Engineering and Physical Sciences Research Council

Intellectual Property & Commercialisation

What is Intellectual Property?

"Intellectual Property" is a generic term that is commonly associated with Patents. In fact the term encompasses outputs of literary, artistic, industrial and scientific accomplishments. If these outputs can be identified there are various forms of legal protection available.

The owner of any Intellectual Property (IP) can also be financially rewarded for its use. This is because like property built of brick and mortar, if ownership can be clearly established IP can be sold, leased, licensed, assigned or mortgaged.

The various forms of protection are listed in the table below:

	Trademarks	Copyright	Design Rights	Registered Design	Patents	Confidential Information
Written Words	**X**	**X**				**X**
Product Name	**X**					
Design / Logo	**X**	**X**				**X**
Technical Drawing		**X**	**X**	**X**		
Computer Programme		**X**	**X**		**X**	**X**
Test Method					**X**	**X**
Manufacturing Method					**X**	**X**
Chemical Process					**X**	**X**
Databases		**X**				**X**
Maps		**X**				
Methodology						**X**
Research Information		**X**				**X**

EPSRC and Intellectual Property

EPSRC makes no claim to the Intellectual Property Rights (IPR) arising from the research we fund. We prefer that the Intellectual Property Rights generated reside with the University that generates it. We suggest a flexible approach. We do not lay down any prescriptive rules about how Intellectual Property should be identified or managed.

We do however expect Universities to manage their IP and to make sure that those generating the IP get appropriate benefit from its exploitation. Unless arrangements

have been made in advance, our guideline is that IP resides with the generating University.

However, even though we are not prescriptive about what happens to any arising Intellectual Property, we do require any Collaboration Agreements to be signed within 6 months of the grant offer being made. A Collaboration Agreement must be signed by all relevant parties before the research project can commence.

Finally, we acknowledge that IP is normally identified and managed not solely by the Academics, but, the Academics in partnership with their Technology Transfer Offices or Research Innovation Services.

Collaboration Agreements

Collaboration is an important aspect of the research supported by the EPSRC. Collaborative activities most often take the form of the joint pursuit of research with industry. In recognition of this we suggest that there is a Collaboration Agreement in place. We require that a Collaboration Agreement must be agreed and signed within 6 months of your grant being awarded.

As a minimum any Collaborative Agreement should cover the following:

- Arrangements for the management of the project.
- Responsibilities and liabilities of each party.
- Arrangement for the treatment of Intellectual Property.
- Reporting arrangements and confidentiality provisions – including publication.
- Consequences of termination and dispute resolution.

The terms of the Collaboration Agreement must not conflict with EPSRC's terms and conditions.

Types of Collaboration Agreements

The type of agreement used will depend on the type of collaboration and the collaborators. If you are only collaborating with Universities the agreement will be different to a collaboration agreement where you are collaborating with Industry.

There are a range of template agreements available. The Lambert Toolkit has sample agreements that cover collaborations with industrial collaborators. The below table outlines the template agreements available for large consortiums.

Type of agreement	Description
Agreement A	Each member of the Consortium owns the IP in the Results that it creates and grants each of the other parties a non-exclusive licence to use those Results for the purposes of the Project and for any other purpose.
Agreement B	The other parties assign their IP in the Results to the lead Exploitation Party who undertakes to exploit the Results.
Agreement C	Each party takes an assignment of IP in the Results that are germane to its core business and undertakes to exploit those Results.
Agreement D	Each member of the Consortium owns the IP in the Results that it creates and grants each of the other parties a non-exclusive licence to use those Results for the purposes of the Project only.

The Toolkit also has a range of template agreements aimed at smaller collaborations.

Why are Collaboration Agreements needed?

Collaboration Agreements are needed because they:

- Formally set out each parties contributions and liabilities.
- Give details of the management system for monitoring and evaluating the research project.
- States who will have ownership of any arising IP and who will have prosecution responsibility if there are any infringements.
- Clearly sets out what any arising IP can be used for – whether it can be commercially deployed or simply used for teaching/internal use.
- States who will take the lead in any commercial exploitation.
- States if there is to be any parties who are simply giving kind support.

Knowledge Transfer Networks

Knowledge Transfer Networks (KTNs) were developed to improve the flow of knowledge within academic communities and to encourage innovation through knowledge transfer. They can also be used as a forum to meet potential collaborators, both industrial and academic.

The KTNs are managed by the Technology Strategy Board (TSB). For further information please visit their website which is listed in Appendix 2.

Many communities have used the idea of KTNs to create their own forums. Many of the forums accept the culture of open innovation and use it to their advantage.

An example of this can be seen below:

Case Study:
During a large research project an online forum was set up between the researchers involved in the project as they were all based in different Universities. The forum grew from a simple online discussion forum to a group that meet quarterly to any issues that may have arisen.

The group also increased in terms of members. It became a useful resource as it has created a pool of researchers where collaborations are common as is asking for assistance on particular issues without confidentiality and disclosure being an issue.

Types of Intellectual Property

Patents

Patents are generally intended to protect products or processes that contain new technical aspects. The majority of Patents are for improvements to technology, or processes that already exist; they are concerned with evolution rather than revolution.

Patents allow information/knowledge to be available to everyone, rather than keeping it a trade secret. This encourages further innovation and creativity for the benefit of us all.

A Patent gives an inventor a 20 year period of exclusive exploitation in return for disclosure of the discovery. This does not give the inventor any rights to manufacture their work. Rather it prevents other people doing so without permission. A Patent disclosure must contain adequate detail to allow an individual “skilled in the art” to reproduce the patent.

However, please note that the 20 year exclusivity period is for the UK only. If you want to protect your discovery in another country you should contact your Technology Transfer Office (TTO).

To qualify for a Patent a discovery must meet four main criteria. It must be:

- Industrially applicable
- Novel
- Include an inventive step, and
- Not be among the list of excluded discoveries.

Case Study:
Research was funded to develop a medical product. The Consortium was approaching completion when they discovered that a third party owned a fundamental patent on their underlying technology.

They tried to secure a licence but were unable to do so. The Consortium reconfigured and tried to exploit their technology in a different area.

The Patent process has a long timescale associated with it. A guideline of the timescale in Appendix 1 demonstrates the various stages.

Your TTO will be able to advise you in more detail if your discovery is Patentable.

Know-how

Know-how can be very valuable. It includes commercial or technical information that is vital to the research. It covers knowledge of formulae, techniques and business plans.

There is no formal application or registration for protecting know-how. The only way to protect know-how is for all the parties involved to sign a non-disclosure agreement.

Ways to Commercialise

Licensing

Licensing is a powerful way of allowing a third party to utilise IP without them taking ownership. A licence is a permission to do something that, without the licence, would be an infringement of the IP. The person granting the licence is called the licensor and the person receiving the licence is called the licensee. (Please note that there can be any number of licensees in a licence agreement.)

However, there are different types of licences:

- Exclusive licence – a single licensee has the right to use the IP.
- Sole licence – a single licensee and the IP owner has the right to use the IP.
- Non-exclusive licence – several licensees have the right to use the IP.

A non-exclusive licence is arguably the most common type of licence used within Academia.

When you license your IP to another person it is called “licensing-out.” However, on some occasions it maybe that you need gain a licence to use someone else’s IP. This is called “licensing-in.”

It is more likely that a spin-out company, or industrial partner, is going to be in a position where they need to license-in another person’s IP. Normally, academics are in a position to license-out their IP.

Case Study:

A research project was built around, and relied heavily on, a software package provided by one of the Consortium's Academic members. The academic did not own the software, but licensed it.

When the project then moved into exploitation, the Consortium discovered that the academic collaborator only had an educational licence to the software and that they would need a commercial licence.

The commercial licence was significantly more expensive and permission was refused by the licence holder.

The project completed but the economic case for the end product was severely damaged.

Assignment

IP can also be assigned. Assignment is another form of commercialising IP. If you assign your IP to another party you are selling it. Therefore, unlike licensing when you assign IP you will lose all ownership rights.

If you continue to use the IP once you have assigned it you will be infringing on the new owners rights. If you wish to exercise your IP rights in the future licensing would be a more suitable route for commercialisation.

Spin-Outs

Spin out companies are created using IP. This can be any form of IP ranging from know-how to patents. Basically, when the IP has been sufficiently protected the owner can use it as a basis to form a company.

However, creating a spin out company can be personally time consuming and financially draining. Many who have created a spin out have stated it has been to the detriment of their career. Rather than being able to apply for research and/or publish findings the spin out has consumed all of their time.

There is also no guarantee that the spin out will be successful. Yet, there have been a number of research projects that were initially funded by EPSRC that went on to be spun out successfully.

The success of the spin out, should you chose to commercialise in this way, depends on the support and advise you get from your Technology Transfer Office (TTO.)

Case Study:

Following initial research into effective bone-graft material a man made replacement for natural bone was developed. The material that was developed was then Patented and used as a basis for a company. The company then made further developments that have many clinical uses, including orthopaedic and spinal applications. The company's products are used in 18 countries worldwide.

On 01 March 2010 it has been announced that the company was to be sold for $330 million, the sale was completed on 18 March 2010.

The initial research was funded by EPSRC.

Role of the Technology Transfer Office

Each University has an office/department dedicated to the administration and negotiation of collaboration agreements and commercialisation. They have a number of labels ranging from Enterprise Office to Research Innovation Services, to Technology Transfer Office. For our purposes the term Technology Transfer Office (TTO) will be used to cover all associated labels.

TTO's are a vital part of the collaboration process. You should keep your TTO as up to date as possible with developments regarding your application for funding.

Therefore, you should seek advice from your TTO at the earliest possible stage. We advise that you should contact your TTO at the same time you apply for funding.

Why is the Technology Transfer Office important?

If you don't keep your TTO informed of any research that you have applied and any possible Collaboration Agreements it can delay things. A delayed Collaboration Agreement can delay the start date of your funded project. In some case Collaboration Agreements have been delayed by up to 12 months. In the worst cases a delayed start date has resulted in one party walking away fro the project.

Your TTO is also important because it is the department that will decide whether or not to patent protect any arising IP. Due to the costs of patent protection not everything can be protected. Please remember that the decision to protect is not yours – it is your TTO's.

The decision regarding protection is not taken lightly. Different TTO's consider different criteria. It is advisable that you liaise with your TTO to find out what this criterion is.

Appendix

Appendix 1 - General Stages in a Patent Application

Timescale	Activity
0	Patent Application Filed in the UK
1 Year	Updated Application filed in the UK with any additional technical material. Any international applications are also filed
18 months	Application published with a Search Report
2 - 4 Years	Examination report received and the wording of the actual Patent is agreed.
3 - 5 Years	Patents is either granted or refused
4 - 20 Years	Annual renewal fees due

Appendix 2 - Useful websites

UK Intellectual Property Office – http://www.ipo.gov.uk

World Intellectual Property Organization – http://www.wipo.int

Lambert Toolkit – http://www.ipo.gov.uk/whyuse/research/lambert.htm

Knowledge Transfer Networks – http://www.ktnetworks.co.uk

Technology Strategy Board - http://www.innovateuk.org

Appendix 3 - Glossary of Terms

IP Intellectual Property.

Know-how Industrial information and data, including trade secrets. Also includes information such as “know-who” and “know-where”.

Licensee Company/University that buys the right to use the IP.

Licensor Company/University that sells their IP.

Patent Protection for new/improved processes or technologies.

TTO Technology Transfer Office / Research Innovation Services / Commercialisation Office.