



## European IPR Helpdesk

### Fact Sheet

# *Intellectual property management in open innovation*

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## Introduction

During recent decades, the R&D field has witnessed a rise in technological complexity. This entails the presence of a pool of intellectual property rights (IPR) within the most advanced products and services. Also considering that the number of patent filings increases steadily, companies therefore have to rely on third party IP rights to innovate.

A natural outcome of this multi-invention background is the need for companies to cooperate with other research and technology development performers (RTDs) in order to produce innovative solutions.

This fact sheet aims to highlight the importance of the open innovation model as an opportunity for Small and Medium-sized Enterprises (SMEs) as well as for research and technology organisations (RTOs), and to highlight the issues to be taken into account for a proper management of IP when innovating through open approaches.

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<sup>1</sup> This fact sheet was initially published in December 2014 and updated in October 2015.

This document refers to other fact sheets developed by the European IPR Helpdesk covering more in detail the management aspects related to the different intellectual property factors in the open innovation actions.

## 1. Open Innovation in a nutshell

Differently from the closed model where the entire innovative process is carried out internally by companies – the “develop it by yourself” paradigm – open innovation offers a different model. Here the development of innovative solutions is made on the basis of internal and external sources of knowledge and therefore in collaboration with several R&D actors, with the advantages of:

- Shortening the time to innovate;
- Sharing risks;
- Reducing costs;
- Getting preferential access to markets.

Indeed, the multi-invention factor entails having a technology covered by several IP rights belonging to different owners. This way, almost no company has a real monopoly over a specific technological field. In addition to that, while the costs of internal R&D and innovation have risen, on the other hand SMEs and RTOs are performing an increasingly high-quality R&D activity.

For these reasons, even big industries started to subcontract R&D activity to smaller entities, in order to integrate external knowledge within the internal innovation chain.

This switch has led to an increasing collaboration between companies with the aim of intensifying innovation and bringing in new resources not available internally. Undeniably, new opportunities are now available for innovative SMEs and RTOs as they are well placed to fill the resource gaps through selling their expertise in specific technological fields. In this sense, the open innovation model can facilitate:

- Research cooperation between SMEs and RTOs;
- R&D commissioned by large industry;
- Strategic alliances with other SMEs and RTOs;
- Licensing in and out.

Mainly for SMEs and RTOs that are proficient in specific technological sectors but often lack expertise in what is outside their core business, open collaboration means filling knowledge gaps with the partners' complementary assets<sup>2</sup>, all of this coupled with the opportunity to effectively manage costs and risks while accelerating the path of the innovative solutions to the market.

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<sup>2</sup> It is worth noting that collaborative innovation acquires value if done at international level as this would give more exposure to the business and help the innovative technology to grow more rapidly and with a better chance of success in commercialisation.

Indeed, this is what open innovation stands for: the use of external knowledge for a better management of internal knowledge, in order to reap the full benefit from the company's intangible assets. On the other hand, open innovation does not mean freely putting at the R&D partners disposal the acquired knowledge, but sharing it with them to come up with a better competitive solution.

## 2. IP and Open Innovation

In the context of open innovation, intellectual property plays a new role which no longer reflects the usual defensive mechanism adopted by companies. More precisely, up until some years ago most of the middle cap companies have been making use of their patents to block competitors and to freely operate on the market. This defensive approach was based on the notion of patent as a negative right to exclude others rather than to enable innovation.

Yet, contrarily to this perception, patent protection allows companies to commercialise their solutions and safely enter into R&D collaborations, with limited risks of seeing their intangible assets appropriated by their partner.

Indeed, patents are extremely important for the innovative process since they protect and disclose at the same time.

Transactions and agreements made in the context of R&D collaboration are facilitated by effective intellectual property protection as this facilitates a smoother technology transfer through licences. Besides, clear ownership and proprietary rights facilitate sharing of knowledge, as partners are more willing to enter into cross-licence deals and exchange their inventions with those of partnering companies.

Therefore, patent protection helps recoup the R&D costs via the commercialisation of intangible assets and at the same time is beneficial for the market growth and the collaborative research development. Strong intellectual property practices are certainly of utmost importance for small entities with very specific R&D capabilities needing partners to monetise their inventions. They would fail to attract partners and investors if lacking a solid management.

Intellectual property is moreover central to open collaborations as it represents the contribution (i.e. background) that each partner brings and which collected with that of others will represent the pool of resources that will be shared and managed in a collaborative project. Besides, new intellectual property as an intended outcome of such projects needs to be appropriated and managed.

It is worth noting that under an open innovation perspective the unexploited intellectual property is considered to be an opportunity and not a cost to account

for<sup>3</sup>. That is, the outcome of internal research developed until a certain level of maturity or a technology that has been developed outside the company core R&D can now be placed in what is called the intermediate market or secondary intellectual property market<sup>4</sup>.

Such a market would offer the opportunity to sell or license unexploited intellectual property to specialised companies bringing the technology to maturity and/or making different use of it.

Under this new perception, intellectual property assets within the open innovation scenario should be considered:

- An advantage and no longer a barrier
- An opportunity and no longer a cost
- An option for the second intellectual property market

### 3. Managing knowledge in open innovation

Because of the very nature of collaborative innovation, an efficient intellectual property management is vital for the success of the project. Sharing knowledge, technology and expertise between partners is an enormous benefit that could nevertheless entail the risk of leakage of such assets and free-riding if not managed effectively.

On the other hand, also due to the co-development activities that might be carried out in collaborative projects, the efficient allocation of ownership of results is crucial for their optimal exploitation.

Since open innovation is all about sharing know-how and inventions with third parties, organisations should start managing IP at the very early stage of the innovative process, starting with an accurate allocation of the IP owned by each party.

The way open innovation is carried out are numerous and can be listed in a non-exhaustive way as follows:

- Networking and crowdsourcing<sup>5</sup>;
- Collaboration and R&D alliances, whether under the form of a research joint venture or an R&D project;

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<sup>3</sup> The Open Innovation Model, © International Chamber of Commerce (ICC), 2014. The paper and more information on the project can be found at [www.iccwbo.org/Innovation-and-intellectual-property](http://www.iccwbo.org/Innovation-and-intellectual-property).

<sup>4</sup> H. Chesbrough, R. Ghafele, "Open Innovation and Intellectual Property: A Two Sided Market Perspective", in H. Chesbrough, W. Vanhaverbeke and J. West ed., *New Frontiers in Open Innovation*, Oxford University Press, Oxford, 2014, 191-207.

<sup>5</sup> Crowdsourcing is essentially a form of mass outsourcing. Instead of engaging with a specific third party to create an innovative solution, the commission is made available to the "crowd" to be accomplished. Thereafter the commissioning organisation will select the best one.

- Creating independent spin-offs dedicated to the development of a new project;
- Licencing;
- Being part of a patent pool<sup>6</sup>.

In any such case a knowledge transfer is taking place and there are particular steps to follow which help to retain control over the owned IP and to know the prospective partner's IP portfolio value, while ensuring the exact share of the planned results.

Contrarily to the fact that the word "open" could characterise a free sharing of innovation, organisations wishing to enter into open innovation should beware of any leak of prior acquired knowledge and take care to capture the newly created knowledge. Organisations should therefore protect their IP assets through rights registration and adopt internal safety measures on confidentiality. This could be put into practice by paying attention to:

- Setting up an internal filing system to track any creation of IP assets;
- Documenting each IP element (laboratory notebooks, inventorship forms etc.) – proof of ownership;
- Creating an IP database and keeping it up to date;
- Organising regular reviews of the IP used;
- Securing confidentiality internally and externally;
- Third parties IP rights (freedom to operate; infringement).

*IP protection and licensing strategies can be used to prevent exclusive appropriation of specific outcomes of collaborative efforts, while providing access to complementary innovation for mutual benefits<sup>7</sup>.*

To this end, it is worth noting that contract negotiations are normally a long process where parties should consider making some concessions to satisfy the other party's interests, mainly in the open innovation environment. Therefore, flexibility in intellectual property negotiations can always help in resolving pending issues and reaching a workable agreement, so as to have more chance to succeed within the partnership.

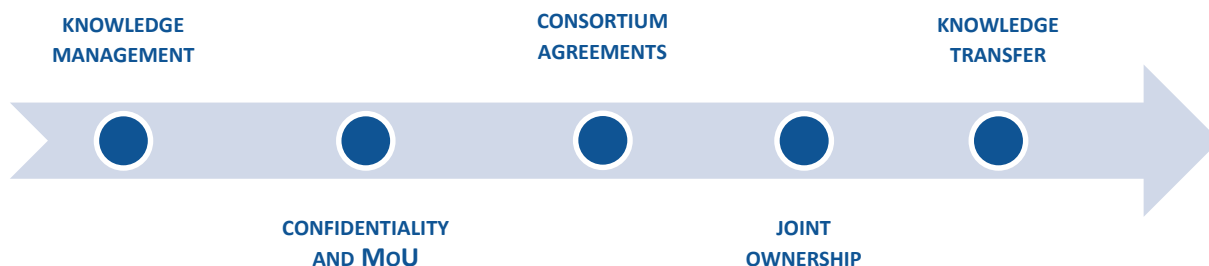
It is then advisable to show the willingness to reach a "win-win" agreement through reasonable statements. It is important to be firm on business perspectives, while being willing to understand the other party's needs and business goals.

Reaching a win-win agreement therefore means obtaining a deal that gives as much commercial flexibility, rights and lucrative possibilities as possible to both parties<sup>8</sup>.

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<sup>6</sup> A patent pool is a consortium of at least two companies agreeing to cross-license all or some of the patents which they possess relating to a particular technology, i.e. they pool their patents.

<sup>7</sup> Lippoldt D, Stryzowski P (2009) Innovation in the Software Sector: OECD Innovation Strategy. OECD, Paris.



### 3.1 Confidentiality issues

When engaging with innovation partnerships, it is important to realise that organisations are about to disclose technology and knowledge that might not have been protected yet. To avoid any eventual misappropriation and use of such information, it is best practice to conclude a non-disclosure agreement (NDA - also known as confidentiality agreement)<sup>9</sup>. This agreement establishes the conditions under which partners disclose information in confidence.

Instead of taking the form of a stand-alone agreement, confidentiality obligations may also be included in a Memorandum of Understanding (MoU), should the partners prefer to define further aspects of their collaboration at the very beginning of the negotiations<sup>10</sup>.

### 3.2 Consortium agreements

When a partnership between large companies, SMEs and RTOs for conducting innovative R&D projects is created, the parties usually sign a so-called consortium agreement<sup>11</sup>.

This agreement aims to define the relationship among the project partners, in particular the obligations between them, the organisation of the work, the management of the project and the generated IP.

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<sup>8</sup> To better understand the different issues at stake when negotiating intellectual property, see “How to deal with IP-related issues in transnational negotiations”, available in the European IPR Helpdesk [library](#).

<sup>9</sup> For detailed information on non-disclosure agreements, consult the fact sheet on “Non-disclosure agreement: a business tool” available in the European IPR Helpdesk [library](#).

<sup>10</sup> Models of a non-disclosure agreement and of a memorandum of understanding are also available in the [library](#) of the European IPR Helpdesk. Tailored assistance can be provided through our [Helpline](#) for free and in confidence.

<sup>11</sup> See “How to deal with IP related clauses within Consortium Agreements” fact sheet available in the European IPR Helpdesk [library](#).

IP-related issues that are to be addressed within consortium agreements include at least:

- ✓ Identification of the intellectual property which is owned by the parties before starting the project and which is necessary for project implementation (i.e. background)
- ✓ Allocation of the ownership of intellectual property which is generated in the framework of the project
- ✓ Access rights to the above for project execution or exploitation purposes.

### 3.3 Joint ownership

Joint ownership<sup>12</sup> often arises in connection with collaborative innovation such as joint ventures, but more generally is relevant to any research project involving co-development of intellectual property.

In order to ensure that ownership, protection and defence of a jointly generated IP are correctly allocated, it is important to put in place appropriate contractual arrangements.

The following non-exhaustive check list identifies the essential IP issues to be addressed when handling jointly owned assets:

- Assignment of shares;
- Conditions of use;
- Conditions of exploitation;
- IP protection and maintenance;
- IP monitoring;
- Governing law, jurisdiction or ADR systems.

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<sup>12</sup> For a deeper analysis see the European IPR Helpdesk fact sheet on “IP Joint Ownership”, available in the [library](#).

### 3.4 Knowledge transfer

The essence of open innovation can be summarised in technology and know-how transfer between organisation. All this knowledge is often exchanged through contractual mechanisms. The most usual are licences, but many others are used to transfer knowledge and in particular technology<sup>13</sup>.

#### Licensing

A licence of intellectual property rights can be subject of a standalone agreement or an integral part of larger partnerships, including franchising, manufacturing or research collaboration contracts, insofar as access rights are concerned<sup>14</sup>.

Relevant to the open access model is the double side of licensing in its forms of licensing-in and licensing-out. The difference is that, with the first practice of licence, an organisation can access a third party's knowledge, while the second form allows an organisation to put its own knowledge at the third party's disposal.

Licences are the core of the open innovation model as they allow intellectual property owners to reap the benefits of their intangible assets, while having control over them, with the possibility to better share knowledge with other intellectual property owners.

#### Assignment of IP

An assignment occurs when an organisation (the assignor) transfers the ownership of an intellectual property right to another party (the assignee). Consequently, the assignee becomes the new owner of the intellectual property right.

Selling intellectual property is certainly relevant to the open innovation process. This method is used when an organisation does not want to keep control over its intangible assets for example because it does not fit with its overall business strategy<sup>15</sup>.

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<sup>13</sup> For a comprehensive overview on Knowledge Transfer, see the fact sheet on "Commercialising Intellectual Property: knowledge transfer tools", available in the [library](#).

<sup>14</sup> The Fact sheet on "Commercialising Intellectual Property: Licence Agreements", available in the [library](#), highlights the key provisions seen in most licensing agreements, as well as the specifics of licensing certain types of intellectual property rights.

<sup>15</sup> For further details, consult our fact sheet on "Commercialising Intellectual Property: Assignment agreements", available in the online [library](#).



## IP valuation and due diligence<sup>16</sup>

In any knowledge transfer activity it is fundamental to gather as much information as possible on the intellectual property position of the partners.

Such a screening has two main goals, consisting of:

- Assessing the value of the intellectual property concerned;
- Assessing the intellectual property-related risks that partners might incur further to business transactions.

Indeed, knowing the economic value and importance of the intellectual property rights owned by partners assists in the strategic decisions to be taken on them, but also facilitates the commercialisation and transactions concerning those intangible assets. More specific to open innovation, a common understanding on the value of the intellectual property at stake is essential to conclude a transfer agreement and to make sure that the parties have struck a balanced deal.

On the other hand, IP due diligence helps organisations to reorganise their intellectual property portfolio with the aim of enhancing its marketability. In this sense, IP due diligence is part of a broader IP audit process. The latter in fact is normally conducted to identify a company's IP assets to develop an efficient IP management.

Within the open innovation process, IP audit may assist organisations to:

- Set the IP development and commercialisation strategy;
- Detect risks connected to the partners' IP assets;
- Take appropriate actions regarding IP protection and enforcement;
- Avoid a waste of money in the acquisition or development of IP;
- Reduce the risk of infringement of third parties rights.

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<sup>16</sup> IP valuation and due diligence are subject of two separate fact sheets, respectively on "Intellectual Property Valuation" and "IP due diligence: assessing value and risks of intangibles", both available in the [library](#).

## Useful Resources

For further information on the topic please also see:

- The Open Innovation Model, © International Chamber of Commerce (ICC), 2014: [www.iccwbo.org/Innovation-and-intellectual-property](http://www.iccwbo.org/Innovation-and-intellectual-property)
- Enhancing IP Management and Appropriation by Innovative SMEs, © International Chamber of Commerce (ICC), 2013: [www.iccwbo.org/Innovation-and-intellectual-property](http://www.iccwbo.org/Innovation-and-intellectual-property)
- Knowledge Transfer Study 2010-2012, final report: <http://www.knowledge-transfer-study.eu/home/>
- OECD (2013), [Commercialising Public Research: New Trends and Strategies](#), OECD Publishing
- H. Chesbrough, R. Ghafele, "Open Innovation and Intellectual Property: A Two Sided Market Perspective", in H. Chesbrough, W. Vanhaverbeke and J. West ed., *New Frontiers in Open Innovation*, Oxford University Press, Oxford, 2014, 191-207
- Lippoldt D, Stryszowski P (2009) *Innovation in the Software Sector: OECD Innovation Strategy*. OECD, Paris
- Fact sheet on "How to deal with IP-related issues in transnational negotiations": <http://www.iprhelphdesk.eu/Fact-Sheet-How-to-Deal-with-IP-Issues-in-Transnational-Negotiations>
- Fact sheet on "Non-disclosure agreement: a business tool": <http://www.iprhelphdesk.eu/Fact-Sheet-Non-Disclosure-Agreement>
- Fact sheet on "How to deal with IP related clauses within Consortium Agreements": <http://www.iprhelphdesk.eu/Fact-Sheet-How-to-Deal-with-IP-Related-Clauses-within-FP7-CA>
- Fact sheet on "Intellectual Property Valuation": <http://www.iprhelphdesk.eu/Fact-Sheet-IP-Valuation>
- Fact sheet on "IP due diligence: assessing value and risks of intangibles": <http://www.iprhelphdesk.eu/Fact-Sheet-IP-Due-Diligence>
- Fact sheet series on "Commercialising Intellectual Property": [http://www.iprhelphdesk.eu/library/fact-sheets?field\\_tags\\_tid\[\]=168](http://www.iprhelphdesk.eu/library/fact-sheets?field_tags_tid[]=168)

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## ABOUT THE EUROPEAN IPR HELPDESK

The European IPR Helpdesk aims at raising awareness of Intellectual Property (IP) and Intellectual Property Rights (IPR) by providing information, direct advice and training on IP and IPR matters to current and potential participants of EU funded projects. In addition, the European IPR Helpdesk provides IP support to EU SMEs negotiating or concluding transnational partnership agreements, especially through the Enterprise Europe Network. All services provided are free of charge.

**Helpline:** The Helpline service answers your IP queries within three working days. Please contact us via registration on our website – [www.iprhelpdesk.eu](http://www.iprhelpdesk.eu) – phone or fax.

**Website:** On our website you can find extensive information and helpful documents on different aspects of IPR and IP management, especially with regard to specific IP questions in the context of EU funded programmes.

**Newsletter and Bulletin:** Keep track of the latest news on IP and read expert articles and case studies by subscribing to our email newsletter and Bulletin.

**Training:** We have designed a training catalogue consisting of nine different modules. If you are interested in planning a session with us, simply send us an email at [training@iprhelpdesk.eu](mailto:training@iprhelpdesk.eu).

## DISCLAIMER

This Fact Sheet has been initially developed under a previous edition of the European IPR Helpdesk (2011-2014). At that time the European IPR Helpdesk operated under a service contract with the European Commission.

From 2015 the European IPR Helpdesk operates as a project receiving funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 641474. It is managed by the European Commission's Executive Agency for Small and Medium-sized Enterprises (EASME), with policy guidance provided by the European Commission's Internal Market, Industry, Entrepreneurship and SMEs Directorate-General.

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