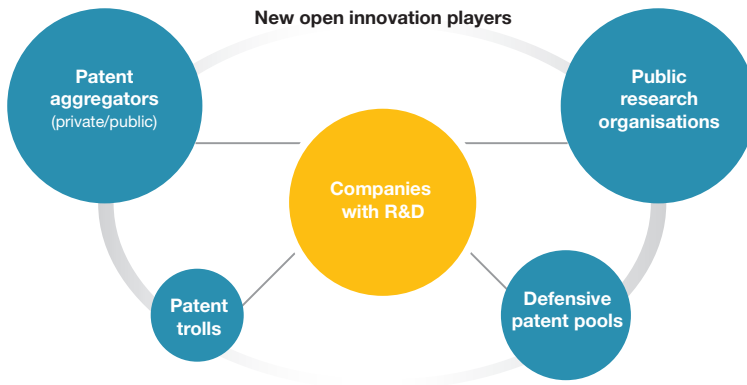
Where open innovation flows from multinational corporations to SMEs, support is often necessary to bridge information gaps. A project by EADS provides an example of this. The global aerospace, defence and related services provider embarked on a technology licensing initiative with the support of IP consulting firms including PATEV of Germany and Avenium Consulting of France. Its aim was to foster joint innovation while increasing revenue streams. The key benefits for both EADS and its potential partners were highlighted. The company's CIPO, an IP strategy team and representatives of each division were organised into a cross-divisional licensing team.

A cutting-edge innovation relationship management system ensured the security and accessibility of relevant information, such as the status of all licensing opportunities, follow-ups on contacts and revenue forecasts. This created a comprehensive overview of the correlations between patents and the associated products, licence agreements and royalties.

The IP consulting firms first analysed the quality and suitability of the patents, the technology and the market or application. Based on the results, the patents with the highest transferability were assessed in terms



Source: PATEV Asia; OECD-EPO-TOKYO survey on patent licensing



of risk, reward and timeframe to monetisation.

By defining a set of limitations, EADS identified the companies with which it was willing to collaborate. By the end of 2010, EADS had already licensed technology contracts worth €10 million. Licensing has become an integral part of EADS’s strategic and financial goals and has created an innovative environment with SMEs operating in similar fields.

When technology stems from mid-caps, reliable networks are needed to connect the various parties. Within industry clusters, this process can be facilitated by a combination of IP business development partners and consulting firms and advanced innovation

relationship management software. In the case of technology from small companies, government-run initiatives such as High-Tech-Gründerfonds can connect valuable intellectual property to funding, business networks and open innovation experts.

New opportunities

As open innovation continues to evolve, so do the types of company engaging with it. Today, these include NPEs such as patent trolls, IP pools, public research organisations and IP aggregators. Each business model presents different challenges, expectations and ultimate goals. Novel open innovation models will emerge, focusing on specific collaborations

between these new players.

Universities are mainly looking for opportunities to commercialise technology that has been developed for academic purposes. Questions of ownership between researchers, the university and corporations may arise. Furthermore, if an institution was previously involved with largely philanthropic breakthroughs that had little commercial potential, a question arises as to the influence that increased collaboration with corporations may have.

Engaging in collaborative efforts involving patent trolls and public research organisations presents unique considerations. Will trust within partner networks be broken? How will joint research be treated between companies and foreign research institutions? Will governments object to certain technologies being transferred?

Conclusion

The fundamental factor is that innovation needs multiple players to contribute technology, thus significantly increasing the importance of collaboration. It is arguable that the companies' innovation, production and commercialisation capabilities will become further removed, with R&D, production and sales each becoming the responsibility of separate parties. This, in turn, will create more specialised core competencies and make reliance on partnering even more vital. Clusters such as the German mechatronic model are crucial to further the innovative capabilities of SMEs and connect them to the market reach of large corporations. IP transfer will become further ingrained as innovative processes become truly collaborative.

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In 1985 Dr Häfele founded a consulting firm focusing on environmental and process technology. Five years later, he entered a joint venture agreement with a supplier for car manufacturers. He later managed an international materials technology firm. In 2001 he became the chief executive officer of PATEV, one of Europe's market leaders for IP management services. Since then, PATEV has greatly advanced the evaluation and use of patents as a contribution to added value.

Dr Häfele's memberships include the *Deutsches Institut für Erfindungswesen*, which promotes innovation in Germany; the German Institution of Arbitration; the Association of Intellectual Property Experts; and the Licensing Executives Society. He has also been listed in *The World's Leading IP Strategists*.



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Michael Beyer was awarded his doctorate from Hanover Technical University, having specialised in biotechnology and microbiology.

His professional career began in 1981 with R&D projects in the area of contaminated land and environmental improvement. Soon he took over several senior management positions in business development and marketing of technical services. He is specialised in the transfer of technology for various industrial applications.

Dr Beyer has been at PATEV since 2006, when he took on responsibility for patent licensing and building a network of experts. He is now in charge of operations and provides his expertise in assessing the transferability of property rights, the implementation of technology transfer projects and the optimisation process in patent management. He is also responsible for the development of cloud-based patent management and collaboration software tools and PATEV's IP risk protection services.

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In 1998 he joined the privately held Swiss aviation and aerospace company SR Technics as purchasing manager. He became a project manager in the Boston Consulting Group in 2001. In 2004 he was appointed vice president of building industry market leader Hilti AG, where he was in charge of marketing and communications.

In 2008 Dr Eberle joined DKSH as president of country operations and head of business unit technology in Taiwan. Under his leadership, Taiwan developed into one of the strongest profit growth contributors of the business unit. In recognition of his abilities, he was made a member of the DKSH Group board and was named head of DKSH global technology in 2010.