IP4GROWTH

Intellectual Property Management

A Guide to Relevant Aspects

IP4GROWTH *'Enhancing Intellectual Property Capacities for Agricultural Development'*
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FOREWORD

IP4GROWTH 'Enhancing Intellectual Property Capacities for Agricultural Development' is a 3-year long Higher Education Capacity Building project funded by the European Commission under the EU – ACP group of states Higher Education cooperation programme, Edulink II. Its objective is to contribute to the agricultural and socio-economic development of West African countries through enhancement of Higher Education Institutions' competences in Intellectual Property management.

West African countries face particular challenges when it comes to agricultural innovation, structured practices, trade policy or IP management. A survey analysis done by IP4GROWTH partners in May 2014 in universities in Burkina Faso, Ivory Coast and Senegal indicated that knowledge and awareness of intellectual property rights, which consequentially includes awareness of aspects of intellectual licensing and management, is lacking.

In response to this, the present document has been produced with the intention of serving as a basic introduction to core aspects of Intellectual Property management with a specific focus on the perspective of Research and Higher Education Institutions. It is important in the context of this guide that the precise structure and background to IP management much depends on both the individual research policy followed by public institutions, but even more on the significantly diverging standards of national IP laws, which may have a somewhat burdening effect especially when considering divergent rules of ownership under different national IP and contract laws. This guide presents, therefore, only basic information by providing short insights into the most relevant aspects of IP management, rather than a list of points that can be ticked off and is of global applicability.

INTRODUCTION

This guide is intended to serve as a basic introduction to core aspects of Intellectual Property (IP) management with a specific focus on the perspective of research institutions.

IP management has recently become imperative given that many institutions, including public research entities and universities, have moved away from purely research oriented policy targets principally based upon generally unremunerated publication of research results towards policies aiming to commercially exploit research results in order to generate additional income.

IP rights function as lubricants in such process because they form the basis upon which any type of commercial exploitation – which may be by way of direct licensing agreements, exploitation through spin off companies owned by the institution, or exploitation following further collaborations in consortia that may include academic and commercial partners alike – rests.

This guide covers, therefore, the **main aspects that need to be borne in mind under a policy that strives to employ IP rights as a means to generate income**. These aspects include an introduction into the nature and remit of IP management offices, strategies for establishing and managing IP portfolios, relevant questions of ownership of rights as well as concerns over internal IP policies. In addition, the divergent rights which may subsist, and the protection and registration strategies in which they may be used will be explained.

WHAT IS IP MANAGEMENT?

The term **"IP Management"** refers to the **administration and organisation of intellectual property matters** in institutions such as companies, public or private research institutions and any other entity engaged in the creation and commercialisation of immaterial rights.

Typically, the management of IP rights – which, for the purpose of this guide, include any immaterial asset that may have commercial value or that may be required for facilitating future exploitation – requires a centralised organisation responsible for overseeing the creation and commercial exploitation of rights.

The rights include, depending on the jurisdiction, registered patents, utility models, trade marks, designs and plant variety rights as well as unregistrable rights including copyright in research documents, computer programs, databases and database rights, unregistered design rights, topography rights and any other immaterial asset including, of course, inventions prior to patent application, and should also stretch to any other right such as domain names, rights in the name of an institution and, ultimately, rights that have been acquired by way of a license or assignment from third parties.

Intellectual Property Rights (IPRs)		
Registered IPRs	**Unregistered IPRs**	**Other Immaterial assets**
Patents	Copyright	Inventions prior to patent application
Utility Models	Computer programs	Rights in the name of an institution
Trademarks	Databases	Rights that have been acquired by way of a license or assignment from third parties
Designs	Unregistered Designs	
Plant Varieties	Topography Rights	

For public research institutions and universities, IP awareness plays a central role both as regards prospects for a further commercialisation of assets as well as for reasons of strengthening research and teaching reputation. Thus a proper IP management scheme allows universities in general enhanced freedom of operation, by enabling technology transfer and establishing a patent culture.

TIP

In the EU, for instance, many steps have been taken in order to provide universities with knowledge about raising IP awareness and fostering prospects for financial returns, precisely because usually much patentable subject matter had been lost due to early publication by research staff.

Important aspects of IP management therefore refer to:

- the on-going **monitoring of whether rights have been**, or are likely to be **created**,
- the **establishment of ownership** of such rights,
- the collation and **documentation of existing rights** (registered and unregistered),
- the documentation and preparation of **licensing contracts and other agreements** (such as collaborative projects or joint ventures),
- the **documentation of ownership** and aspects such as the valuation of rights or,
- the establishment of **non-disclosure or IP audit policies**.

The structure of IP management may therefore be broken down as follows:

- Inventory, documentation and monitoring of existing assets
- Facilitation of decision making processes with scientific and academic staff
- Assistance in the formulation of internal IP policies and administration of licensing and other agreements (exploitation or collaborative research)
- Assistance with respect to the protection and subsequent registration of rights
- Detection of potential commercial partners and administration of agreements including assisting in or conducting negotiations
- Monitoring of IP rights (in collaboration with expert attorneys)

THE IP PORTFOLIO

An **IP portfolio** is perhaps best described as the **chief document where information on IP aspects within a research or commercial entity is collated and organised**. Its main purpose is to

1) Allow easy access to information about existing IP rights and,
2) Enable organisations to align business and exploitation strategies using IP portfolios as a control point for the purposes of exploitation, valuation and enforcement of rights.

IP portfolios are, today, generally administered by use of specific database software allowing easy access. There is **no standard approach as to how an IP portfolio should be managed**. This depends, ultimately, on the type of entity using it and its specific needs. Some typical features should, however, briefly be mentioned before turning to more detailed aspects.

In general, the **purpose of an IP portfolio is to assist in business decisions** and to allow for on-going value creation by allowing to maintain continuous clarity about which immaterial assets exist or are likely to come into being, and likewise to permit certainty about which rights have or will be subject to licenses and/or to which access had been granted to for the benefit of third parties, such as in collaborative research. IP portfolios are usually managed by IP specialists with a dedicated degree in IP management.

Some of an IP Manager's Specific Tasks

- Establishment of annual management plans for individual sectors
- Monitoring of the life cycle of products protected from creation to commercialisation
- Enforcement and defence of rights against infringements (and the respective collaboration with specialised lawyers)
- Overseeing developments in specific fields with a view to detecting third party rights for future research and other collaboration
- Documentation of rights acquired as part of collaborations

A specific challenge therefore lies in **aligning the IP portfolio with existing strategies**, rather than simply collating lists of existing rights. There is no standard answer as to how such strategies should look like, as much depends on the characteristics of the entity concerned. However, it is important to bear in mind that, for example, different existing rights must be viewed holistically in order to create clarity before entering into any agreement.

> *For example, a research collaboration project must take into account not only the technology as the main subject of the agreement, but also accompanying rights such as copyrights and database rights, as well as know how, in relevant documentation necessary for granting access to a third party, or rights in computer programs to be used for specific databases in, for example, consortium agreements.*

There are, further and in particular, differences between commercial entities, where IP portfolio management is usually centralised and part of a general business strategy, and the management of IP in higher education or public/private research institutions.

As for the latter, many universities have established, next to a centralised unit charged with the documentation and general organisation of IP portfolios, **technology transfer offices which operate on the basis of private commercial entities** and which are usually charged with the task of acting as first point of contact for research staff with a view to finding pathways for the commercial exploitation of, predominantly, inventions. Their remit thus involves acting as “middle men” between the university and commercial partners.

Technology transfer offices are therefore not merely responsible for providing general advice to researchers. Their tasks may (there exist many different models which cannot be portrayed here in detail) **include the monitoring of a central IP management division, the preparation and negotiation of contractual agreements and the management of application and exploitation** strategies.

An important aspect of technology transfer offices is that IP expertise can be bundles with expertise in licensing laws and commercialisation strategies, and staff must have expert knowledge. The strategy to be followed can, of course, be different in each case, and decisions must be made as to whether the invention should be assigned or licensed to a third (commercial) party, or whether it should be subjected to more advanced licensing models such as cross-licensing, and whether the invention should be used in the context of a joint venture, a "pure" research and development project based upon a consortium agreement or any combination thereof.

Main features of an IP portfolio management			
Which rights do exist, and is there a market for those?	**What is the time scale for conducting IP management audits?**	**Which rights are likely to come into existence?**	**How are the (prospective or existing) rights safeguarded, internally and externally?**
Includes any registered rights in documents or reports, "rights" in assets such as domain names or other names not subject to an IP right, and also technical and other know how and confidential information, as well as research tools that may have been developed	Are there detailed plans for specific rights and a corresponding demand in specific sectors?	This requires a close collaboration with research staff and thus a constant "flow" of communication.	That is, are non-disclosure agreements in place? What is the status of applications? Who owns these rights?

These aspects will be discussed and explained in more detail below, with a special emphasis upon the importance of internal management by way of audits, corresponding agreements and related questions

on ownership and a short overview of the characteristics of individual IP rights and, as far as relevant, international registration strategies.

The main characteristics of licensing and other forms of agreements relevant specifically to research institutions will also be briefly portrayed.

Internal IP Management

The notion of an **internal IP management** includes **any aspect relevant for a proper documentation and organisation of an IP portfolio.** The three probably most important aspects concern:

- **the management of IP audits**,
- **the relationship between research institutions and visitors** (as a crucial aspect of IP audits) and, related to this,
- **general questions of first ownership of rights.**

Depending on the case, internal IP management can also involve:

- the formulation of IP application strategies,
- the monitoring and enforcement of IP rights,
- the administration and assistance in negotiating agreements with third parties such as for the conclusion of consortium or joint research agreements, or for the negotiation of individual licenses.

In essence the internal IP management goes beyond a mere documentation of existing rights, though management strategies are typically organised around the creation and maintenance of IP portfolios.

TIP: Key skills for IP Managers

Staff working in IP management need robust knowledge not only as regards the legal implications of IP law, but must also be aware of partially intricate aspects of contract law and, sometimes, competition law which may limit the freedom of the contracting parties considerably especially where a license is exclusive, an aspect considered in more detail later.

IP managers must have a thorough understanding of the types of rights protected by IP laws, the protection rationales underlying those rights, the scope and limitations of each right and the existing international or regional registration opportunities.

Moreover they often need a background in relevant sciences in order to be able to assess the potential of on-going projects to yield protectable assets, and many will be qualified patent attorneys.

IP Audits

An **IP audit** can generally be described as **an exercise with the aim of collating as much information about existing and prospective rights as possible**. It is usually the task of an IP officer to contact and communicate with relevant staff in order to ascertain a basis of which rights may exist and which rights may be created.

An audit must also include information on whether the institution possesses policies on ownership (explained in more detail later) and whether it has taken precautions for securing confidentiality as against, for example, visiting scientists (see below).

Elements of IP Audits

An IP audit, especially where such audit is conducted for the first time in a research institution, should be sufficiently structured. Certain steps may be identified which should be conducted in turn:

1) **Identification of existing rights and other relevant assets** in different departments. This includes the identification of assets which may already exist or of research projects conducted which

are likely to spawn registrable right such as patentable inventions and may be carried out through (documented) interviews with scientific staff).

2) **Documentation of the ownership status** applicable to each right (in existence or prospective) identified under Step 1. This step involves identification and documentation of a range of rules that may affect ownership (which is discussed in detail later). It includes, typically, a review of employment contracts, contracts for temporary research staff, institutional policies applied to visiting researchers etc.
3) **Identification of existing licensing agreements, material transfer agreement**, collaboration etc. which may affect IP rights and other immaterial assets, and which produces clear information on IP rights owned by the institution, by individual staff, or by third parties.
4) **Setting up comprehensive documentation** on which rights are owned, which require protection, and which are owned by third parties or are subject to conditions in existing or prospective licensing or other agreements.
5) **Establishment of documentation on on-going research** likely to produce protectable subject matter.

It should be noted that in many cases the IP audit, and proper ensuing management of IP portfolios on a regular basis, is obligatory where third parties fund research or for certain types of public research institutions, and is thus often a prerequisite for further research income.

Likewise, many funding organisations require that creations and inventions be subject to certain conditions such as being placed in the public domain, either by way of publication or through commercial exploitation. If research is funded with a view to applied research yielding products or processes that can be commercially exploited, new organisational and administrative structures and procedures must be established so as to properly manage the portfolio and subsequent licensing.

Safeguarding IP Rights Internally

There are two important aspects of an internal safeguard applied to IP management and securing prospective rights. These concern questions of ownership and the following will explain

1) **the basic concepts of ownership and possible transfer or rights in research institutions in particular**,
2) **safeguarding existing knowledge and processes of knowledge creation by way of non-disclosure agreements**.

In general, ownership may depend on a number of factors, and between those summarised here many overlaps and inconsistencies may occur. Some of the main factors to be taken into account concerning IPR ownership include:

1) **Legislative rules on ownership** (which differ between individual IP rights), and which often declare certain rights inalienable.
2) **Existing contractual agreements** on ownership for certain staff (in particular professors).
3) The **legal character of the research institution** (for example, sometimes publicly funded institutions have specific rules allowing the entity to acquire any, or certain, rights).
4) **Rules on ownership imposed** by public or private funding bodies.
5) **Contractual agreements in consortium agreements** regulating aspects of individual ownership and consequences of joint ownership.

OWNERSHIP OF RIGHTS IN PUBLIC RESEARCH INSTITUTIONS

Apart from a clear understanding of the range and availability of rights in immaterial assets, questions of ownership are necessarily crucial for any IP management scheme. However, rules on ownership differ between jurisdictions and between specific IP rights considerably. The following therefore gives but an introduction to diverse ownership concepts.

Basic Rules on Ownership

In broad terms, rights such as patents or trademarks can be registered – and will thereby be owned – by any legal entity, such as a company or a university. Rules on ownership are usually enshrined in relevant national IP legislation. There is no internationally applicable rule on ownership.

As a general principle, it is always the person who created or invented first who will be first owner of the right, such as the right in the original creation in copyright or the right to the invention in patent law.

TIP: Inventions or works created by employees

In common law countries, such as the US or UK, a work or invention made in the course of employment is initially owned by the employer.

In all other cases, these rights must usually first be obtained from any previous owner. In some countries, works made under a contract for employment will automatically be owned by the employer, and in such cases no individual agreement is necessary, whereas in other countries different rules apply which require a transfer to be expressly included in the employment contract.

In **copyright law**, in most **civil law jurisdictions the author will always retain his right**, though in some countries a statutory assumption that a license is granted to the employer is in place, whereas in **common law jurisdictions the employer will be first owner**.

In **patent law**, the **right to the invention is more generally allocated to the employer**; yet again this depends upon specific national legislative rules.

Where the law does not permit the acquisition of rights, a second issue to consider is whether such automatic transfer may be enshrined under standard contracts of employment, or whether IP polices to that effect may be incorporated as conditions of employment contracts at a later point in time.

There is no general rue on whether, for example, a university may do so and whether such clauses and policies will actually have the required legal effect of allowing the institution to own such rights. Much here depends on national legislation both as regards IP ownership rules in general and national employment laws in particular. Much also depends on whether staff is employed under standard terms of employment contracts under private law or whether the relationship between professors and university is based on public laws, that is, where certain staff has the status of civil servants.

As regards **creations or inventions made by academic and scientific staff**, especially professors, there are very divergent rules in place under national laws, and between individual universities.

Usually, the rule that inventions are owned by the employer automatically does not, as mentioned, apply to university staff, and the same is true for creations protected under copyright law. This means that the commercialisation of inventions, in particular, requires **a license between the individual scientist and the university**, and here much depends on whether the university is a public body or a private entity.

In some instances, the law may foresee an obligation by scientific staff to offer an invention created in the course of university employment to the university (that is, the legal entity under which the univer-

sity is incorporated) based on legislation. In others, the university may have an internal policy to the same effect.

This means that the university may decide on whether to use the invention, and any rights related to such invention, for their own commercial purposes or whether the staff member in question should retain ownership.

Usually, where the invention is commercially exploited, the staff member should receive equitable payment. Where such rules do not exist, the commercial exploitation will therefore always require individual negotiation, which is usually conducted with the assistance of the IP office. The question whether, in general, a newly introduced IP policy can legally have the effect of transferring all and any IP rights to the entity is unresolved and much debated, and again depends on the conditions laid down in individual jurisdictions.

In sum, much will therefore depend on the implications of national laws governing ownership with regard to different types of rights. Sometimes, and in as far as national law permits transfers of rights by way of agreements, such transfer of rights for the benefit of the institution may depend on the contractual agreements in place in the institution.

Individual agreements must be negotiated and will usually require the institution to offer consideration to the inventor(s), such as a lump sum payment or financial participation in relation to royalties received in future. This does not only apply to patents and other types of rights that form the basis of future exploitation, but also to accompanying material protected by copyright.

As for copyright law, the rules on contractual transfers of rights – again – differ significantly, and in civil law jurisdictions (such as in France and Germany) additional specific provisions are in place that aim to protect authors. These provisions should be checked as they restrict freedom of contract.

In essence, proper IP management would therefore require **specific and advanced knowledge on national legislation concerning first**

ownership as well as on **specific internal regulations within the institution.**

Specifically: Joint Ownership

Very rarely inventions are made by individuals. Where made by a group of researchers, questions of joint ownership arise. There are two facets to this issue. First, one needs to consider the legal relationship between joint owners internally. Secondly, there are questions as regards the relationship between joint owners and third parties, i.e. the external perspective.

Joint ownership arises where several individual contributions lead to the creation of a patentable invention. These contributions must have a certain quality, and the requirements differ from country to country. Whether that condition is met can be complex legal issue, but **as a rule of thumb it can be said that mere technical or routine assistance generally is not sufficient, and that any such qualifying contribution must be geared towards the final creation of the invention**.

The legal treatment of joint ownership is likewise complex. Usually, joint ownership is treated as a right held collectively by individual shares – each owner thus holds an interest in the asset that is calculated by dividing the number of joint owners; thus, where there are four owners, each will hold a twenty five per cent share.

This can lead to highly unsatisfactory consequences because in such situations any exploitation by way of licensing requires consent by all owners. Therefore, **it is highly advisable for an IP office to be notified about ongoing research projects and to clearly regulate the exploitability by way of a contractual agreement** between all prospective owners and the university.

Non-disclosure agreements

The importance of establishing an IP management policy is specifically relevant with regard to persons who may acquire knowledge but are not subject to general institutional policies. Thus, non-staff such as predominantly visiting scientists, researchers or students may come into possession of valuable information, or may use such information as a basis for their own future research. This may endanger, especially as regards patent or design protection, the future commercial exploitation since such disclosure might destroy aspects of novelty of the asset in questions. Therefore, visitors and other staff not directly subject to standard agreements are usually required to agree to a written non-disclosure agreement. The significance of such an agreement lies in the fact that otherwise the institution has no legal redress against a visitor using research information publicly.

It should, however, be noted that a non-disclosure agreement only gives rights against the contractual partner. It will have no effect on a patent application and cannot, in general, be used against a third party commercialising upon ideas that had been created in the institution (e.g a third party that has arrived to the same technical solution by means of reverse engineering).

The scope of such contractual protection differs significantly between jurisdictions, and non disclosure agreements often lack the legal capacity of being enforceable where the conditions remain unclear, especially so vis-à-vis the subject matter of such agreement.

It is therefore prudent to precisely list the type of information that is subject to confidentiality, and to unambiguously clarify the context of such obligation not to disclose with respect to a concrete research project and to subject matter created in such. **In short, the more detailed and lucid the agreement is, the higher are the chances that it will be enforceable.**

Overall, however, the effect of such agreement does not lie in legally enforcing claims to damages in cases of unauthorised disclosure but more in achieving clarity of obligations with a deterring effect.

AFTER THE AUDIT: REGISTRATION AND LICENSING STRATEGIES

Perhaps the most important instance to be reflected concerns the IP strategy to be followed. For a public research institution in particular, the question often arises as to whether assets created as a result of research should be commercialised or whether it is more prudent in terms of research reputation to allow immediate publication. Again, that decision must follow from a reflection of the precise research policy followed and there is no definite answer.

TIP: Look for specialized advice

For any registration (as well as for any subsequent monitoring and enforcement of rights) the assistance of a specialised attorney is required. In any case, IP managers must possess sufficient knowledge about which steps need to be taken once a decision for commercialisation has been reached, and which rights should be collated as relevant before any agreement with third parties is signed.

The following will give a brief overview over rights that should be recognised as potentially important, including some information on the international framework governing those rights. In any event, and especially when dealing with partners from abroad, it should be clear that different aspects of contracts may be governed by different applicable laws.

An Overview of Principal IP Rights

It is, again highly advisable to collate any rights that may have been created in the course of a research project in proper documentation as potentially important, and, as mentioned, such management is very often mandatory where research is funded.

Research projects usually spawn a variety of divergent IP rights, and frequently encompass technical rights on the one hand and so-called "soft" rights on the other. **Technical rights** may refer to prospective **patents** but may include other rights of a technical or functional character, such as rights in databases, topographies of semiconductor chips, plant varieties or software, which can be protected, to varying degrees, under patent, copyright, confidentiality or even trade mark law.

Another right falling broadly in the remit of technical inventions is the **design right**, which may protect functional articles though not technical features as such. In addition, for technical inventions below the standard of patentability in some countries, such as Germany, a utility model right, or a design patent in the US, may be available.

Copyright protection may vest in assets such as research documents, tables, graphs, databases, surveys and the like, and these assets may be as important as the invention itself considering later commercial agreements.

In addition, some aspects of research may also be subject to protection under **trade secret law**, and, as mentioned, the invention itself must generally not be disclosed in order to avoid the risk of losing novelty. In some countries, such as the UK, a specific law on confidential information may allow claims against unauthorised disclosure, whereas in other jurisdictions such as in France or Germany protection for valuable technical information is provided under laws against unfair competition.

Thus, as a first step before considering commercialisation, these assets must be identified, collated and placed in the context of a specific research project and its anticipated or existent outcome.

PATENTS

The principal assets are usually inventions. Patented protection lasts for a period of, in Europe, twenty years. In essence, a patent is granted where it can be shown that an invention is present, which is the case where the **requirements** of novelty, inventive step and industrial

applicability are met and where there is no specific exclusion from patentability.

Application strategies in patents much depend on considerations of where, geographically, protection is sought. There is no global or international patent registration system. Under the Patent Cooperation Treaty, national patent protection may be acquired through a process of application to World Intellectual Property Organization (WIPO) via a national patent office, which after a formal check is then forwarded by WIPO to the national patent offices in those countries the applicant designated as countries for which patent protection is sought. In Europe, a bundle of national patents in almost all European countries may be applied for via the European Union Intellectual Property Office.

In general – though many significant disparities exist – a patent (which may cover a product or process) gives an exclusive right to use the invention commercially.

TIP: Research exception to patents

One highly important exception to patent is its use for research purposes, which allows uses of the invention in the context of researching activities. This exception does not, however, cover research on the invention itself, so that the invention can only be used as a medium for research.

Apart from patent protection, alternative means of protection may be considered. Depending on the jurisdiction, such alternatives may be petty patents such as utility models or, in the US, design patents.

DESIGNS

In the EU, a community design right exists which can be applied for at the Office for Harmonisation of the Internal Market (Trade Marks and Designs) (OHIM) in Alicante, Spain. A design right is granted to a design that is new, and protects the appearance of a two or three-dimensional product against copying. It is advisable to record precisely the date when the design was made for the purpose of evidence.

TRADEMARKS

Trademark protection for any invention that is to be commercialised is also recommendable. Trademarks protect, fundamentally, signs used to distinguish goods or services. A trademark may be registered with effect in a number of territories via the Madrid System, which is another convention administered by WIPO. In the EU, a community trademark system operates and applicants may register trademarks with OHIM.

In general, national trademark laws differ significantly as to their scope. In the EU, three types of infringing activities may be differentiated. There is, first, no need to show consumer confusion where an identical trademark is applied to identical goods or services (double identity). If either the sign or the use is only similar, protection depends on whether the consumer group is likely to be confused.

Well known marks (marks with a reputation) can also be protected against acts of free riding, such as where the reputation or distinctiveness of the mark is subject to tarnishment or dilution.

PLANT VARIETIES

In relation to, predominantly, biological research, plant variety protection is an important regime to consider. In the EU, an application leading to protection in all member states may be made through the EU Plant Variety Offices, or may be made through dedicated national granting agencies.

In all these cases, the decision of registration of rights depends on the general policy of the institution, but may be mandatory as part of proper IP management structures in cases where the research had been funded.

Recognition of Relevant Unregistered Rights

For public research entities in particular, regard must also be had to those rights that arise automatically, and often inadvertently, in the course of research projects. Again, this can extend to any lists, in-

ventories, descriptions, know how, databases and software that may have originated from a research project, and also includes any physical (for example, biological) material used or created during such project, including research tools which may be physical apparatuses or specifically designed computer programs.

The potential rights in such assets can be distinguished between those falling squarely in the IP system, and related rights protected by different regimes. The difference is that the latter do not give absolute protection and cannot, therefore, be licensed, but – as will be explained later – are nonetheless relevant in research collaboration and licensing agreements. The recognition and proper documentation of such rights is mandatory.

COPYRIGHT

As mentioned, copyright protection subsists in much material created in the course of a research project. This includes, specifically, any collection of research data, written research documentation, graphical representations of research findings or tables, and for computer programs that may have been created specifically for a particular project.

Copyright does not protect mere data or information but only the expression of such information in a particular form. **Copyright protection usually only arises where a certain degree of originality can be shown**. Under French law, for example, copyright arises only for "work of the mind", and under German law, similarly, a personal intellectual creation must be shown. The standard of originality is lower in common law jurisdictions such as the UK where a certain degree of investment, rather than intellectual input, must be shown.

Copyright does not, unlike a patent, give a right to commercially use the work but entails more specific exclusive rights such the reproduction, distribution and certain communication to the public rights. Importantly, in some jurisdictions the storage, running and loading of works, including computer programs, on a computer falls within the reproduction right, which is an important aspect to consider. The protection of research data under copyright law presents an ongoing

problem and there are varying views on whether, and to what extent, research data are protectable.

If graphically represented, protection as an artistic work may be acquired but this is subject to the required standard of originality. For research data presented in the form of a structured compilation or database, copyright may subsist in the structure of such compilation, that is, in the original selection and/or arrangement of data, so that protection is usually thin and does not, in any case, extend to the data as such.

DATABASE RIGHTS

A crucial right akin to copyright is the database right, which exists only in the EU. This right arises automatically and is granted to the maker of the database, which may be a company or other institution such as a university.

The right requires that a substantial investment in the obtaining, presentation or verification of the contents of the database can be shown. It lasts fifteen years from the date of first publication of the database, but this can be extended by proving on-going substantial investments. The right protects the maker against the copying, distribution and public communication of the whole or a substantial part of the database.

KNOW HOW AND CONFIDENTIALITY

In contrast to these rights, certain assets are not subject to IP protection but may nevertheless be the subject of agreements. Know how, for example, is usually protected where it is kept confidential.

There is no precise definition of know how and the term may encompass, therefore, a significant variety of practical tools, software and acquired abilities. The collation of which know how exists or has been acquired in a research project is crucial for different types of subsequent agreements and, as will be explained, forms an important factor in defining access rights.

COMMERCIALISING IP RIGHTS

This section considers the final steps relevant to IP management, that is, the commercialisation of assets. As will be seen, such commercialisation may take many different forms, and can range from simply assigning rights to a commercial partner for exploitations to dedicated joint research agreements in order to improve on the invention.

From an institutional perspective, the decision as to whether to commercialise or not (and thus to publish research outcomes so as to place that knowledge in the public domain) should be made following in depth discussions based upon the specific knowledge transfer policy in place. This should be followed by a "scouting" exercise, which aims to identify relevant partners in academia, industry or other areas. The result may be, as mentioned, to assign or license rights, to engage in further research collaboration, or to even establish a spin off company tasked with the exploitation of the asset.

Clearly these decisions are complex and require a robust IP management scheme as well as a significant degree of knowledge about existing opportunities in diverse industries and academic sectors. In many universities, therefore, specific divisions assisting, and collaborating with, IP management offices have been established, with the dedicated task to act as mediators between the institution and third parties.

The task of such knowledge or technology transfer offices goes beyond mere internal IP management and includes all aspects of finding partners, negotiating agreements and observing and enforcing rights, to the creation of dedicated companies for the exploitation of knowledge or technology.

Where the decision is made to allow a third party, usually a commercial company, to exploit an invention and related immaterial assets, different models of licenses may be distinguished. Again, it should be noted from the outset that national rules on licensing diverge considerably.

Assignment of Rights

The most radical form of allowing exploitation by a third party is by way of assignment. An assignment is, basically, a form of purchase of the right as a whole. **The previous owner thereby loses their position, and the acquirer becomes the new owner**, with all rights attached. An assignment must usually be in writing, and sometimes requires authentication by a public notary or must (or can) be registered officially with a national IP office.

Licensing of Rights

In the case of a license, the legal position is slightly different. **The owner retains ownership but passes on certain rights to the acquirer.**

A license may be exclusive or non-exclusive. In the case of an exclusive license, the owner promises to not license any other party for the specific use, whereas in the case of a non-exclusive license the owner remains free to award licenses to others. The licensee thereby acquires the same rights as the licensee and can perform any of the exclusive rights associated with the IP right in question, including the right to use alleged infringers. In general, an exclusive license may be subject to antitrust rules given their exclusionary nature, though for licenses agreed upon in the context of research and development, or technology transfer, many such licenses have been exempt from antitrust law in the EU and other jurisdictions.

Elements of Licensing Agreements

The licensing agreement should contain express conditions with regard to a range of aspects. A licensing agreement should clearly define the object of the license and the rights attached to this, and should therefore meticulously list both the principal object (usually, the invention, design etc.) and any other rights (documentations, know how, confidential information) required to exploit the asset es-

pecially where the licensee must perform certain tasks covered by a process patent.

Other usual clauses on licensing agreements:

- Clauses relating to the payment of royalties to the IP owner (both as regards the amount payable over time and the specific points in time when payment must be made);
- Obligations of the licensor to grant access to other types of knowledge;
- Consequences of non performance or breach of contract;
- Restrictions of the licensee on more detailed aspects such as output;
- Obligations relating to whether the licensee may attack the right (which may be void under antitrust law);
- Constraints as regards obligations to sell in relation to territory and/or specific product markets;
- Obligations to improve and to license back such improvements (usually only between commercial companies);
- Clauses regulating the law applicable to the agreement and to choice of forum (i.e. which court, in which country, should have jurisdiction over disputes arising out of the agreement).

Cross Licensing and Research Collaborations

There are specific, and more advanced types of agreements that should also briefly be presented here. These are so called cross licensing schemes and license (patent) pools.

- A **cross licensing** scheme is usually an agreement whereby two or more parties license their patents to each other. The benefit lies in the fact that it offers more freedom to improve upon each invention, but there are also certain antitrust concerns.
- A **patent pool** is related to cross -licensing schemes but is more extensive. Here, two or more partners holding various rights in specific patented technologies “pool” their patents so as to avoid infringement actions from other partners. However, a patent pool may also be used as a means to reduce complexities in

research such as by allowing access to research tools, and can have pro-competitive effects as well as fostering open science schemes.

Where a decision is made not to allow exploitation based on expected royalty payments alone, different models for more advanced forms of exploitation exist, in particular as regards further collaboration in research where existing rights form a necessary part of such agreement. In general, **collaborative research projects** are concluded between two or more parties based on a consortium agreement. A consortium agreement is a contract defining common aims in collaborative research.

Such agreements require early intervention by IP and/or knowledge transfer offices experts. The reason is that joint research necessarily requires access to knowledge held by each partner. Most consortium agreements must therefore contain detailed and specific clauses defining the type and character of knowledge, whether protected by an IP right or not, and usually a differentiation is made between foreground and background IP.

The term IP, in this context, relates to any knowledge in the form of patents, designs, copyright, know how or confidential knowledge held by an individual partner. The assets in question must thus first be meticulously listed before the agreement is negotiated in detail. Typically, the term **foreground IP** refers to any knowledge to which access must be given, whereas the term **background knowledge** refers to those where access may be given subject to certain conditions.

The distinction between the two obligations must be made on the basis of the expected research aim and outcomes, and therefore the type and character of the research is decisive in determining whether a particular right falls in the foreground or background category, or whether it is irrelevant. As a result, the key question to properly define the background knowledge is whether access is indispensable for conducting the research project within the terms of the research question to be solved. It should be noted that for many publicly and otherwise funded research project the right to have access to foreground IP is obligatory.

USEFUL LINKS

World Intellectual Property Organisation (WIPO)
www.wipo.int

European Union Intellectual Property Office (EUIPO)
www.euipo.europa.eu

Community Plant Variety Office (CPVO)
www.cpvo.europa.eu

Organisation Africaine de la Propriété Intellectuelle (OAPI)
www.oapi.int

IP4GROWTH

The present document serves as a basic introduction to core aspects of Intellectual Property management providing short insights into the most relevant aspects of IP management, with a specific focus on the perspective of Research and Higher Education Institutions. It covers the main aspects that need to be borne in mind under a policy that strives to employ IP rights as a means to generate income including an introduction into the nature and remit of IP management offices, strategies for establishing and managing IP portfolios, relevant questions of ownership of rights as well as concerns over internal IP policies.

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For more information about Project IP4GROWTH, please visit our website:

www.ip4growth.eu