2006 - 2nd cycle

# CREST report

# Intellectual property

## Cross-border colllaboration between publicly funded research organisations and industry and technology transfer training

European Union
Scientific and Technical Research Committee

EUR 20796 IP

**Interested in European research?**

***Research*eu*** is our monthly magazine keeping you in touch with main developments (results, programmes, events, etc.). It is available in English, French, German and Spanish. A free sample copy or free subscription can be obtained from:

European Commission
Directorate-General for Research
Communication Unit
B-1049 Brussels
Fax (32-2) 29-58220
E-mail: research-eu@ec.europa.eu
Internet: http://ec.europa.eu/research/research-eu


Council of the European Union - General Secretariat - DG CII

Contact: Frits Smulders
Address: 175 Rue de la Loi  B-1048 Bruxelles
Bâtiment Justus-Lipsus 00-40-FG-52
Tel: +32 2 281 55 86
Fax: +32 2 281 65 11
E-mail: frits.smulders@consilium.europa.eu

European Commission - DG RTD

Directorate-General for Research
Directorate C –European Research Area: Knowledge-based economy
Unit C2-Private investment and technology platforms
Unit C3-Analysis and monitoring of national research policies and the Lisbon strategy

Contact: Shalini Saxena
*European Commission*
*Office:  SDME 09/46*
*B-1049 Brussels*
*Tel. (32-2) 29-84 591*
*Fax (32-2) 29- 92712*
*E-mail: shalini.saxena@ec.europa.eu*

September 2006

# Final report of the CREST OMC expert group on Intellectual property

## Cross-border collaboration between publicly funded research organisations and industry and technology transfer training

CREST
European Union Scientific and Technical Research Committee

Chair: Tony Howard
Rapporteur: Mike Edwards

2008 EUR 20796 EN

***EUROPE DIRECT is a service to help you find answers to your questions about the European Union***

Freephone number (*):
00 800 6 7 8 9 10 11

(*) Certain mobile telephone operators do not allow access to 00 800 numbers or these calls may be billed.



A great deal of additional information on the European Union is available on the Internet.
It can be accessed through the Europa server (http://europa.eu).

Cataloguing data can be found at the end of this publication.

Luxembourg: Office for Official Publications of the European Communities, 2008

ISBN 92-79-02265-2
ISSN 1018-5593


*Printed in Belgium*
PRINTED ON WHITE CHLORINE-FREE PAPER

**Group Members**

| | | |
|---|---|---|
| Georg BUCHTELA | AU | Department Innovation and Technology |
| Kristel ALLEWIJN | BE | IWT |
| Sarka JANDOVA | CZ | Industrial Property Office |
| Ingo BÖHRINGER | DE | Bundesministerium für Bildung und Forschung |
| Julia GRZONDZIEL | DE | Bundesministerium für Wirtschaft und Technologie |
| Kaare JARL | DK | Ministry of Science, Technology and Innovation |
| Carmen TOLEDO | ES | Oficina Espanola de Patentes y Marcas |
| Gabriel Gonzalez | ES | Oficina Espanola de Patentes y Marcas |
| Tuija YPYÄ | FI | Ministry of Trade & Industry |
| Alain GALLOCHAT | FR | Ministère de la Recherche |
| Paraig HENNESSY | IE | OST, Department of Enterprise, Trade and Employment |
| Daniela CAROSI | IT | Ministry of Economic Development - Italian Patent and Trademark Office (UIBM) |
| Janis KRISTAPSONS | LV | Latvian Academy of Sciences |
| Jeffry MATAKUPAN | NL | Ministry of Economic Affairs |
| Nicolai SEIP | NO | Ministry of Trade and Industry |
| Catharina SOJDE | SE | VINNOVA – the Swedish Governmental Agency for Innovation Systems |
| Nikolaus THUMM | CH | Swiss Federal Institute of Intellectual Property |
| Lucia LALIKOVA | SK | Industrial Property Office |
| Tony HOWARD (Chairman) | UK | The Patent Office |
| Lawrence CULLEN | UK | The Patent Office |
| Robert SHORTHOUSE | UK | The Patent Office |
| Denis DAMBOIS | EU | DG Research, European Commission |
| Frank MOESCHLER | EU | DG Research, European Commission |

Raporteur: Mike Edwards

Workshop facilitator:
Martin Haywood
University of Sunderland

**Presentations made to the IP Group**

| | | |
|---|---|---|
| Lord Sainsbury | Formal ministerial opening | UK Minister for Science and Innovation |
| I. Böhringer | An Overview of IPR in German Research | Bundesministerium für Bildung und Forschung, *IP Group Member* |
| J. Grzondziel | Utilisation of Rights | Bundesministerium für Wirtschaft und Technologie, *IP Group Member* |
| P. Hennessey | Irish Codes of Practice for Managing and Commercialising IP | Irish Office of Science and Technology, *IP Group Member* |
| R. Schulte | Revising State Aid Rules | DG Research, European Commission |
| P. Graham | The Institute of Knowledge Transfer (IKT) | AURIL and IKT |
| R. Lambert | Knowledge Transfer | Chair, Lambert Working Group on Intellectual Property |
| A. Dearing | Next Steps for the Responsible Partnering Initiative | EIRMA |
| I. McKay | Cross-Border Collaboration | Pera, Ltd |
| W. Lindsay | Vision, Structure and Present Activities | PROTON Europe |
| B. Peitz | Objectives & Methods, Good Practices | PROTON Europe |
| A. Gallochat | French Public Research and IP Training | Ministère de la Recherche, *IP Group Member* |
| M. Haywood | Knowledge Transfer: Continuing Professional Development | AURIL |
| L. Cullen | Lambert Decision Tree and Toolkit | UK Patent Office, *IP Group Member* |
| P. Libbrecht | Training Activities of the European Patent Academy | European Patent Academy |
| M. Zintler | Legal Hurdles for PROs and the Hamburg model contracts | Freshfields, Hamburg, Germany |
| G. Gasteiger | OMC-NET proposal | Austria, Department Innovation and Technology |

# TABLE OF CONTENTS

# 1. Executive Summary and Recommendations

Improvement of cross-border collaboration between public research organisations (PROs) and industry has a significant role to play in promoting the long term competitiveness of the European economy. Such collaboration is essential for the development and transfer of knowledge and technology throughout Europe.

This CREST group on Intellectual Property (IP) set out to address specific IP related difficulties in setting up cross-border collaborations, by looking both at skills training and the tools available for technology transfer. As representatives from our member states we have considered both the information currently available to practitioners and the nature of research collaborations in our own countries.

This group recognises that businesses and PROs have been deterred from cross-border collaboration by the complexities of different IP systems including differences in: IP ownership rules, negotiation of contractual terms, funding systems, legal status of PROs and individual researchers, national regulations on publication, and the organisation of technology transfer support structures. This Group does not believe that cross-border collaborations should be prevented by such perceived complexities.

This Group set out to de-mystify these issues and ensure that cross-border collaborations can be set up more easily. The Group identified a lack of resources that can be used by practitioners and the need for effective training systems as key elements.

To that end, the group identified and analysed a number of issues that they considered to be essential for setting up effective cross-border collaborations. Following the conclusions drawn from this analysis, and bringing together the experiences gained at national level, this group has produced a Decision Guide and Toolkit for private enterprises (including SMEs), public research organisations and intermediaries to use in setting up cross-border collaborations. This toolkit is designed to be delivered as a web tool; this was seen as the most effective and accessible way for practitioners to use the tool.

The Group also identified a need to create a professional system of training for the technology transfer profession, on both the PRO and industry side in order to facilitate increased and effective cross-border collaboration. This report also includes an analysis of the key skills required by practitioners and an indication of how to deliver these skills. This work is the result of extensive consultation with national users and a workshop drawing together experts from across the EU.

During the course of our work, we have also noted the crucial role of the state aid framework to enable effective knowledge transfer and set out our conclusions on what it should address.

**This group recommends that:**

1. Cross border collaboration should be promoted as a viable option for industry and PROs. Member states should provide practical resources and assistance to address IP related issues in cross border collaborations.

2. The toolkit and decision guide presented in this report should be integrated with national information and guidance for potential collaborators, by the end of 2006. It should be widely disseminated by Member States and the European Commission after publication and during 2007.

The group realizes that this requires a real commitment at national level to updating this toolkit, developing other practical tools, providing integrated national materials and promoting their use.

3. The CREST committee (or a group under its auspices) should conduct a review after 12 months (by end of 2008) with a view to updating and improving the toolkit, perhaps through a partner organisation. Member states should contribute fully to this process.

4. Member States should determine and agree on quality criteria for the education of technology transfer professionals to be able to promote recognition and accreditation of Technology Transfer education programs.

5. Any such comprehensive education programs should be modular-based and must provide and/or improve the core-skills identified in this report.

6. The European Commission should facilitate and support setting up European-wide or trans-national training systems and assist those Member States which lack the necessary infrastructure or national demand.

# 2. Introduction

**Background:**

The '*Barcelona Objective'* set by the March 2002 European Council, aims to give Europe a stronger public research base and to make it much more attractive to private investment in research and innovation. Carrying out these actions will allow the European Union to bridge the growing gap in the levels of research investment between Europe and its main trading partners, which is putting Europe's long term innovation, growth and employment potential at risk. The objective is to increase the average research investment level from 1.9% of GDP today to 3% of GDP by 2010, of which 2/3 should be funded by the private sector.

The European Union Scientific and Technical Research Committee (CREST) was asked to act as an interface to define and oversee the implementation of the open method of co-ordination (OMC) in respect of the 3% objective.

The 2004 CREST *report on the application of the open method of coordination in favour of the Barcelona research investment objective* set out recommendations on intellectual property and research, adopted from the recommendations of the first cycle Expert Group on IPR and Research. The Intellectual Property Expert Group in the 2nd cycle (the IP Group) is tasked with developing these recommendations and providing practical tools for making such recommendations workable.

1. This group, the CREST OMC 2nd cycle Expert Group on Intellectual Property (the IP Group) set as its overall objective the development of concrete and practical tools to promote cross-border collaboration.

## Identification of Project Objectives

2. Prior to its official launch in September 2005 the IP Group held two project planning meetings in May and July 2005 in order to agree how best to deliver on this practical objective.

3. In addition to the interests expressed by each of the experts involved in the Group, particular note was also taken of two recommendations from the main report of the first cycle[1] when deciding the work objectives for this project. These recommendations were:

(a) *Improve the coherence and effectiveness of IPR ownership regimes applicable in publicly funded research… by the production of clear… guidelines…* (CREST Recommendation 11).

(b) *Promote the accreditation of technology transfer professionals on a Europe-wide basis, to facilitate exchange of personnel and experience, and promote mobility, across Europe* (CREST recommendation 18)

4. The Group agreed that two aspects of how to facilitate cross-border collaboration were worthy of study and these were identified as work stream 1 and work stream 2.

[1] http://ec.europa.eu/invest-in-research/coordination/coordination01_en.htm

## Relationship between Work-streams 1 and 2

5. The first aspect, work stream 1, focussed on what kind of practical advice can be provided to help a potential collaborator in one country identify the important things they need to know about how IP issues are handled in another country. This advice would help improve understanding and make it easier to set up a collaboration between a Public Research Organisation in one European country with an industry partner in a different EU country.

6. The second aspect that the group explored, work stream 2, was how can we encourage the development of experts in technology transfer who can help PROs and industry partners to set up collaborations. This work focussed on identifying what kind of skills are needed by professional technology transfer staff, what education and/or training programmes are currently in place to provide them, and what new specific programmes could be set up.

7. The IP Group agreed from its earliest discussion that it is necessary to develop both of these linked aspects – expert people and practical tools – in order to facilitate and improve the level of cross border collaboration in Europe.

8. During the course of our work, the European Commission has also been reviewing its current rules on state aid. The group therefore also identified a number of issues which should be taken into account when preparing the new state aid framework. The IP group's conclusions in this area are described in Section 5.

## Work stream 1

9. The IP Group resolved to produce a set of practical guidelines relating to the ownership, transfer and exploitation of IP to facilitate and promote cross-border collaborations between PROs and industry.

10. Section 3 of the report describes the identification, analysis and development of practical advice on cross-border collaboration. The IP group identified a number of key issues which impact on the ownership, exploitation and use of IP in collaborations and developed a template to record this information for each country.

11. The Group has produced concise, practical fact sheets aimed at potential collaborators in cross-border research, and particularly the intermediaries facilitating RTD projects involving SMEs, industry and PROs. Examples of these intermediaries are technology transfer offices of PROs, lawyers and government departments which support SMEs or foster innovation.

12. We adopted the Toolkit approach outlined in section 3.4. The Toolkit comprises:

(i) A *Decision Guide* to help users identify what issues they need to take into account when considering a cross-border collaboration;

(ii) *Facts-sheets* describing the situation concerning the ownership, exploitation and use of IP in 20 individual countries.

13. The Toolkit is designed to be suitable for delivery via the internet. The decision guide allows the user, firstly, to assess and balance the importance of the various key issues when setting up a collaboration agreement and, secondly, to remind himself what issues are especially important when setting up a cross-border collaboration. The user can then explore the fact-sheets describing the situation in the countries concerned, making a comparison and identifying those new or unfamiliar issues that need to be taken account of when setting up a cross-border collaboration.

## Work stream 2

14. In parallel, this group focussed on the problems that a lack of professional skills in a Public Research Organisation's (PROs) technology transfer could cause (trans)-national collaboration. The group therefore set out to answer the following questions:

(i) What skills/expertise should a person possess to be able to work as a professional in the field of Technology Transfer?
(ii) If such skills/expertise are going be taught through education programmes/courses, what should be the main characteristics of such programmes/courses? (eg target audiences, levels, subjects, formats, ...)
(iii) What courses are already available in member states?

15. Section 4 of the report describes the survey evidence and expert workshop on professionalizing technology transfer.

16. The answers to the questions above provide a basis on which to build recommendations on how Member States, the Commission and stakeholders should proceed to realise the objective of professionalizing technology transfer. The Group recognised that this was an ambitious task, given that this would rely on the input from different stakeholders and analysis of training systems beyond the experience of the group. A workshop was therefore organised to bring together trainers and technology transfer professionals at a national and European level. Members of the group were also asked to identify existing education programs/courses and the National demand for such a scheme.

17. This lead to an analysis of the merits of a Europe wide approach to training, which might address some of the difficulties caused by lack of national resources and the very real need for expertise on the effect of cross-border aspects in collaborations. The group resolved to tackle three aspects of this:

- Step 1: Identification of key building blocks and core skills needed to by technology transfer offices (TTOs).
- Step 2: Identification of existing programs within Europe regarding technology transfer
- Step 3: Design of an ideal (European) education program to facilitate the training of professional TTOs.

18. The group's analysis of these three aspects and the conclusions of the Workshop of National Experts are set out in Section 4.2. This analysis sets out the case for multi-lateral action and the group's recommendations set out how this might be done.

# 3. Work Stream 1: Practical guidance on IP to facilitate cross-border collaborations:

## *3.1 Outline*

This section of the report presents the group's analysis of the issues that affect cross-border collaboration. This analysis is based upon three elements:

(i) national fact sheets, The fact sheets in Appendix B aim to cover every member state, including those that are not represented in the expert group, and also important trading partners. It is intended that fact sheets for additional countries can be added over the course of time. The fact sheets are intended to be published and widely disseminated at national level, in addition to through the Commission web sites.

(ii) an analysis of differences and national solutions: The Analysis of the issues covered in the fact sheets is reported in Part 3.2 below. This sets out differences between member states and gives examples of how issues are dealt with on a national level. The IP Group has also examined the effect that collaborating cross-border may have on these issues and provides advice on dealing with those issues. In addition, it has produced a checklist of issues, derived from its analysis of the fact sheets, for both PROs and their industry partners to consider, negotiate or discuss when entering into research agreements.

and

(iii) a framework decision guide: As part of its practical guide on how IP issues that arise in cross-border collaborations can effectively be dealt with, the IP Group has developed a Decision Guide which will assist collaborators in deciding the vexed question of who should own the IPR resulting from collaborative research. This decision guide is included in Part 3.4 of the report. It is also intended to be able to be disseminated separately as a stand alone document.

Based upon this analysis and the associated development of the toolkit the group has made a number of recommendations for member states both individually and Europe wide. These recommendations and the reasoning behind them are set out in Part 3.3 of this report.

## *3.2 Analysis - Cross-Border Collaboration between Industry and Publicly Funded Research Organisations.*

## (A) THE TYPES OF INTELLECTUAL PROPERTY RIGHTS (IPR)

The types of Intellectual Property which are commonly subject to negotiation in research collaborations are patents, confidential information[2], and copyrights – (for example computer programmes or educational materials.) However it is also important to note that many other kinds of IPR could also be the result of industry/PRO collaboration, including database rights; registered designs and design rights (which protect aesthetic features of a product), and also lay-out designs (semi-conductor topography rights) of integrated circuits; and both registered and unregistered trade marks, which protect words and symbols used in the course of trade.

*One variant of IPR protection that only exists in certain Member States, is the low cost "utility model" or "innovation patent" (see box below).*

**Utility Models** are available in several countries (See *www.wipo.int/sme/en/ip_business/utility_models/where.htm. For note on differences between utility models and patents see http://www.ipr-helpdesk.org/controlador/resources/faqs?seccion=cuerpoFAQ&len=en&id=0000002093&searchText=utility%20model)*
Sometimes referred to as "petty patents" or "innovation patents", utility models are a low cost form of protection for inventions or innovations. The conditions relating to utility models vary from country to country. One difference that has a bearing on the conflict between publication and confidentiality (see 3.2.5 below) is the grace period allowed for prior publication by the applicant. In Belgium, Denmark, Finland, France, Italy and the Netherlands, the requirements for novelty for Utility Model applications are the same as for patent applications. For example, the law in Austria, Czech Republic, Germany and Slovakia, allows a grace period of six months prior to the date of application. Publication by the applicant of the 'invention' within that grace period will not invalidate it through lack of novelty[3].

### *Why does this affect cross-border collaboration?*

An industry partner engaged in cross-border collaboration will need to know whether the results will qualify for protection in the respective countries and in other potential markets. It is important to be aware of what types of IP protection are available in the country that the PRO partner is based, and in which the IP will probably be created. Further information about the forms of IPR which exist in a given Member State can be obtained from the national IP offices (see Table 1 of Appendix E).

## (B) IP OWNERSHIP

**The ownership of IPR is a key issue during collaborative RTD negotiations as all parties should ensure that the results of collaborative research have been protected adequately and that the mechanisms in order to assign or license the results for further development and/or exploitation are clear.**

[2] Confidential information is a subset of the body of information termed 'know-how' or 'background knowledge', much of which is not protectable through IP rights, but that is often necessary for the succesful commercial exploitation of the IP resulting from joint research.
[3] Article: "Petty Patents" by John Richards: http://www.ladas.com/Patents/PatentPractice/PettyPatents/PettyP08.html.

1. The differing regimes within Europe mean that the original owner of IP resulting from collaborative research can be the institution, individual researchers, students, the industry partner or a combination of these.

2. Ownership of any background knowledge necessary for the commercialisation of that IP may rest with any of the parties involved in the research project, or even with third parties.

3. Even where the IPR belongs to the Public Research Organisation (PRO[4]), by statute, internal regulations or contract, there are circumstances where the ownership of the IP may not ultimately remain with the PRO – e.g. where national legislation or regulation requires reversion of rights to the inventor if there has not been diligent pursuit of commercialisation.

4. Further, the rules in a country relating to ownership may differ as regards patentable inventions and other types of IP such as copyright (for example, computer programmes, printed or audiovisual training material or reference notes).

5. Members of the IP Group felt that the IP ownership regime in their country did not adversely affect the level of innovation. The inconsistency of the rules between countries, and potential collaborators' consequent unfamiliarity with those rules creates a perception of difficulty in setting up cross border collaboration, in the absence of guidance providing collaborators with information about the system in operation in each other's countries.

### *(i) What happens in the national context?*

*A summary of the IPR ownership situation in the countries surveyed is set out in Table 1 of Appendix D.*

### *Types of research funding*

1. Before considering the IPR issues, it is worth distinguishing between the various classes of research that may be undertaken at a PRO which can be distinguished on the basis of how the project is being funded: [Note that some research may be funded through a mix of these]

**A** **Open Research**: Research carried out by PROs which is wholly funded by public funds or by grants (e.g. from foundations or charities). The object is to serve the public good and the results of open research are generally published. Often publication can be delayed to allow the owner of an invention (see 3.1.9 below) to file patent applications, subject to the terms of the grant agreement.

**B** **Contract research**: the PRO is paid 100% of all costs (at market rate + reasonable profits[5]) to apply existing knowledge and expertise to a particular practical problem. In this case, the PRO acts as a service provider with specialist expertise and/or specialist equipment. Patents, utility models, confidential trade secrets or computer programmes protected by copyright

[4] Generally, a PRO is considered to include both (a) universities which undertake research and (b) dedicated research institutes.
[5] PROs may not use public monies to compete with contract research organisations. State Aid rules make it clear that if the PRO undertakes such economic activity it must cover all costs plus a reasonable profit. See Expert Group on the Management of IPR: *Management of Intellectual Property in Publicly-Funded Research Organisations: Towards European Guidelines* KI-NA-20-915-EN-C
ec.europa.eu/comm/research/era/pdf/iprmanagementguidelines-report.pdf.

may result and these are usually fully owned by the contracting party (the industry partner).

**C** **Collaborative Research:** If the research to be undertaken is of scientific interest to the PRO and is relevant to the interests, but not for immediate commercial use, of the Industry partner, then the relationship between PRO and industry partner is a joint or shared one. Collaborative Research is best defined as research where both parties provide financial or other resources, such as materials or equipment, for the project and both parties have an interest in its outcome. This may imply private or third party funding of part of the research conducted by the PRO, but it could also be that the industry partner funds only its own part of the project. The agreements that the parties come to regarding use of the resulting IPR, and any share in resulting revenue will of course vary according to unique set of circumstances of each individual case.

**Institutional Ownership vs. Employee ownership – 'professor privilege'**

1. An earlier Expert Group[6] described three different categories of inventions by employees or students of PROs:

(a) *Free Inventions* – made outside the researcher's (student's or employee's) terms of employment. Ownership of *Free Inventions* remains with the inventor.

(b) *Attributable Inventions*[7] – made outside the researcher's (student's or employee's) terms of employment, but making use of information (including background knowledge), materials and/or equipment owned by the PRO. In France and Spain, however, the PRO has a right to claim ownership of an *Attributable Invention.*

(c) *Service Inventions* – made wholly within the terms of a researcher's employment[8],

Note that several countries or regions have laws[9], regulations or policies vesting first ownership of *Service Inventions* to PROs.

Italy and Sweden have a 'professor privilege' system assigning inventions to university professors or researchers. Unlike Italy, Sweden's 'professor's privilege' system extends only to universities; at other Swedish PROs the IPR will be owned by the institution[10]. In Italy, almost all PROs manage the relationship with their individual researchers on the basis of a contract signed by both parties before the research activity starts providing that the ownership of the potential research outcomes belongs to the PRO. In Sweden, regarding contract research and collaborative research, the universities negotiate and sign the agreement on behalf of itself and the individual researcher, based on an agreement with the individual researcher

Austria, Denmark, Finland, Germany, and Norway previously had a similar 'professor privilege' system, but have all introduced significant changes by bringing in a system whereby the invention has to be notified to the PRO, which has a right to claim ownership of the rights.

## *Regional variations*

[6] Definitions drawn from the 2004 report of the Expert Group on the Management of IPR: *Management of Intellectual Property in Publicly-Funded Research Organisations: Towards European Guidelines* KI-NA-20-915-EN-C http://europa.eu.int/comm/research/era/pdf/iprmanagementguidelines-report.pdf

[7] The Expert Group on the Management of IPR report used the term 'Dependent Inventions.' We have used 'Attributable Inventions' to distiguish these from the term of art meaning *related inventions*.

[8] But note that the definitions of a *Service Invention* and *Free Invention* may differ from country to country.

[9] Austria, Belgium (with differences between the three regions), Denmark, France, Latvia, the Netherlands, Switzerland and the United Kingdom.

[10] Italy's parliament is currently considering an amendment to the law which would abolish the 'professor privilege'. In Sweden, the parliament is considering a government report which provides two alternative bills for consideration, one where professor's privilege is retained, but with a duty for scientists to report their innovations to the university, and one where the professor's privilege is abolished, giving the university exclusive right to take over the ownership of innovations against economic compensation to the scientist. Both alternatives gives the university a legal possibility to own patents.

2. In Belgium, IP falls within the federal competence, but education and research is governed by the regions. This means that there will be variations between the three regions, Flanders, Wallonia and Brussels.

3. In Switzerland inventions or designs developed under a contract of employment belong to the employer, but the conditions as to ownership of other IPR can vary from institution to institution, and from canton to canton.

**(ii) Copyrights**

4. The copyright regime concerning computer programs has been harmonized in the EU. Throughout the EU the employer owns the copyright in computer programs produced by employees in the course of their employment.

5. The situation is not the same with other copyrights. In most countries of the European Union, the employer becomes the owner of the copyright in works made by its employees in the performance of their duties in the absence of express or implied agreement to the contrary. However, in some countries (France, Italy, Belgium, Luxembourg, Portugal) the employee remains the owner of copyright, even though the work has been created in performance of the employees' job duties. That said, in France, Italy and Luxembourg, where the work in question is a collective work (i.e. made by several creators under the direction of the employer) the employer remains the owner of the copyright.[11]

**(iii) Students or other researchers and independent contractors not employed by the PRO**

6. In most European countries, many researchers are not directly employed by the PRO, but are sponsored directly by government or other grants. It is not always clear whether their inventions, whether as a result of the operation of law or of internal regulations, will be owned by the PRO. Further, the invention of a student who is not employed by the PRO and who is engaged in research will generally be owned (or jointly owned in the case of joint inventions) by the student. Denmark makes a distinction between Ph.D. students, who usually have the same status as PRO employees, (i.e. inventions belong to the PRO), and other students, who will own their own inventions.

7. Commonly, a student will have worked with others to produce the invention, and will be a joint owner with other researchers or the PRO, depending on the IP ownership regime in the particular country. That said, in France and Spain the PRO will generally have the right to claim full ownership of the IPR as an *Attributable Invention.*

8. For the reasons set out in the next section (*Joint Ownership*, below), some universities in the United Kingdom have attempted to obtain a blanket assignment of rights from students when they register for their studies. This practice has met with criticism from a moral or ethical point of view, but more importantly for the prospective collaborator, doubts have frequently been raised as to the legal validity of such an assignment.

9. Thus, where any sub-contractor or student is to work on a collaborative research project, the collaborators should ensure that the appropriate partner acquires the IP rights that the sub-contractor or student acquires by virtue of its involvement in the

[11] See IPR Helpdesk document “Employees’ Creations – copyright”.http://www.ipr-helpdesk.org/documentos/docsPublicacion/html_xml/8_EmployeesCreationCopyright[0000006177_03].html

project. Those rights will not automatically belong to the party that engages the sub-contractor and you may not therefore be able to secure these rights.

### (iv) Joint Ownership

10. Joint ownership of IPRs, as the earlier CREST IP Expert Group has noted, are notoriously difficult to manage: "In Europe, as a general rule, each joint owner may exploit the invention (subject, in some countries, to fair compensation of the other joint owners) but *may not assign or license his undivided interest in the invention to other parties without the consent of all the other joint owners*. In other words, in most countries, PROs owning a joint interest in a patent may not grant any licences to other parties without consent. PROs may practice the invention, including in the course of undertaking collaborative research with other partners. Nonetheless, they may not grant a licence to the jointly owned background technology that may be needed to exploit the results. Industrial owners, on the other hand, may directly practice the invention in their product or processes without the consent of any of the joint owners, subject only, in some countries, to a fair compensation of the other owners, including PROs[12]."

11. The situation is also unsatisfactory for the industry partner who will not be able to sub-licence the IP to any other party, in spite of any agreement it may have with the PRO, unless it also obtains the consents of all the other joint owners.

12. Where joint ownership is unavoidable, the difficulties can be overcome by negotiating a joint ownership agreement. For example, joint owners may sometimes agree that each joint owner is free to exploit as they see fit without accounting to the other joint owners[13]. Where there is a disparity in the relative contributions of the respective joint owners to creating the invention, an alternative, frequently used by Framework Programme consortium members[14], is for the joint owners to agree to assign the patent to a single party who is responsible for the exploitation and who has to account to the joint owners according to their agreed shares. Evidently, since both joint owners will often want to exploit the results, it is rare that an exclusive license can be granted (unless restricted to certain areas of activity which neither owner wishes to pursue).

### (v) Background knowledge

13. The existence of background knowledge is often the most important consideration for an industry partner in selecting a particular PRO for collaborative research. The partner may need access to the background knowledge of the PRO in order to make commercial use of the project results.[15]

---

[12] Expert Group on the Management of IPR report: *Management of Intellectual Property in Publicly-Funded Research Organisations: Towards European Guidelines* KI-NA-20-915-EN-C http://europa.eu.int/comm/research/era/pdf/iprmanagementguidelines-report.pdf.

[13] As is the case under US law: 35 U.S.C. §262 .

[14] For details, see discussion of ownership arrangements for the Sixth EU Framework programme at http://ec.europa.eu/research/fp6/model-contract/pdf/fp6-iprguidelines17march04_en.pdf. For model contract and related annexes, see http://ec.europa.eu/research/fp6/index_en.cfm?p=0_contracts#Core%20contract.

[15] Expert Group on the Management of IPR report: *Management of Intellectual Property in Publicly-Funded Research Organisations: Towards European Guidelines* KI-NA-20-915-EN-C http://europa.eu.int/comm/research/era/pdf/iprmanagementguidelines-report.pdf

14. Legal uncertainty can arise if the background knowledge at the PRO was built up as a result of collaboration with a previous industry partner. It is often unclear whether or not the background knowledge can be used:

(i) In any subsequent research free of charge; or
(ii) Under licence.

This lack of legal certainty is particularly true where the background knowledge was jointly owned.

15. It should also be noted that the other party may want to retain some use of the background IPR developed, for example PROs can rarely grant exclusive licenses to such background IPR.

**(vi) Cross-border collaboration**

16. Of all the issues examined, the IPR ownership related issues present the greatest degree of diversity between the countries surveyed. Unfamiliarity with the systems in other countries is likely to be a major cause of unease when considering cross-border collaboration.

17. Where the purpose of the relationship is for the industry partner to secure entitlement to the results, either as owner of the IPR or as licensee, a right to claim damages is little consolation. This is particularly the case for SMEs, which rarely have the resources to sustain a legal claim against a large, publicly-funded organisation (or its insurers). It is therefore important that the industry partner ensure that the IPRs are properly secured by the PRO, rather than simply rely on a warranty.

### *(vii) Conclusions*

**Good practice for partners in collaborative research:**

***For PROs and technology transfer offices:***

a. Define, secure and document the rights to background knowledge.

b. Obtain written assignments of all IPR generated by students[16] and researchers who own their research results (either because they benefit from professors' privilege or because they are not employees) and who take part in collaborative research project.[17]

c. Ensure that the research project is properly documented, e.g. by maintaining laboratory notebooks[18].

d. Make available documentation providing evidence of the ownership of IPR to the industry partner.

e. Ensure that any statutory, regulatory or contractual requirement for IPR to revert or be transferred to an employee inventor in the event of failure to diligently pursue commercialisation of the invention is taken into account when drafting the contract.

f. Ensure that legal requirements for employee compensation (in service inventions) are taken into account when drafting the contract.[19]

***For Industry collaborators (these steps should be carried out whatever the IP ownership regime):***

a. Ensure that all necessary background knowledge has been defined and the necessary IPR secured.

b. Ensure that all necessary documentation evidencing and transferring ownership of the IPR to be generated in the project is in order.

c. Where the PRO is required to claim rights from a researcher or student, the industry partner should ensure that the claim has been made within the time allowed.

d. Ensure that the project is properly documented, e.g. by maintaining laboratory notebooks.

---

[16] Note that in some countries, such as Austria, assignments by students to the PRO or industry partner may be legally invalid, if the assignment is a prerequisite to work towards an academic qualification.

[17] As an illustration, the website of IPAL GmbH, which undertakes technology transfer activities on behalf of several Berlin universities, provides useful examples of agreements with researchers (http://www.ipal.de/uploads/media/Appendix2_Mission_Oriented_Research_1Mai2003.doc http://www.ipal.de/uploads/media/Appendix2_Research_Cooperation_1Mai2003.doc) as part of its collection of model contract provisions (the "Berliner Vertrag").

[18] The keeping of laboratory notebooks has, for example, been an important part of the French training policy on innovation since 2003. Laboratory notebooks serve a dual purpose: (1) concerning patents, of documenting when an invention was first made (important for US patent law), and for documenting who the actual inventor(s) were; (2) they are also of great help when determining background knowledge. This laboratory notebooks policy is integrated in a general quality process.

[19] In some countries, a PRO may be liable to pay employee compensation for an invention. If the invention turns out to be more successful than originally envisaged, this may in certain cases mean that the PRO has to have access to a budget to cover this, over and above anything that might be agreed in the contract. Where service inventions are likely, in cases where a PRO accepts a lump sum in return for a licence or assignment of IPR, it would be prudent to make provision in the agreement for additional payments to cover its liability to the employee inventor should the invention turn out to be more successful than envisaged.

e. Be aware that IPR originated by independent contractors, researchers who are not employees, or IPR that is originated outside the scope of their employment, may not belong to the PRO.

f. Be aware that the PRO may have a statutory, regulatory or contractual requirement for IPR to revert or be transferred to an employee inventor in the event of failure to diligently pursue commercialisation of the invention.

g. Be aware that the PRO may have legal requirements to publish research results and to compensate employees for inventions.

## (C) NEGOTIATION OF IPR CONTRACTS

**In order to conclude an agreement, there are a number of key issues that will need to be considered including: who do I negotiate with, what terms could they accept and what might the price be. Obviously this often involves a commercial negotiation, but there are a number of things arising from differences in national IP systems that it will be useful to know when setting out:**

**- Whether you should be negotiating with the PRO or an individual (as a result of professor privilege, or of student or other party involvement)**

**- Legal requirements on the PRO to hand back IP ownership if commercialisation is not pursued within a set timetable**

**- Legal requirements on the PRO to make a certain return, particularly if the research is partially or completely funded by public money.**

### (i) What happens in the national context?

**Who is entitled to negotiate IPR contracts?**

*A summary of the situation in the countries surveyed is set out in Table 2 of Appendix D.*

1. In Sweden's universities (but not other Swedish PROs) and in Italy an industry partner may negotiate directly with the researchers. However, in practice, the universities negotiate on behalf of the researcher, concerning contract and collaborative research. In Italy though, most PROs will administer the rights to all IPR generated in the course of a collaborative project with industry through a technology transfer office.[20] Consequently, in all countries surveyed apart from Sweden and Italy, the contracts must be negotiated with the PRO, generally through a specialised technology transfer office. In some countries, e.g. the Netherlands, a single technology transfer office can represent several PROs.

2. In Hungary, PROs are not able to own IPRs, which therefore vest in the State Treasury. However the PRO is for all practical purposes regarded as the IPR owner, and exercises quasi property management rights including the right to licence or assign IPRs.

[20] Several countries also had a similar 'professor privilege' system, but Austria, Denmark (2000), Germany (2001), Norway (2003), and Finland (from 1/1/2007) have all introduced significant changes by bringing in systems under which the invention has to be notified to the university, which has the right to claim ownership of the rights. Italy went the other way and created a professor privilege system in 2001 (but note that both Italy and Sweden are currently considering changing the 'professor privilege' system).

In Swedish universities, although there is professors' privilege, the university normally negotiates contracts concerning contract and collaborative research on behalf of itself and the individual researcher. The university will then have an agreement with the individual researcher about the rights to IPR.

Since the universities cannot themselves exploit IPR, they make use of holding companies. Currently, all the larger universities and some of the smaller universities have holding companies. Many of the holding companies function provide support to individual researchers to exploit their inventions. This is offered against a share in the start up company or a share from royalty income. An example of such a holding company is Karolinska Innovation AB, connected to Karolinska Institutet, the world renowned medical university. Karolinska Innovation AB also helps inventors from other universities in Sweden and other Nordic universities within their field of specialization.

There are other organizations handling IPR stemming from university researchers. For example SweTree Technologies AB is jointly owned by a group comprising some of the university holding companies and a number of companies within the forest biotech sector including one which is owned by 46 researchers in this field. The researchers assign all their patents to SweTree Technologies AB against a royalty, and SweTree Technologies AB is responsible for commercializing resulting patents through licensing or forming "start-ups".

The person or entity with whom to negotiate over IPR arising from research within Swedish universities differs from situation to situation. If the IPR does not already exist and will arise from contract and collaborative research, it is best to address the university and to regulate these rights in the agreement with the university – thereby obliging the university to acquire the negotiation rights from the researcher. In the case of existing IPR it will be best to approach the researcher who can negotiate him/herself or indicate with whom to negotiate.

In **Germany** universities established patent and licensing agencies (*Patent- und Verwertungsagenturen*, abbrev: PVA) in each Federal State (*Land*). The Fraunhofer Society as well as the Max Planck Society established central patent- and tech-trans units responsible for all their respective institutes (*Fraunhofer- Patente und Lizenzen* and *Garching Innovation*, both located in Munich). The Helmholtz Association set up a common transfer agency for life sciences (*Ascenion GmbH* in Munich).

### (ii) At what terms and at what price can IPRs be negotiated?

*A summary of the responses on term and price in the countries surveyed is set out in Table 3 of Appendix D.*

### a. The nature of rights a PRO is empowered to transfer

3. In the majority of countries surveyed, PROs are empowered to assign IPR outright to an industry partner, or to licence it either on an exclusive or non-exclusive basis[21]. In Ireland, for example, the PRO is obliged under the National Codes of Practice to maximise the exploitation of IP, and a decision whether to assign or licence exclusively or non-exclusively will be influenced by their view on which is the most appropriate means to maximise exploitation of the IP.[22]

4. In any EU member state where a PRO assigns its IPR to, or grants an exclusive licence to an industry partner, particular care needs to be taken that the agreed terms do not imply illegal distortion of competition; or the illegal granting of State Aid.[23]

[21] These include Austria, Belgium (Flanders region), Denmark, France, Finland, Germany, Italy, Norway and the United Kingdom.

[22] **National Code of Practice for Managing Intellectual Property from Publicly Funded Research:** http://www.forfas.ie/icsti/statements/icsti040407/index.html and **National Code of Practice for Managing Intellectual Property from Public-Private Collaborative Research:** http://www.sciencecouncil.ie/reports/#ipcode04

[23] Article 87 of the Treaty of the European Union provides that "any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the common market."

**b. Power to accept equity in payment**

5. In most countries surveyed a PRO is empowered to accept equity in payment for IPR.[24] This is often subject to limits, e.g. equity in a start-up may be accepted in a PRO in Germany, and by any PRO in France, Italy and Spain. On the other hand in the United Kingdom and Denmark, PROs may accept payment in the form of equity only if it is equity in public limited companies.

**c. Reversion of rights if commercialisation not pursued**

6. As it is frequently the case in IP agreements, PROs generally require reversion of IPR unless commercialisation is diligently pursued. In France government recommendations state that exclusive rights should transform to non-exclusive rights if there is no commercial exploitation within an agreed time. In the United Kingdom, PROs are required to make sure that they obtain a suitable reward from exploitation of IP that arises from the research of the institution. For this reason PROs will often require reversion of IPR if commercialization is not diligently pursued by the licensee or assignee.

**d. Price of publicly-funded IPR**

7. EC State Aid regulations require that IPR resulting from publicly-funded research be transferred at market price: this is determined according to local criteria in the country where the rights are originated: i.e. where the research is undertaken.

8. There are many factors which should be taken into account in determining actual transfer price. The method used in Finland provides a practical example:

> *Actual transfer price should be calculated by reducing the full market price of the IPR by the value of the receiving partner's contribution to the collaborative project in which the transferred IPR has been created. This calculation should not be limited to financial contributions only, since the value of intellectual contributions might in many cases be much higher. In addition, account should be taken of the relative value of any IPR retained by the transferring party.*

9. Switzerland is not subject to EU State Aid laws and therefore has no requirement that the results of publicly-funded research should be transferred at market price.

**(iii) *Conclusions***

1. The effect of "professor privilege" on ownership, or other legislative frameworks that might affect who you need to negotiate with, should not create a barrier to cross-border collaboration, as long as the prospective collaborators are aware of the situation in the other country.

2. Where the researcher/PRO is located in a 'professor privilege' country, consideration must be given to securing the right to use any background knowledge necessary to commercialise the result of the collaboration if that is not controlled by the researcher with whom the collaboration contract is being made.

3. Collaborating parties should note that for State Aid purposes, market price is determined according to local conditions in the relevant country.

[24] These include Austria, Belgium (Flanders region), Czech Republic, Denmark, Finland, France, Germany, Italy, Latvia, Netherlands, New Zealand, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

## (D) THE EFFECT OF FUNDING ON IPR CONTRACTS

**The source of research funds will often dictate the returns that should be expected from research, whether the results of research should be publicly accessible, and even whether permission is required for first commercial exploitation outside the country where the research was funded. When entering into a cross-border collaboration it is therefore important to be aware of the restrictions and opportunities that this offers.**

It is worth noting that public funding may have been secured by the industry partner as well as or rather than the PRO. Some countries also offer tax advantages to SMEs to encourage them to invest in Research and Development.

### (i) What happens in the national context?

### a. The Effect on IPR Ownership of Public Funding

1. In general, public funding does not require the transfer of IPR to the funding agency. In most cases legislation or the rules of the funding foundation will provide that the Recipient of Funds will own any resulting IP (e.g. Germany, Italy, the Netherlands and Switzerland). In most countries this will be the PRO. In Italy the recipient of funds may be an individual researcher or a PRO.

**Some examples of conditions which may be imposed**:

**Italy** distinguishes between *open research*, where the IPR is owned by the PRO, even if there is an element of private participation involved in the funding, and *project funding*, where the IPR belongs to the Recipient of Funds. The results of open research can be transferred to private ownership on payment of appropriate consideration

In **Norway**, the biggest public donor is the Research Council of Norway (RCN). The Project Owner, usually the PRO which receives the fund and organises the project research, will own any resulting IPR, but has an obligation to secure the right to commercialise from all project partners, including all necessary licences, e.g. of background knowledge. If the project results are not commercialised within Norway, RCN permission is required for a foreign licence. If the project IPR is not exploited within a reasonable time, it must be licensed to the RCN.

In **Switzerland**, the biggest public donor for research is the Swiss National Science Foundation (SNF). The SNF can require that recipients of Funds make data available to other researchers, including through making the research results available on a publicly accessible database.

### b. The Effect on IPR Ownership in Contractual Arrangements where all or part of a collaborative project is publicly-funded

2. Where research is wholly publicly funded it is usual for the PRO to own the IPR. This is similar to the situation in the USA[25]. The source of public funding will have an influence: for example in Hungary a public body funding a specific project may

[25] The United States laid out a federal approach to funding questions in the Bayh-Dole Act. This Act sets out that:

- Non-profit making companies, including universities, and small businesses may elect to retain title to innovations developed under federally-funded research programs
- Universities are encouraged to collaborate with commercial concerns to promote the utilization of inventions arising from federal funding
- Universities are expected to file patents on inventions they elect to own
- Universities are expected to give licensing preference to small businesses
- The government retains a non-exclusive license to practice the patent throughout the world
- The government retains march-in rights.

require that resulting IPR be made available free of charge for public use. In Ireland the terms and conditions of grant funding supersedes any ownership agreement.

3. In none of the countries surveyed was there a requirement that the PRO should retain the IPR where a project (as opposed to open research) is partly publicly funded. In **France** the Government recommends that the PRO should in such circumstances secure at least a part of the IPR.

4. In many of countries surveyed, contracts generally provided that the ownership of the IPR generated in collaborative projects will vest in the inventor, when an individual inventor can be identified. In some countries the issue is open to negotiation and will depend on a number of issues, including the input of the respective parties, including funding and background know-how.

5. If an individual cannot be identified as the inventor, contracts usually provide that the parties will jointly own the IPR.

6. The difficulties, described in the section on joint ownership above [3.2 (b) iii)], have been dealt with in contracts in various ways, all of which require additional negotiation: In the Flanders region of Belgium it is general practice to adopt, by contract, the USA model[26], and provide that each joint owner shall have the right to commercially exploit and to licence the IPR without accounting to the others. In Denmark and Austria, it is usual for the contract to provide that the commercial partner will have access to commercially exploit the IPR.

**c. The Effect on IPR Ownership in Contractual Arrangements where wholly funded by industry.**

7. In Austria, Germany, Denmark, Ireland, Italy, Sweden and the United Kingdom the industry partner will usually own the IPR resulting from Contract Research or at least get the necessary rights to exploit the results commercially. The same will apply in France where there has been no inventive contribution from the PRO. In the Flanders region of Belgium the industry partner will usually at least get the necessary rights to exploit the results commercially.

8. In many countries, including Germany and Italy the PRO will at least retain non exclusive rights to use the results for research and educational purposes.

**d. Fiscal measures that might affect funding, ownership or exploitation**

9. By way of example, the UK scheme targeting SMEs requires the SME to be the owner of the IP resulting from the research in order for them to be able to claim the tax credit. For this reason, UK SMEs are likely to seek ownership of any IP resulting from research collaboration.[27]

10. In most cases tax incentives for patents are introduced through broader incentives to encourage investment in intangible assets. For example, some countries (e.g. France, Hungary and Spain) explicitly allows purchased patents to qualify as R&D expenditure when calculating their R&D tax credits (either through depreciation allowances or acquisition costs). Evidently, such mechanisms may prove to be an incentive when deciding which partner owns the IPR resulting from

[26] 35 U.S.C. §262 .

[27] The CREST group on the Evaluation and design of R&D tax incentives suggests in section 4.2.1: "Currently 17 of 33 CREST and 15 of 25 EU Members have tax incentives for business research and development in place: AT, BE, DK, FR, HUN, IE, IT, MT, NL, NO, PL (2006), CZ (2006), PT, SL, ESP, TK and the UK. ".. However, only in the UK was this reported to potentially affect IP ownership.

the project, and should be taken into consideration during negotiations. In France, a new law enacted on April 18 2006 provides (article 28) an income ("impôt sur les sociétés") exoneration for PROs' revenues coming from the valorization of their results.

### (ii) Cross-border collaboration

11. The industry partner should be aware of the source of any public funding for the project and what conditions are attached to it, either by the operation of law in the country the PRO is located, or as a result of the regulations of the donor of funds.

> In Norway, the Research Council of Norway requires that if the project results are not commercialised within Norway, RCN permission is required for a foreign licence. This should be sought and obtained at the time the contract is entered into if a foreign industry partner does not intend from the outset to exploit the results of a project in Norway.

The fact sheets provide guidance on the key issues.

### (iii) Conclusion

1. The question of the effect of public funding on ownership of the fruits of research will not create a barrier to cross-border collaboration as long as the prospective collaborators are aware of the issues. Public funding of research does not prevent the licensing or even the assignment of IPR resulting from that research to private companies.

2. The requirement in some countries that research results be made public may be an inhibiting factor where the industry partner wants to keep the results confidential over the longer term. However, this requirement can frequently be waived if there are justifiable grounds for secrecy. Where this is the case, the source of funds should be advised in advance of any contractual secrecy requirements.

3. Collaborators should be aware of the source of funding of collaborative research and be aware of any restrictions this imposes. If any flexibility is needed on rules requiring public access to results or first commercialisation in the country of origin, this must be negotiated with the donor body at the outset.

## (E) CONFIDENTIALITY AND PUBLICATION

**PROs and their industry partners may have conflicting needs as regards the publication of the results of research. These need to be identified and discussed at the outset.**

1. This is one of the key issues identified by the CREST First Cycle Expert Group on IPR and Research as potentially hampering cross-border collaborations and technology transfer activities.

2. It is now acknowledged that the mission of universities (and other PROs that have an educational function) should be divided into three streams of activities:

a) **Teaching:** Dissemination of the accumulated body of knowledge through teaching

b) **Research and publication:** Advancement and dissemination of knowledge through research by academic staff and students, and publication of the results of that research
c) **Knowledge and technology transfer:** Advancement and dissemination of knowledge through collaboration with industry on research and development, with the objective that some of the results of that collaboration be exploited through the commercialization of products and services.

3. PROs and individual researchers are still judged primarily on their reputation as educators, and the quality and volume of their publications. Indeed in some countries researchers or departments are only assessed on the basis of their publications. Their primary requirement is therefore still the publication of results of research, and the dissemination of their accumulated knowledge through teaching.

4. Lecturers in universities will often want to base their teaching on the accumulated body of knowledge in any particular field, including knowledge accumulated in the course of collaborative research with an industry partner. Furthermore, a PRO will want to use that accumulated body of knowledge in conducting further research, whether with the original industry partner, with any other partner, or in conducting further research of its own.

5. This can conflict with the interests of an industry partner collaborating on research and development, who may require confidentiality, for two primary reasons. Firstly, they may require a temporary stay on publication of research results for sufficient time to evaluate the results and, if appropriate, to enable them to lodge a patent application, as publication prior to application will put at risk the novelty of the invention.

6. They may also require long-term confidentiality where the intention is to protect the fruits of research through secrecy rather than patenting. This may be necessary where the fruits of the research might not be patentable but will nonetheless provide a competitive advantage in the market place if kept confidential. There are also cases where the result may be patentable, but publication, either academically or through registering a patent, would defeat the object of the research.

7. The ability of an industry partner to achieve long-term confidentiality will frequently depend on whether the relationship with the PRO is one of Collaborative Research or Contract Research. In the case of Collaborative Research the industry partner will generally not be able to insist on long-term confidentiality: In the case of Contract Research all countries that responded to the survey on this point confirmed that where fully funded by an industry partner, PROs may agree to permanently refrain from publication.

**(i) What happens in the national context?**

**a. Confidentiality of background knowledge**

8. In all countries surveyed, PROs are able to agree to maintain the confidentiality of the industry partner's background knowledge.

**b. Requirement to publish**

9. PROs are required by law or administrative bye-laws to publish the results of publicly-funded research in Belgium (Flanders region), Denmark and Germany. In Germany the PRO may declare parts of the results as confidential; these must not be published. In France PROs are required by law to disseminate their knowledge,

including through the publication of results of research. In Sweden the Principle of Openness (*Offentlighetsprincipen)* gives the public a right to public records. In the case of contract research, Swedish universities can thus only agree to confidentiality for up to 10 years.

10. In Switzerland, the rules of the Swiss National Science Foundation, the biggest donor for publicly funded research, requires publication of research results except where there are reasonable grounds for secrecy.

11. In Norway, individual researchers have the right to publish, even if the PRO elects to exploit the IPR, but publication must not conflict with 3rd party interests, which would include the interest of an industry partner in the filing of patent applications.

12. In most other countries surveyed, there is no legal or administrative obligation to publish, but pressure to publish in all of these countries is strong both professionally for individuals and for the university under its second mission.

**c. Ability to delay publication**

13. In all countries surveyed, the PRO is empowered to agree to delay publication in order to allow patent applications to be made. If the industry partner anticipates that it will require a period of confidentiality to enable the results of research collaboration to be assessed and any patent applications to be made, the issue should be and normally is discussed and agreed at the outset as part of the agreement. A number of different European states have developed model contracts which illustrate how this can be handled in the national context. See Appendix E3.

14. In Denmark and Finland, the PRO can agree to delay publication if the research has been jointly funded. In Denmark the parties can agree to refrain from publication in the case of Contract Research funded exclusively by the industry partner. In Germany the PRO, under its obligation as an employer, is actually required by law to file a domestic patent application if it claims ownership of the invention. In Slovakia publications will be screened to ensure the removal of confidential information.

**d. Publication by postgraduate students or other non-employees**

15. Further complications may arise in specific cases such as when a postgraduate (PhD) student is sponsored by a company to do research at the PRO. The supervisor of the PhD student who is an employee of the PRO and not of the industry partner will usually be a co-inventor. To address this situation, for example, in Demark, the company may wish to include an “option to read” clause in the contract, which would give them a right to inspect any proposed publication by the supervisor and to remove any company secrets.[28]

16. In the UK, the industry partner and the PRO may agree to add a clause allowing for the submission of a thesis by the PhD student and its deposit in the University library where access to the thesis can be restricted so that it may only be examined confidentially.

**e. Secrecy**

17. Most countries that responded on this point confirmed that a PRO is allowed to refrain from all publication of the results of Contract Research, i.e. where the

[28] For more information on this, see the Danish "Contacts, contracts and codices" http://billed.di.dk/wimpfiles/lores/image.asp?objno=/686201.pdf

research is wholly funded by the industry partner. Again, the need for secrecy needs to be identified and agreed with the researchers in advance. One exception is the Flemish region of Belgium, where publication of the results of original research may only be postponed for 'a reasonable period'.

**(ii) Conclusion**

1. In a cross border collaboration the differences between the national systems will have to be taken into account when deciding how best to address the issue of confidentiality and publication. Determining factors in deciding what approach to take to this issue are where, i.e. in what state the research is being performed and what are the sources of funding, i.e. is it funding from a public source or from the business?

2. The general principle that if the industry partner wants greater control over the publication and confidentiality of the results he must increase his contribution to the PRO seems to be a useful one in this context. This will have to be matched with any legal requirements for the PRO to publish results.

3. The essential issue is to identify the possible need for either short- or long-term confidentiality in advance of the project, and to agree the terms of that confidentiality in the collaboration agreement. The parties should consider at the outset whether information is to be kept confidential indefinitely.

5. Although there may be a conflict between the industry partner's short- or long-term need for confidentiality and the PRO's or researcher's need to publish, the Expert Group did not feel that this provided a barrier to cross-border collaboration that could not be overcome by:

- Better understanding by each party of the needs of the other side, achievable through the wide dissemination of the relevant parts of this report and the development of national guidelines;
- The provision of practical national or European guidelines aimed at both PROs and industry, and example of how to handle such an issue in a collaboration contract.

## (F) EXAMPLES OF IPR CONTRACTS

**Funding requirements and guidelines to PROs on best practices vary. Being aware of the framework that your partner is working in reduces the complexity of negotiations – and you may be able to use national guidance as a shortcut.**

1. It is usually the case that where research is wholly publicly funded, the ownership of the IPR will rest with the PRO (or its researchers in 'professor privilege' countries). Conversely, if a collaborative project is wholly funded by industry at market rates, it is usual for the industry partner to own the IPR.

2. As reports in both the United Kingdom[29] and Denmark[30] point out, it is much more difficult to achieve agreement on IPR ownership when a research project has been jointly funded by industry and public funds.

[29] Lambert Review of Business-University Collaboration, Final Report, December 2003: http://www.hm-treasury.gov.uk/media/DDE/65/lambert_review_final_450.pdf.

3. The UK report states[31]: “Many universities and businesses say that disagreement over IP ownership is a major barrier to research collaborations. The costs of protracted negotiations in some cases can be high, both financially and in tying up staff. This in itself deters some organisations, especially SMEs, from trying to collaborate with universities in research. But more important, several businesses and universities have failed to reach agreement and walked away from collaborations because they found it too difficult to reach agreement on IP ownership.”

4. In several countries the solution to this issue has been to formulate model contracts or a series of model contractual provisions and/or guidelines to help the parties identify what ownership arrangements are appropriate for their circumstances.

5. The IP group has identified a need for guidelines at European level to assist PROs and industry to work out dispassionately what contractual arrangements for IPR ownership will be appropriate for their needs, and has provided such guidelines as part of the Toolkit set out in section 3.4 of this report.

6. The IP Group determined that model contracts capable of pan-European application would be overly complicated to be of practical use. The group believes that model agreements that exist at national level are likely to provide a better base. (See Appendix E 3).

**(i) What happens in the national context?**

7. In Denmark the Danish Rectors Conference and the Confederation of Danish Industries has published a comprehensive guide to research co-operation between industry and universities[32]. It includes an examination of the factors that would influence a decision on which of the parties to a collaboration agreement should own the IPR.

8. In Ireland, the National Code of Practice for Managing Intellectual Property from Public-Private Collaborative Research[33] includes a comprehensive examination of the issues to be addressed in discussion between parties to arrive at an agreed arrangement on ownership and access to IP resulting from collaborative research. This suggests amongst other things that the AUTM[34] sample contracts may also be used as a starting point.

9. In the United Kingdom the Lambert Review recommended that all stakeholders including business, PROs, and funding and research councils should agree a protocol for the ownership of IP in research. The report recommended that:

- The common starting point for negotiations on research collaboration terms should be that PROs, who generally make the most significant contribution, own any resulting IP, with industry free to negotiate licence terms to exploit it.
- But if industry makes a significant contribution it could own the IP.

---

[30] *“Contracts, contacts and codices – Research co-operation between universities and companies”* http://www.rks.dk/sider/publikationer/english/Contacts%20%20contrats%20and%20cod.pdf.

[31] Lambert, par. 4.16, pg 50.

[32] *“Contracts, contacts and codices – Research co-operation between universities and companies”* http://www.rks.dk/sider/publikationer/english/Contacts%20%20contrats%20and%20cod.pdf.

[33] See: http://www.sciencecouncil.ie/reports/#ipcode04.

[34] See: www.autm.net/aboutTT/aboutTT_policies.cfm

- Whoever owns the IP, the following conditions need to be met:
  - The PRO is not restricted in its future research capability.
  - All applications of the IP are developed by the company in a timely manner.
  - The substantive results of the research are published within an agreed period.
- On all other terms the protocol should recommend flexibility where possible to help ensure that the deal is completed.

10. A Decision Guide was produced as a means to help parties to understand how best to balance these issues and suggest an appropriate ownership, access and exploitation arrangement.

11. In Germany, the Berliner Contracts (*Berliner Vertrag)*[35], a series of model contractual provisions were negotiated between representatives of the Berlin Universities and of large German industrial enterprises, at the instigation and under the leadership of IPAL GmbH, which undertakes technology transfer activities on behalf of several Berlin universities. These model clauses only form the basis for negotiations with those Berlin universities. Many other university groupings have their own model agreements.[36]

12. Beyond these, individual technology transfer offices in several countries have developed their own standard contract forms. Several countries, including Italy and Sweden, are in the process of drafting model contracts for use at national level.

13. In the United States, the Government-University-Industry Research Roundtable (GUIRR) published a set of *Simplified and Standardized Model Agreements for University-Industry Cooperative Research* in 1998[37] and are currently developing general principles governing intellectual property negotiations between U.S. universities and industry.

**(ii) Cross-border collaboration**

14. The difficulty in reaching agreement on IPR ownership in cross-border research collaboration projects is magnified by the uncertainty which results from having to deal with an unfamiliar legal regime. The resource provided by the IP group aims to demystify some of this, and to provide clear information so that decisions can be made on how to set up the collaboration.

15. In this respect, it may be useful for potential collaborators to use a resource such as the Decision Guide. The questions in the CREST Decision Guide are not dependent on national conditions or a particular IP system, and should be generally applicable for cross-border collaborations. The Decision Guide forms part of a Toolkit, designed to be delivered as a web tool, and can be found in section 3.4 of this report.

[35] http://www.ipal.de/index.php?id=34&L=en.

[36] Additional such resources which the group has noted are the Düsseldorf and Hamburg Contracts.

[37] See ermat.nap.edu/catalog/10010.html and www.nationalacademies.org/guirr

### (iii) Conclusion

Potential collaborators may often have been deterred from cross-border collaboration by the perceived complexities of different IP systems, including differences in: IP ownership rules, funding systems, legal status of PROs and individual researchers, national regulations on publication, and the organisation of technology transfer support structures. The resource that this Group has provided aims to reduce that anxiety and ensure that cross-border collaborations can be set up more easily.

## (G) PROTECTION AND ENFORCEMENT OF IPRS

**It is important to be clear about who will pursue and enforce IP rights that result from collaborative research. The rules governing PROs in different countries, as well as the policies of PROs will affect the level of involvement they can have in the registration and enforcement of rights. Collaborators will find it helpful to explore and decide this issue when entering into the initial collaboration agreement.**

### (i) What happens in the national context?

1. In general, the industry partner will be expected to undertake the obligation to enforce the IPRs if they are commercialising the results, although the PRO will provide assistance. Responsibility for the cost of filing patent applications is an issue for negotiation. Generally PROs expect that the industry partner will bear the cost of registration if they have exclusive rights to exploit the technology.

2. Norway is not yet a member of the European Patent Convention. In order to get patent protection in Norway, an application must be filed there. Elsewhere, unless the application relates to a matter of national security – such as military technology, there is no restriction on where you can file the initial patent application.

3. Publicly funded institutions are exempt from the patent/utility model/trade mark/design fees in Slovakia. Czech public institutions which are fully funded from public sources are also exempt from patent fees. In Spain, universities are exempted from patent fees.

4. Italy removed its patent renewal fees in the course of 2006.

5. In France, only a patentee or an exclusive licensee (if not precluded by the licence contract) can initiate a law suit. There is also a reduced rate for individuals, small entities and not for profit organisations.

### (iii) Conclusion

The contract should include a clause setting out whether and in what circumstances the PRO is expected to assist in the enforcement of the resulting IP.

## *3.3 Recommendations*

1. Improvement of cross-border collaboration between PROs and industry has a significant role to play in promoting the long term competitiveness of the European economy. Such collaboration is essential to the development and transfer of knowledge and technology throughout Europe. The group believes that businesses and PROs have been deterred from cross-border collaboration by the perceived complexities of different IP systems including differences in: IP ownership rules, negotiation of contractual terms, funding systems, legal status of PROs and individual researchers, national regulations on publication, and the organisation of technology transfer support structures. This Group set out to de-mystify these issues and ensure that cross-border collaborations can be set up more easily. The Group has found that there is a lack of practical tools designed specifically for cross-border collaboration.

This group therefore recommends that:

**Cross border collaboration should be promoted as a viable option for industry and PROs. Member states should provide practical resources and assistance to address IP related issues in cross border collaborations.**

2. To that end, the group identified and analysed a number of issues that they considered to be essential for setting up effective cross-border collaborations. Following the conclusions drawn from this analysis, and bringing together the experiences gained at national level, this group has produced such a tool. This practical tool, or Toolkit, is a Decision Guide and Fact-sheets for businesses, public research organisations and intermediaries to use in setting up cross-border collaborations. The toolkit is designed to be delivered as a web tool; this was seen as the most effective and accessible way for practitioners to use the tool.

This Group therefore recommends that:

**The Toolkit presented in this report should be integrated with national information and guidance for potential collaborators, by the end of 2006. It should be widely disseminated by Member States and the European Commission after publication and during 2007.**

**The group believes that this requires a real commitment at national level to updating this toolkit, developing other practical tools, providing integrated national materials and promoting their use.**

3. The toolkit has been produced with a view to its use by practitioners. This Group recognises that its use by practitioners may well highlight issues which have not been considered or suggest alternative approaches.

This group therefore recommends that:

**The CREST committee (or a group under its auspices) conduct a review after 18 months (by end of 2008) with a view to updating and improving the toolkit, perhaps through a partner organisation. Member states should contribute fully to this process.**

## *3.4 A Toolkit To Assist Cross-Border Collaboration Between Industry And Public Research Organisations* [38]

## (A) INTRODUCTION

1. This section comprises a toolkit for companies and publicly-funded research organisations (PROs), or their advisers, that wish to collaborate on research projects across international borders.
2. The toolkit is intended to build on the many guides to research collaboration that exist at national level (see Appendix E). It was produced by the CREST group of national policy experts working in conjunction with stakeholders and the European Commission and was designed for use in a web tool produced by the Commission. [Figure 1 below illustrates how the Toolkit can be used to simplify negotiating cross-border collaboration.]
3. The objectives of this toolkit are:
    (i) to highlight some of the major points of difference between countries in relation to intellectual property rights (IPR);
    (ii) to give practical guidance on how the IP issues can be dealt with effectively;
    (iii) to provide a Decision Guide to help collaborators in cross-border research resolve the vexed question of what is the best way to handle the ownership of and access to use the IP resulting from their research project(s);
    (iv) to provide a checklist of the issues raised in this report that prospective collaborators considering cross border RTD need to take into account.
4. The toolkit will enable a user to fill-in the gaps in their knowledge relating to IP regimes and practices in other countries. It will highlight some of the IPR issues that should be considered when collaborating on research with a partner from another country, and provide guidelines which should (hopefully) help you resolve the questions of ownership and access to the resulting IPRs.
5. Details of the current situation in each individual country are provided in the form of a fact sheet for that country. The fact-sheet describes the situation in relation to the eight key issues: (i) Types of IPR; (ii) Ownership of IPR; (iii) Negotiation of IPR contracts; (iv) Effect of funding of IPR contracts; (v) Confidentiality & Publication; (vi) Examples and Further information on IPR contracts; (vii) Protection and enforcement of IPR; and (viii) Sources of further information

---

[38] **Limitation**

Note that this section should in no way be regarded as a substitute for proper legal advice. Its purpose is to de-mystify the process of cross-border collaboration on research and technical development (RTD) between industry and PROs by highlighting some of the major points of difference between countries in relation to ownership of IPR, the negotiation of IPR in RTD contracts, the effect research funding has on IPR ownership, and to point out some of the factors that a prospective collaborator contemplating involvement in cross border RTD needs to take into account.

The fact sheets in this section restrict themselves to these issues. We do not try to provide a comprehensive guide to the many other issues that need to be considered by both PROs and industry when contemplating collaboration arrangements.

## (B) WHO IS THIS TOOLKIT AIMED AT?

1. We assume that:

- you represent or advise a PRO or a company, you have some knowledge or experience of research collaboration within your own country, and are now contemplating research collaboration with a partner in another country
- you are familiar with the various types of intellectual property that may result from research collaboration
- you have identified the research and /or development project that needs to be undertaken, and a potential partner in another country with whom you would prefer to undertake that research
- if you represent a PRO, you are familiar with the requirements and limitations set by your sources of research funding

2. If you are new to industry/PRO collaboration, we recommend spending time familiarising yourself with any of the many national practical guidelines to research collaboration that are listed in Appendix E (2).

3. Together these provide signposts to issues on which you may need to negotiate, seek legal advice or discuss with your prospective collaboration partner.

4. Simply pick out the fact sheet for the country in which your prospective collaborator is located for a brief summary of key IPR issues you will need to be aware of.

5. A comparison with the fact sheet for your own country will help you highlight and understand the differences which you need to take account of, and to understand the position of your research partner.

6. Having gone through this process you will be in a position to identify key issues for you and your potential partner. You will be able to see the issues on which you need to get advice, and where to get that advice. This should provide you with the foundations from which to negotiate a successful collaboration agreement.

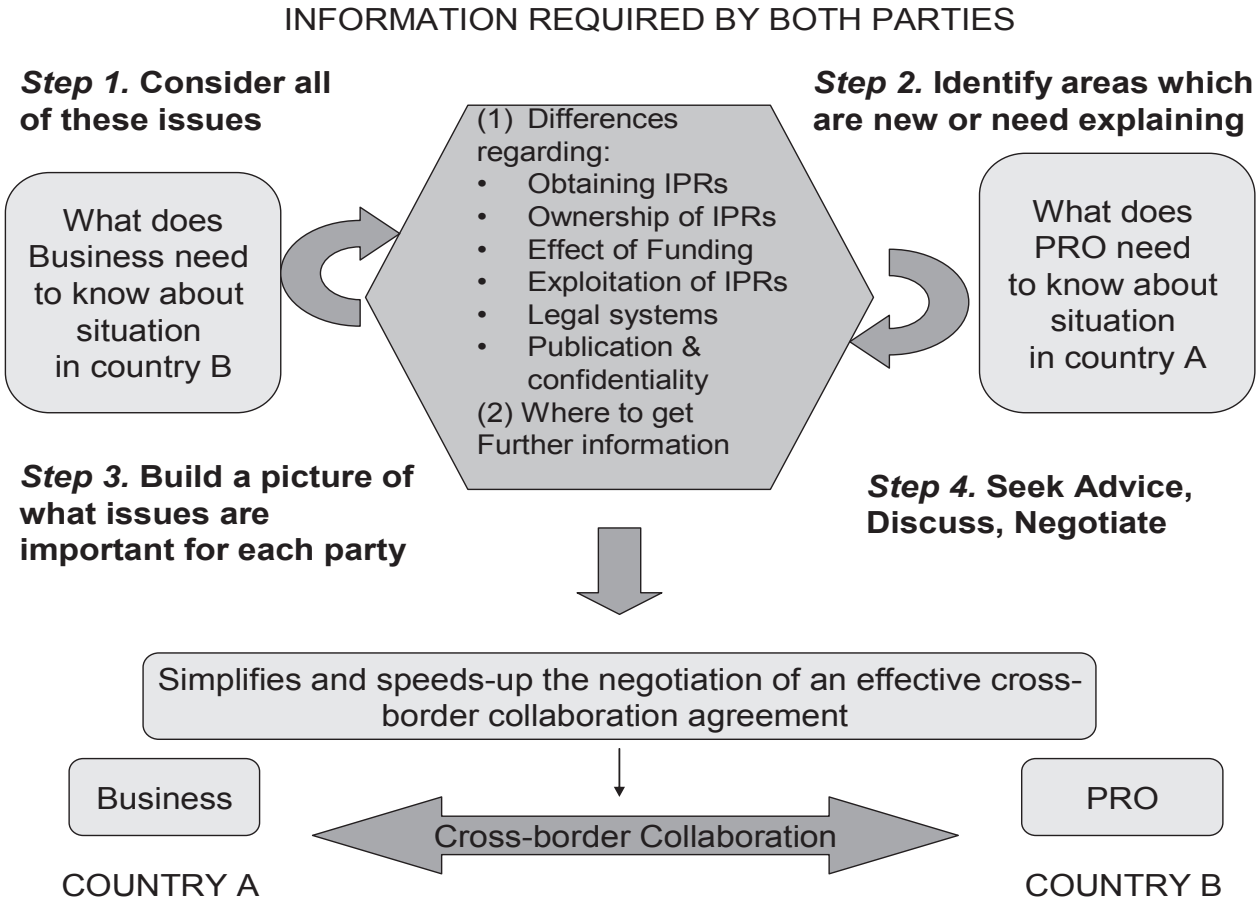


**Figure 1: Simplifying the Process of Negotiating a Cross-border Collaboration**

## (C) DECISION GUIDE

This is presented in the following pages in the form of a self contained set of questions and suggestions which will:

(i) help you to determine what are the issues you need to be aware of so that you can set up an effective collaboration (the First Step); and

(ii) provide a check-list or 'health-check' to help you decide if a proposed collaboration agreement covers the issues identified by the CREST IP group as being important to address the cross-border aspects of the collaboration (the Second Step).

(iii) All the pages of the Decision Guide are provided with a page border (i.e., a page box) so that it can be clearly distinguished from the other parts of the report. Copies of all the fact-sheets are provided in Annex B of this report.

## *3.5 Crest Cross-Border Collaboration Decision Guide*

### 1. OBJECTIVE

This series of questions[39], referred to as the ***CREST Collaboration Decision Guide***, is designed to help potential collaborators, such as a business and a public research organisation, to decide the best way to arrange matters in their collaboration agreement.

The following sections introduce the background and context to these questions and they should be read as preparation for using and understanding the Guide.

The Decision guide itself has two Steps. The First Step allows the user to focus on identifying what issues need to be covered in the collaboration agreement and also to think about the relative importance of these issues. The Second Step makes sure that the collaboration agreement takes into account the cross-border aspects.

Thus, in effect, the First Step helps the users to negotiate a collaboration agreement, while the Second Step is used to check that this collaboration agreement covers the cross-border issues effectively.

### 2. USING THE DECISION GUIDE

This Guide has been prepared to indicate the sort of issues that a person experienced in negotiating research collaborations will often take into account. By combining the responses to the questions in the Decision Guide, it is possible for the user to identify the relative importance of these issues and so focus on those areas that need to be resolved by negotiation. It also allows the user to identify those issues that can be agreed quickly. The Decision Guide thus suggests an **Ownership Position** that is based on the actual situation that the public research organisation and the industry partner find themselves in. Five possible ownership positions are suggested and these are discussed in detail below.

If both parties to a potential collaboration use this decision guide and answer the questions in the First Step as realistically as possible, they should be able to identify very quickly a suggested **Ownership Position** which they can then adapt to take into account the specific circumstances of their project. If both parties find that they have very different results from using the decision guide, they may need to consider whether they need to do some further preparation individually before considering entering into a collaboration***.***

It should be noted that this Decision Guide is not the only means of deciding what the terms of a research collaboration agreement should be and, having reached a conclusion using this Guide, you should review whether the answers obtained really reflect your position. You may want to seek advice, for example, from a lawyer.

[39] The general Decision Guide approach and the questions used in the CREST Cross-Border Collaboration Decision Guide have been influenced by the questions used in the Decision Guide of the Lambert Model Agreements Toolkit launched in February 2005 by the Lambert Working Group in Intellectual Property in the United Kingdom (UK).

## *2.1 Starting Point for Use*

This Guide assumes that:

1. the Public research organisation (PRO) and the Industry partner wish to collaborate on the Project;

2. the PRO and the Industry partner can agree on the description of the Project (the project plan); and

3. the Industry partner and the PRO are willing to provide resources to carry out the project, and the financial (or other) contribution and a budget of resources (i.e., financial, equipment, personnel) for the project can be agreed; and

4. As a starting point, each partner will own the Intellectual Property rights (IPRs) in the results from the project that are generated by its own employees

For the purpose of using the decision guide, a user needs to decide whether they are in the role of the PRO or the role of the Industry Partner as these are the two terms used throughout the questions. The following examples are provided as ways to help users to decide which role they are in:

(1) In the situation where professor privilege arises, the PRO may not be entitled to own the IPRs but it is assumed that they will be entitled to negotiate what happens to the IPRs generated from the results of the project.

(2) If the two partners in the collaboration are both PROs or both Industrial companies, they should determine which of them is best described by the role of PRO and which as Industry partner in the Decision Guide.

## *2.2 Structure of the Decision Guide*

The Decision guide comprises two steps. The First Step has five sections and answering the questions in each section allows the user to focus on identifying what issues need to be covered in the collaboration agreement and also to think about the relative importance of these issues. The five sections are:

1. Deciding Ownership of the Intellectual Property Rights (IPRs)
2. Influence Of Confidentiality & Publication
3. Importance of the Results for Future Activity
4. Exploitation of the Results
5. Additional Questions

The Second Step is focused specifically on making sure that the collaboration agreement takes into account the cross-border issues. It provides a list of questions for the user to use as a check-list to make sure that the important cross-border issues have been addressed in a satisfactory way in a proposed collaboration agreement.

The First Step is used to prepare the collaboration agreement, the Second Step is used to give the collaboration agreement a health-check.

It is expected that all potential collaboraters will use the First Step to identify what is the best balance of issues for their proposed collaboration and thus quite quickly arrive at a suggested ownership position for the collaborative project, which they can then adapt to take account of the specific circumstances of their project through negotiation. Once this collaboration agreement has been agreed or drafted, the collaboraters can use the Second Step to check that they have covered all the relevent cross-border issues.

Please remember that answering the questions in this Decision Guide may **not** provide a definitive way forward:

- If the circumstances for which you are trying to find an appropriate form of agreement are 'mixed' (e.g. the academic and commercial drivers are of equal importance), you may need to answer a more open-ended set of questions, in section 5 (Additional Questions), to guide your decision-making.
- You may also find that there are other considerations (not mentioned in this Guide) that, because of your circumstances, you may wish to take into account.

## 3. WHAT DOES THE DECISION GUIDE DO?

As indicated above the Decision Guide has been structured as a series of questions to:

(i) help identify the key elements of a collaboration agreement between a Public Research organisation (PRO) and an industry partner;

(ii) provide potential collaborators with a clear idea of the cross-border issues they need to take into account in their collaboration agreement.

In order to effectively address (i), the Decision Guide focuses on three key areas and encourages the user to asses the relative importance of each to the other. These three areas are considered in more detail, below:

1. the ownership and right to use the results of the project and the intellectual property obtained from the results;
2. the financial and other contributions made by the industry partner; and
3. the public research organisation's use of the results for academic purposes.

### *3.1 Ownership and the Right to Use the Results of the Project and the Intellectual Property Rights obtained from the Results*

**Ownership and Right to Use**

The outcome of most collaboration projects will be the Intellectual Property (IP) obtained from the results and of course the results themselves. A description of different types of

intellectual property can be found in the FAQ section of the IPR Helpdesk website[40]. Ownership of the IP and the rights to use the IP resulting from the project are key elements of the collaboration agreement because anyone wishing to use the results will have to obtain the permission (licence) of the owner. The owner, in turn, will expect to make a commercial return from the exploitation of the IP.

A licence or right to exploit may be limited in a number of ways; for example, it may be limited to use in a particular area or field of technology.

The licence or right to exploit may be limited to a particular geographical market: for example, the US or European market.

Sometimes the right to use may be exclusive, giving only one party the right to exploit the IP, or it may be non-exclusive, allowing more than one party to exploit it.

The ownership of the IP and the right to use it are important considerations for an industry partner because they can confer a competitive advantage on their business.

Where the results of a project enable the industry partner to create a product with unique characteristics that is attractive to customers, ownership of the IP, or the exclusive right to use it, provides protection for the investment made in developing the product and taking it to market.

The ownership of the IP and right to use it are becoming increasingly important to PROs in Europe as national governments seek as much benefit as possible from the money they have invested in publicly-funded research. The PRO therefore has an interest in ensuring that the most effective exploitation strategy is followed. Granting exclusive rights to a single industry partner may or may not meet this goal. The right to use IP may also be important for future research at the PRO.

It is clear from the above that ownership of IP obtained from the results of the project and the rights to exploit it will be one of the key elements of any collaboration agreement. The potential value of such ownership and right to use will vary according to the nature of the IP, the nature of the right to use and the market for its exploitation. For the same patented invention, an exclusive right to exploit it worldwide in any field will be worth more than a non-exclusive right to exploit it limited to a particular field of use and/or a limited geographical market.

If a project is of critical commercial importance to the industry partner, and cannot take place without using the industry partner's technology or intellectual property, or where publication of the results would have a serious impact on the competitive position of the industry partner and the industry partner wishes to ensure that publication does not take place, then the industry partner is likely to want much greater control over the ownership of the Intellectual Property rights then in situations where these factors are not important. In such a situation, it would be expected that the public research organisation would be suitably reimbursed.

[40] These frequenctly asked questions can concurrentky be found at http://www.ipr-helpdesk.org/controlador/resources/faqs?seccion=cuerpoFAQ&len=en&id=0000000079&tipoListado='ip'&idSeccion=t_01.02.

**Joint Ownership**

In developing this decision guide, we have focused on trying to make things as easy and simple as possible for potential collaborators to understand and use. It is for this reason that we have not suggested joint ownership as a Suggested Ownership Position.

The Decision Guide assumes that one party to the collaboration will own the IPRs generated by the project and that the other party will have a specified right to use, such as an exclusive or non-exclusive licence, or will negotiate an assignment of ownership. As the research is usually carried out by staff of the Public Research Organisation and using its facilities, it is assumed that the PRO who will usually be the initial owner of the IPRs generated from the project. To balance this, it is also assumed that the industry partner will have a non-exclusive right to use the results of the project because of the contribution he has made to the project.

The industry partner will seek a greater degree of control, such as an exclusive licence or an assignment of the IPRs depending on how important they think the results of the project may be for their future (commercial) activity. Different arrangements may be put in place for different results; for example, the PRO may own the IPRs arising from project result A, while the Industry partner may own the IPRs arising from project result B.

Joint ownership agreements are more complex and require more time and effort to negotiate than the single ownership with assignment or right to use discussed above. Joint ownership agreements also require greater effort to manage subsequently, for example, assessing the portion of jointly owned IPRs that each partner is entitled to and it can place greater limitations on how the IPRs may be exploitated.

If a potential partner is considering a multiple collaboration involving two or more other cross-border partners, they could use the CREST Decision Guide if they consider the collaboration as a series of one-to-one relationships. The Guide would then be helpful in considering the issues arising in each one-to-one relationship. These would then need to be taken into account as a whole to achieve a mutiple collaboration agreement. However, the latter is not within the scope of this project.

## *3.2 Contributions from the Partners*

Generally, the industry partner will seek greater or further rights to exploit the results in situations where it has made a greater contribution, be it financial or other (for example, equipment or personnel) or both, to the collaborative project. This might mean that a user who wishes to have exclusive access to the IPR pays full cost plus a profit to the PRO, whereas the user can have a non-exclusive licence as part of the cost of the research.

Where the industry partner needs full ownership of the results for commercial reasons, the public research organisation may agree to this, but the cost to the industry partner

will be greater than where the results are of less immediate commercial importance or interest to the industry partner.

For example, where the project is more speculative in nature, or has implications for future research at the public research organisation, the financial contribution of the industry partner will be lower and the rights to use and exploit the IP granted by the public research organisation will be more limited.

### *3.3 Use for Academic Purposes*

A key element of any research agreement entered into by a public research organisation will be the right to publish the results, for example, in the form of scientific papers and to use the results in connection with teaching and academic research.

Publication is not only the life blood of the academic researcher's career but also important to the development of the research profile of the public research organisation.

But premature publication may damage the competitive position of either partner and/or the chances of protecting and exploiting the IP.

For example, early disclosure would prevent an application for a patent from being successful because the invention would not be novel. The effect of this is that the industry partner would not have any protected time period to get his product to market and he would be faced by competition from other companies at all stages.

There is a spectrum in relation to the right to publish, with no rights to publish for the academics at one end of the spectrum and unrestricted rights to publish for the academics at the other. The "middle ground" is represented by the academic researchers being able to publish under a protocol that allows the industry partner an element of control over the content of, and the timescale for, publication (e.g., in order to give the industry partner an opportunity to secure patent protection).

## 4. OWNERSHIP POSITIONS

The Decision Guide will suggest that the user may want to consider adopting one of five **Ownership Positions** depending on the answers they make to the questions. These are suggestions only and are designed to get the user focusing as quickly as possible on what sort of agreement they are likely to require and what the issues are that need to be negotiated. The five **Ownership Positions** are listed below:

**NOTE**: In ownership positions 1 and 2 below, the suggestion is made that the industry partner will need a license to use (some of or all) the results. This licence may be a non-exclusive license (ownership position 1) or an exclusive licence (ownership position 2). In both cases it is suggested that the licence may be limited to use in ***a specified area of business (field of technology)***, for example, pharmaceuticals, automobile parts or ***a geographical area (territory)***, e.g. Europe, USA. This means that the industry partner could have a licence in relation to the areas of business or geographical areas in which it actually operates. The PRO would retain the right to exploit the results in other areas of business or geographical areas not covered by the license agreement.

An exclusive license will give the Industry partner more control than a non-exclusive license as the PRO will (usually) have to agree any proposed changes to the use of the technology covered by the licence with the Industry partner (as sole or exclusive licensee). This would not (usually) be the case with a non-exclusive licence. If the Industry Partner wants to own the IP and the results from the project then he can negotiate an assignment or transfer of the ownership of the IP in the results from the PRO to itself and compensate the PRO accordingly (see ownership Position 3)

**Ownership Positions**

1. The **Public research organisation should own the Intellectual Property** (IP) obtained from the Results and grant a ***non-exclusive licence for the Industry partner*** (and its Group Companies) to use the Results in a specified area of business (field of technology) and/or a geographical area (territory).

2. As in **Ownership Position 1** but in addition the ***Industry partner has a right to negotiate to acquire an exclusive licence*** in relation to certain Results;

3. As in **Ownership Position 1** but in addition the ***Industry partner has a right to negotiate to take ownership through an assignment*** of the IP;

4. **Industry partner should own the IP** obtained from the Results, but ***the right should be reserved to allow the Public research organisation to use the Results for academic purposes*** (such as teaching, research & publication) on certain conditions to protect the confidentiality of the Industry partner's information and so as not to jeopardise the possibility of the Industry partner obtaining IP protection, such as a patent, for the Results.

5. The **Industry partner should own the IP** in the Results, and the ***Public research organisation would have no right to publish the Results***. (This type of agreement is usually referred to as a Contract Research or Research Services Agreement, rather than a Collaborative Research Agreement, where the industry partner pays a commercial rate to the Public research organisation but retains complete control over the results.)

### 3.5.1 First Step: Deciding On What Should Be In The Collaboration Agreement?

#### *Section 1: DECIDING OWNERSHIP OF THE INTELLECTUAL PROPERTY RIGHTS*

1. Is the Industry partner paying all the costs[41] plus some element of profit to the public research organisation?
2. Has the Project been proposed by the Industry partner?
3. Is the Project critical to the Industry partner's technology acquisition and/or development strategy?
4. Does the Project rely substantially on the Industry partner's own materials and/or Background IP from the Industry partner?
5. Would the Project be easy to carry out without privileged access to the PRO's own materials or Background IP?
6. Is the focus of the Project the testing or analysis of the Industry partner's own materials, or research based around the Industry partner's own materials or Background IP?
7. Has the Industry partner taken the lead in designing the work for the Project?
8. Is the Industry partner managing the project e.g. setting deliverables, targets and/or milestones for the Project?
9. Can the Project be kept separate from the other activities of the PRO researcher?
10. If the Industry partner has ownership of the IP resulting from the project will this have little or no effect on the future research of the PRO or individual researcher(s) (i.e. there will be no knock-on effect on the professor's other research or related IP rights)?

**Suitable Ownership Position**
**(see details on page 44)**

**0 - 4 "Yes" answers**
Please *go to Section 3*

**5 "Yes" answers**
Go to the *Section 5: Additional Questions* section.

**6 - 10 "Yes" answers**
The Industry partner should own the IP obtained from the Results, and you should consider whether the Public research organisation needs to use the Results for academic purposes. Please *go to Section 2*

[41] All costs include those of staff, equipment, pension costs, etc.

## *Section 2: INFLUENCE OF CONFIDENTIALITY & PUBLICATION*

1. Will the academics or other researchers from the public research organisation need to publish the Results of the Project?
2. Is the Industry partner willing to approve publication of the Results?
3. Is the PRO charging only project costs with **no** element of profit (including for the IP developed)?
4. If students or others working towards a qualification are involved, will they need to submit the Results of the Project to obtain this academic qualification, for example a masters or doctoral degree?

**Suitable Ownership Position**
**(see details on page 44)**

**0 "Yes" answers**
***Ownership Position #5*: The Industry partner should own the IP** in the Results, and the ***Public research organisation would have no right to publish the Results***.
(This type of agreement is usually referred to as a Contract Research or Research Services Agreement, rather than a Collaborative Research Agreement, where the industry partner pays a commercial rate to the Public research organisation but retains complete control over the results.)

**1 - 4 "Yes" answers**
***Ownership Position #4*: Industry partner should own the IP** obtained from the Results, but ***the right should be reserved to allow the Public research organisation to use the Results for academic purposes*** (such as teaching, research & publication) on certain conditions to protect the confidentiality of the Industry partner's information and so as not to jeopardise the possibility of the Industry partner obtaining IP protection, such as a patent, for the Results.

## *Section 3: IMPORTANCE OF THE RESULTS FOR FUTURE ACTIVITY*

1. Has the Project been designed primarily to address academic interests?
2. Does the Project represent an integral part of the academic professor or PRO research group's overall long-term research activities?
3. Does the Project rely substantially on the PRO's own materials or Background IP from the Public research organisation?
4. Is the Project being funded principally through sources other than from the Industry partner, e.g. public funding from a government or state research funding organisation; funding from a third party?
5. Would the Project be easy to carry out without privileged access to the Industry partner's own materials or Background IP?
6. Will the Project take place entirely on PRO premises?
7. Are all the individuals working on the Project employees or students of the Public research organisation?
8. Is it unlikely that commercially exploitable Results or patentable inventions will arise from the Project?
9. Are the Results of the Project likely to be of more interest to the Public research organisation than to the Industry partner?
10. If the PRO has ownership of the IP resulting from the project will this have little or no effect on to the Industry partner's future research (i.e. there will be no knock-on effect on the Industry partner's other research or related IP rights)?

**Suitable Ownership Position**
**(see details on page 44)**

**0 - 3 "Yes" answers**
Please *go to Section 4*.

**4 - 5 "Yes" answers**
Go to *Section 5: Additional Questions*.

**6 - 10 "Yes" answers**
***Ownership Position #1***: The **Public research organisation should own the Intellectual Property** (IP) obtained from the Results and grant a ***non-exclusive licence for the Industry partner*** (and its Group Companies) to use the Results in a specified area of business (field of technology) and/or a geographical area (territory) in which they operate.

## *Section 4: EXPLOITATION OF THE RESULTS*

1. Will an exclusive licence provide an effective means through which the Industry partner can exploit the Results?
2. Are there likely to be applications/fields of use, markets/ territories in which the Industry partner is unable to exploit, or is uninterested in exploiting, the IP obtained from the Results?
3. Does the Project represent an integral part of the overall research activities of the PRO or individual researcher(s), and will the IP in the Results therefore be of significance to his/her/their long-term plans?
4. Is the Project based more on the Public research organisation's Background/Know-how/own materials than on the Industry partner's Background/Know-how/own materials?
5. Does the Public research organisation have the patent budget and expertise to manage the IP in the Results?

**Suitable Ownership Position**
**(see details on page 44)**

**0 - 2 "Yes" answers**
***Ownership Position #3:*** The **Public research organisation should, in general, own the Intellectual Property** (IP) obtained from the Results and grant a *non-exclusive licence for the Industry partner* (and its Group Companies) to use the Results in a specified area of business (field of technology) and/or a geographical area (territory). ***The Industry partner should also have the right to negotiate ownership through an assignment of the IP***;

**3 "Yes" answers**
The position is evenly balanced and we cannot usefully recommend an ownership position. You may wish to reconsider some of your answers. Answering the *Additional Questions* in Section 5 may help to clarify things.

**4 - 5 "Yes" answers**
***Ownership Position #2:*** The **Public research organisation should own the Intellectual Property** (IP) obtained from the Results and grant a *non-exclusive licence for the Industry partner* (and its Group Companies) to use the Results in a specified area of business (field of technology) and/or a geographical area (territory). ***The Industry partner should also have the right to negotiate to acquire an exclusive licence in relation to certain Results.***

## *Section 5: ADDITIONAL QUESTIONS*

**This section is designed to help you reflect and consider the answers you have given to the previous sections so that you can have greater clarity about which ownership position may be most appropriate.**

If you are still unsure which Ownership Position is most useful, try answering the following questions to help determine an appropriate way forward. These are not designed to have yes/no answers in the same way as the previous questions, but to help you consider how important the project is to you.

(a) whose idea was the Project?
(b) what is the purpose of the Project?
(c) why does the Industry partner wish to fund the Project?
(d) why does the Public research organisation wish to carry out the Project?
(e) what are the relative contributions of the parties in cash and in kind (e.g., materials, equipment)?
(f) how will the industry partner use the resulting IP (e.g., do they need a non-exclusive licence)?

(Please Note: Financial contributions might also include payment of patent costs, and protection for enforcement/infringement proceedings, bonus payments, etc.)

Based on the above questions and after negotiation between the parties, either of the following **Ownership Positions** may apply:

1. ***Ownership Position #2:*** The **PRO should own the Intellectual Property** (IP) obtained from the Results and grant a *non-exclusive licence for the Industry partner* (and its Group Companies) to use the Results in a specified area of business (field of technology) and/or a geographical area (territory). ***The Industry partner should also have the right to negotiate to acquire an exclusive licence in relation to certain Results*.**

2. ***Ownership Position #3:*** The **PRO should, in general, own the Intellectual Property** (IP) obtained from the Results and grant a *non-exclusive licence for the Industry partner* (and its Group Companies) to use the Results in a specified area of business (field of technology) and/or a geographical area (territory). ***The Industry partner should also have the right to negotiate ownership through an assignment of the IP.***

Having answered all these questions the industry partner can decide that the results from the project will have little or no potential for future commercial use for themselves, they can then decide that they do not need to secure a non-exclusive licence to use the results in a specified area (field of technology) and/or a geographical area (territory).

## 3.5.2 Second Step: Does The Proposed Collaboration Agreement Adequately Cover Cross-Border Issues?

### IPR Ownership

***(1) Is the PRO in control of the IP rights so that they can enter into negotiations with the Industry Collaborator?***

It is reasonable for the industry collaborator to require that any circumstances that mean that the PRO is not the first owner of rights produced on its side will be the responsibility of the PRO to sort out.

This applies equally the other way, though it is less common for businesses not to have direct contractual arrangements with its researchers which cover IPR ownership. You may also have to deal with a situation in which the PRO is required to retain use of its research.

***(2) Is there any arrangement to cover reversion of the IPRs back to the PRO if commercialisation of the invention is not pursued?***

This will have to take account of what the Industry collaborator has paid the PRO for the IPRs

***(3) Is there an agreement on how each partner can have access to the background IPR or confidential information that each bring to the project?***

An arrangement needs to be in place that indicates how each collaborating party may use this background IPR especially where such background knowledge from the industry partner or the PRO is important to the commercialisation of the invention, e.g., knowledge of how machinery using the invention works or knowledge of how to prepare material to get the best results from using the invention.

***(4) Have you checked that there is a suitable project description included with the collaboration agreement?***

Experience at national level has shown that an outline of the project to be performed is most helpful so that it is clear what work, and subsequent IPRs generated from this work, is covered by the agreement. An example of such a project outline in Annex C.[42] The collaboration agreement should refer to the specific project to be performed and include details such as the dates of beginning and finishing of the project or stating how a finish date will be agreed and arrangements for reporting progress and results from the work.

***(5) If it is unavoidable that some of the resulting IP is to be jointly owned, have suitable arrangements been agreed and put in place to ensure that this does not cause obstacles to the exploitation of the results?***

[42] This was developed as part of the Lambert Model Agreements Toolkit in the UK to ensure that a suitable project description would be included with the collaboration agreement and has proved very helpful in the UK.

If a joint ownership agreement is unavoidable, arrangements should be included that allow as much flexibility as possible for exploitation, for example, have the joint owners sometimes agreed that each is free to exploit the IP without accounting to the other joint owners? Alternatively, have the joint owners agreed to assign the (jointly owned) IPR to a single party which would be responsible for the exploitation and would account to the joint owners according to agreed shares.

## Negotiating the IPR Contracts,

***(6) Is there a clear statement of who the agreement is between and what their relationship is to parties carrying out the work?***

If further negotiations are to take place over, for example, a licence agreement, which are the parties to carry out the negotiation.

## Effect of Funding

***(7) Does the collaboration agreement include details of how the partners in the collaboration will take account of any requirements placed on them by funding from a third-party source?***

***(8) If the funding is from a public source and requires that the results from a project funded from this source are published and made available for others to use, does the collaboration agreement indicate how this will be achieved while also taking account of the need for confidentiality until the necessary IPRs have been secured? Has any necessary consent of the funding body been sought and obtained?***

***(9) Have you dealt with any regulatory requirement to commercialise the invention?***

In some states it may be required to have a plan to commercialise the invention in that country. It may also be helpful to consider whether the different parties can have different roles in commercialising the invention in their respective countries.

## Confidentiality & Publication

***(10) Is there a need to include a clause laying out how the collaborating partners will decide when and who may publish the results from the project?***

This arrangement would need to take account of the time needed for the appropriate partner to secure any IPRs and, possibly, put in place the necessary arrangements to gain commercial benefit from the project, for example, install new equipment.

An alternative arrangement may be for the PRO to secure the IPRs prior to publication but then to receive reimbursement for such expenses from the industry partner.

***(11) Is there an undertaking that neither partner will disclose to any other third party any of the background confidential information provided by the other party?***

Access and use of background confidential information provided by each party may be essential to use or exploit the results from the collaboration project. It is important that there is a clear understanding what this information is, how it can be used and most importantly, that either party to the project will not reveal it to a third party unless expressly allowed to by the owner of the background confidential information.

***(12) Is there any arrangement laying out clearly how any legal requirements to publish will be taken into account?***

This might indicate, for example, how long a time period the industry partner has to secure the IPRs before publication of the results by the PRO will take place.

***(13) If students (postgraduate or undergraduate) or persons without a contract of employment (see definition) with the PRO were involved in the project, has an arrangement been made with them to ensure that the results of the project remain confidential until the IPRs are secured?***

For example, if a postgraduate student was involved in the work, has an arrangement been put in place to indicate that the thesis may only be consulted by third parties who agree to keep the information in the thesis confidential?

## Protection and Enforcement of IPRs

***(14) Is there a need for an undertaking from the PRO that they will provide appropriate assistance, for example in the form of expert advice, to the Industry partner if they are taking action to enforce the IPRs generated from their collaboration?***

***(15) Has it also been make clear how the collaborating partners will handle any disagreements that arise between them during the collaboration project?***

For example, if there is a difficulty over payment of funds to the PRO from the industry partner; how will such a situation be resolved?

***(16) Have you considered under what jurisdiction and applicable law any disputes that arise will be dealt with?***

The nature of a cross-border collaboration means that you have to agree under which jurisdiction any disputes between the parties will be dealt with. This will often dictate the sorts of termination or other normal contractual provisions that should be agreed. You may also have to agree what language the collaboration will work in.

A collaboration agreement may have to give specific recognition to particular requirements from each country for contracts which are distinct from the cross-border issues referred to above regarding the ownership, negotiation and funding of IPRs, confidentiality and publication, and protection and enforcement of IPRs. For example, in contracts in the UK, it is common practice to include a clause which sets out the limitation of legal liability of the parties to the agreement.

## *DISCLAIMER*

The above questions and suggestions are designed to give people an idea of the issues that they should expect to include in a cross-border collaboration agreement. They are designed as a guide to make the process of negotiating a collaboration agreement easier.

They are **not** a comprehensive list of the many other elements that should be included in a collaboration agreement and should in no way be regarded as a substitute for proper legal advice.

Neither the European Commission nor any person acting on behalf of the CREST Expert Group on Intellectual Property Rights or the Commission is responsible for the use which might be made of the following information. The content and views expressed in this report do not necessarily reflect the opinions or policies of the Member States or the European Commission.

## 3.5.3 The Fact-Sheets – Summary of the Situation in Each State

### (A) THE FACT SHEETS

The second part of the Toolkit is the series of country fact sheets in Appendix B describing the elements of the IP system in each member state that a potential collaborator from another state should be aware of when considering a cross-border collaboration.

The information in each fact-sheet is presented under eight key issues – discussed in more detail below. The fact-sheets also provide details on how recently the data has been updated and where to find further information on each topic.

The information on these eight key issues was obtained for each state using a template fact-sheet and a list of key questions, reproduced in Appendix B.

**If you have little or no knowledge/experience of PRO/industry collaboration:** *Please see Appendix E 2 which provides a reference to various national and European guidelines which will help familiarise you with the process of research collaboration at national level.*

### (B) THE KEY ISSUES

Eight key issues relating to how to handle the ownership, access to use and exploitation of the IP are summarised below, and a reference given to where you can find general information on each topic. Specific information on each issue will be found in the fact sheet for the individual country concerned.

#### *(i) Types of IPR*

*Issue:*

The range of intellectual property available in most countries is substantially similar. One variation worth noting is that a low cost form of IP protection for inventions known as a "utility model" or "innovation patent" exists in some countries but not in others. For more information see the note on Utility Models .

#### *(ii) Ownership of IPR*

*Issues:*

The ownership of IPR is important because all the parties to a collaborative RTD project will want to ensure that the IPRs necessary to exploit the results of collaborative research have been secured and are able to be validly assigned or licensed for development and/or exploitation to an industry partner.

**a.** There are variations from country to country as to whether the PRO or the individual researcher owns the IPR in:

i. Any patentable invention resulting from research. For more information see the section on IPR ownership.

ii. Copyright: variations exist in the treatment of computer programmes and other copyright material, even within the same country. For more information see note on copyright.

**b.** In the absence of contracts to the contrary, students and independent contractors, rather than the PROs, will own all IPR in their creations, or co-creations. For more information see note on students, researchers and independent contractors.

**c.** However, in practice, most contracts for collaborative research will be negotiated by the PROs or by technology transfer offices acting on behalf of PROs and/or individual researchers. It will generally be the responsibility of the PRO or technology transfer offices to take the necessary steps to ensure that all the necessary IPRs have been secured and are able to be validly transferred or licensed to an industry partner. For information on what steps to take to reassure yourself that this process has been carried out, please see Conclusions.

### *(iii) Negotiation of IPR contracts*

*Issues:*

**a.** In countries where the individual researcher owns IPRs, it is possible to enter into contracts directly with the individual researcher. In practice, the PRO, or a technology transfer office representing the PRO(s) and/or the researcher(s), is usually involved in negotiating research collaboration agreements.

i. To ensure that the necessary rights are properly transferred or licensed, there are a number of precautionary steps both PROs and their industry partners can take, please see Conclusions.

**b.** Where the research is wholly or partly publicly-funded, State Aid regulations require PROs and researchers in EU states to obtain the full market price for the transfer of any IPR. For more information, please see note on the price of publicly-funded IPR.

**c.** In some countries the PRO is empowered to accept equity in payment for IPR. Particulars differ in each country. For more information please see note on equity.

**d.** In several countries, laws, regulations or policy require reversion of some or all rights if commercialisation of IPR is not diligently pursued.

### *(iv) Effect of funding of IPR contracts*

*Issue:*

The source of research funds will sometimes dictate the returns that should be expected from research, whether the results of research should be publicly accessible, and may require permission for foreign exploitation. When entering into a cross-border collaboration it is therefore important to be aware of the restrictions and opportunities that this offers. For more information please see the section on Effect of Funding.

### *(v) Confidentiality & Publication*

*Issue:*

PROs and their industry partners may have conflicting needs as regards the publication of the results of research; the PRO and researchers generally require publication while a company may want to delay publication temporarily to enable patent applications to be filed, or indefinitely to preserve trade secrets. For more information please see Confidentiality and Publication section.

### *(vi) Examples and Further information of IPR contracts*

*Issues:*

**a.** Experience in many countries has shown that it is often difficult to achieve agreement on IPR ownership when a research project has been jointly funded by industry and public funds. For more information please see Examples of IPR Contracts section.

**b.** There are several useful guides to help resolve this issue, as well as examples of model contractual provisions. We have provided a Decision Guide which should help the collaborators in collaborative research decide where ownership of resulting IPR should reside. For more information please also see Appendix E.

### *(vii) Protection and enforcement of IPR*

*Issues:*

**a.** It is important to be clear about who will be responsible for the registration and enforcement of IPRs that result from collaborative research. For more information please see notes on protection and enforcement .

**b.** Costs of patenting inventions vary significantly, but as a guideline a recent European Patent Office (EPO) study found that a “representative European patent” would cost an average of EUR 31,580 if filed direct with the EPO (generally valid in six countries), while a filing under the Patent Co-operation Treaty, generally valid in eight countries would cost an average of EUR 46,550. For more information see Appendix E (4).

### *(viii) Sources of further information*

**a.** Local industrial and intellectual property offices will be able to provide further information. For details of national IP offices, please see Appendix E.

**b.** Appendix E also contains tables of useful references for:

- The IPR Helpdesk which provides comprehensive information on IPR
- Resources provided by industry
- Resources provided by technology transfer bodies
- Resources provided by EC-sponsored entities promoting innovation

## 3.5.4 Definitions Of Terms Used In The Decision Guide

The following are definitions for terms used in the decision guide that you may need to know in order to answer the questions.

### Public Research Organisation (PRO)

A university or other publicly funded institution or laboratory that carries out research.

### Industry Partner

A business that carries out research and provides resources to the PRO e.g. financial, equipment, personnel.

### The Field and the Territory

If the PRO owns the IP and grants a non-exclusive licence to the Industry partner, the Industry partner's use and exploitation of that IP may be limited to a specific business or technological area or field, and/or to a specific geographical area or territory.

By granting a non-exclusive licence in a field, the PRO is precluded from granting exclusive rights to any third party in the same field and in the same territory, but it may grant non-exclusive licences, and may itself exploit the technology, in that field and territory.

If the Industry partner's key business area is pharmaceuticals, or its activities are limited to Europe, the Industry partner may have no need for a licence in other fields or territories, so leaving the way clear for the PRO, or other licensees of the PRO, to exploit the IP in other fields/territories.

If the Industry partner's use of the IP is not limited to a specific territory, you should insert "worldwide" in the definition of the Territory.

### Group Company

The Industry partner may be part of a group of companies and its R&D may be carried out across various companies in the group. Therefore the PRO allows the group to use the Results.

### Background, Specific Background, Sensitive Background and Confidential Information

It is likely that the Industry partner or the PRO (or both of them) will make available for use in the Project, information, software or materials that already exist or that are developed independently of the Project. Each of the parties allows its Background to be used for the purposes of the Project but not for any other purpose, although negotiations may result in Background being used, where necessary, to exploit the Results.

Although it may not be necessary or possible to identify all of the Background at the start of the Project, if the success of the Project depends on one or both of the parties making specific Background available, this needs to be identified and included in the project plan.

If any of the Background is sensitive or for some other reason should not be disclosed beyond the researchers working on the Project, this should be identified either before, or at the time, the Background is made available. While the PRO may want to publish Background as part of its academic publication of the Results, it may be important to the Industry partner that its Background remains confidential. It is important that this issue is resolved at the outset.

The Industry partner may take the view that all of its Background is commercially sensitive and must be kept confidential. Any information or material that is to be kept confidential should be marked "Confidential".

## The Project

One of the most important parts of the Agreement is the description of the Project in the Project plan as this describes what is to be done and the resources that are to be provided; the nature of the IP created will flow from the description of the Project and its outputs or results. It is the cornerstone of the agreement and it is therefore important that the researchers give serious thought to the contents of the project plan so that it is complete and accurate

## Contract Research

The PRO is paid to apply existing knowledge and expertise to a particular situation rather than developing new solutions or new ideas. The PRO acts as a service provider with specialist expertise and/or specialist equipment. Patents, utility models, confidential trade secrets or computer programmes protected by copyright may result. PROs are not in business to compete with contract research organisations and may not use public money to do so. The PRO would therefore be compensated at full cost of carrying out the work plus reasonable profit, and the rights in the agreed deliverable would be generally transferred to the industry partner.

## Collaborative Research

This relationship is best defined as research where both parties provide financial or other resources for the project. This may imply private funding of part of the research conducted by the PRO, but it could also be that the industry partner funds only its own part of the project. The agreements that the parties come to regarding use of the resulting IPR, and any share in resulting revenue will of course vary according to the unique set of circumstances of each individual case.

## Student or Person without an Employment Contract

As part of their education and training, students and visiting academics may be involved in carrying out research. These people do not have an employment contract with the PRO so there may be difficulties in securing assignment or transfer of IP rights.

# 4. WORK STREAM 2: PROFESSIONALISING TECHNOLOGY TRANSFER

## *4.1 Introduction*

Collaboration between Public Research Organisations (PROs) and industry is crucial to increase Europe's capacity to innovate. In this context universities are seen as part of the PROs. There are several factors which influence such collaborations, in particular, the ability to exchange knowledge between PRO and industry in a professional way. This requires them to have basic knowledge and access to all of the skills necessary for the commercialisation of knowledge created (i.e. patenting, licensing, drawing up contracts, how to spin out etc).

The CREST 1st Cycle concluded that the professionalization of technology transfer professionals plays a crucial role in reaching the 3% target. Technology transfer enables the flow of knowledge from PROs to industry. Technology transfer professionals include staff which work in PROs, industry and intermediaries who have the responsibility to facilitate, promote and exchange technology.

Evidently, such a capability largely depends on the profile and expertise of the technology transfer officers at the PRO side. The Crest IP expert group[43] recognised that this issue needed to be tackled in the first cycle, and said: that:

- *"The group recommends that the EC and member states endeavour to ensure that professional technology transfer systems are sufficiently resourced at institutional, national and EU levels. Issues to be tackled include:*
  ***The need for professional and skilled people"*** *(REC 3)*

- *"The group recommends that professionalization of Technology Transfer Organisations should be improved through IP/technology transfer training…." (REC 4)*

The importance of these recommendations were confirmed during the 2004 Dutch Presidency conference in Noordwijk on "Investing in Research and Innovation: Realising the potential of public-private interaction". The conference recommendations built on these conclusions of the first cycle. The conference recommended that an (European) education programme should be developed in which people could be trained to become professional technology transfer officers[44].

[43] CREST REPORT on the application of the open method of coordination in favour of the Barcelona research investment objective – see http://europa.eu.int/invest-in-research/coordination/coordination01_en.htm.

[44] See the Report "Investing in Research and Innovation, Realising the Potential of Public – Private Interaction" summarising the results of the conference, held in Noordwijk, the Netherlands, October 12 and 13 2004, as part of the Dutch EU Presidency. Organised by the Ministry of Economic Affairs and the Ministry of Education, Culture and Science, and supported by the European Commission.

Work Stream 2 follows up on the aforementioned work done in the first cycle, the Noordwijk conference conclusions and existing Member State initiatives in this field.

## *4.2 Objectives*

Building on the earlier work and recommendations made by the 1st cycle OMC-Crest IP-Expert Group, the 2nd cycle IP-Expert Group also decided to take forward a second work stream to focus on professionalizing technology transfer through education. Central to this work stream are the following questions:

1. What skills/expertise should a person possess to be able to work as a professional in the field of Technology Transfer?

2. If such skills/expertise are going be taught through education programmes/courses, what should be the main characteristics of such programmes/courses? (e.g. target audiences, levels, subjects, formats, ...)

3. What education programmes/courses are already available in the Member States/Europe and what do they offer?

Based on the answers to these central questions and relevant sub-questions, recommendations will be made on how Member States, the Commission and stakeholders should proceed to realise the objective of professionalizing technology transfer through education.

## *4.3 Methodology*

The IP-expert group wanted to draw on as much expertise as possible to answer the formulated questions. To be able to analyse the subject and draw conclusions/ recommendations this work stream gathered information through two separate channels:

- *OMC-Crest IP-expert group survey*
  This survey was carried out by the OMC-Crest IP-expert group members themselves. A focused questionnaire was sent to national experts and collected by the members of the IP-expert group. This survey was not meant to be comprehensive or complete. The aim was to get a general feel of the relevant issues, questions and needs in the respective Member-State countries and to use it as base for the preparation of the expert workshop.

- *Workshop with national and European experts and stakeholders in the field of technology transfer*
  On March 22nd there was an expert workshop held in Brussels. A total of 22 national technology transfer experts attend this meeting. These experts came from 15 Member-state countries. Also representatives of the major European and national associations in the field of technology transfer (Proton[45], ASTP[46], AURIL[47] and LES[48]) participated in this workshop.

[45] ProTon Europe is a pan-European network of Technology Transfer Offices (TOs) and companies affiliated to universities and other Public Research Organisations (PROs); see http://www.protoneurope.org/.

The results of survey and the full workshop-report can be found in the appendix in this report.

## *4.4 Analysis of Survey Results*

The OMC-Crest IP-expert group survey is a tool to quickly draw out information from the national experts in the Member States. Furthermore, this information was also used to set up and prepare for the Expert Workshop. This would enable the Expert Workshop to go into and explore in further detail the relevant questions. The questionnaire was distributed through the members of the OMC-Crest IP-Expert Group to a number of experts in each state. Experts from 14 States filled in the Survey.

The following questions were explored by the survey:

- *Is there a need to professionalize the technology transfer profession (through upgrading the skill-sets) within your country through education programmes/training?*
  Outcome of the Survey:
  The result from the Survey was an unanimously yes. This discussion was confirmed by the IP-Expert Group. It can be concluded that there is a need to professionalise the technology transfer profession (through upgrading the skill-sets) within the MS through education programmes/training.

- *Who should be the target-audience of such an education programme/training?*
  Outcome of the Survey:
  The results of the survey delivered a clear picture whereby there was a split in the middle in regarding who is going to be the target-audience. 50% of those who answered wanted personnel from universities and PROs only as the target audience. The other 50% wanted to also include personnel from industry in the target audience (as well as those from universities and PROs).

  This split in opinion was also reflected in the discussions within the group regarding the issue of target-audience.

- *Should the education programme/training be aimed at people entering the technology transfer profession (like students) or at people who already working in this profession?*
  Outcome of the Survey:

---

[46] The Mission of the non-profit **A**ssociation of European **S**cience & **T**echnology Transfer **P**rofessionals (ASTP) is *to professionalise and promote technology and knowledge transfer between the European science base and industry*.; see http://www.astp.net/.

[47] AURIL is the professional association representing all practitioners involved in knowledge creation, development and exchange in the UK and Ireland who work to ensure that new ideas, technologies and innovations flow from their institution into the market place; see http://www.auril.org.uk/.

[48] The Licensing Executives Society International (LESI) is an association of 31 national and regional societies, each composed of men and women who have an interest in the transfer of technology, or licensing of intellectual property rights - from technical know how and patented inventions to software, copyright and trade marks; see http://www.lesi.org/

The majority (75%) of the respondents wanted a focus on both groups. The rest wanted a focus on people who are already working in the field

- *What should be the status of such a programme? (Training, full course, graduate course, masters, post-graduate, MBA, etc.)*?
  Outcome of the Survey:
  This delivered a very mixed picture. There was not a clear answer regarding this question. There were several important issues raised that will influence the answer to this question. These issues included time constraints for the participants and a general need for an official recognition of the programme.

- *Should such an education programme/training cover all aspects of technology transfer profession (screening, scouting, patenting, business development, VC, licensing, etc) or should it focus on one aspect?*
  Outcome of the Survey:
  The majority (90%) of the respondents wanted a programme that covers all aspects of technology transfer.

- *Should such an education programme/training offer the possibility to learn with and from technology transfer professionals from other Member States in the European Union? And should such an education programme/training provide for EU-networking possibilities between the participants of the education programme/training?*
  Outcome of the Survey:
  The respondents answered this question unanimously with a yes.

- *Is there already such a course available in your country?*
  Outcome of the Survey:
  This delivered a mixed picture. Only the UK and Austria have education programmes that cover all the aspects of technology transfer and supplied official degrees. Most countries in Europe don't have this. They do have workshops and courses on specific aspects (for example patenting, licensing, etc.).

- *Would it be interesting for your country to explore the possibilities setting up such a (European) technology transfer educational programme?*
  Outcome of the Survey:
  The respondents answered this question unanimously with a yes. The only remark put forward by some respondents was that the format of such programme would influence their final answer.

The outcome of the survey was discussed by the Expert Group. The results of the survey reflected the opinion of the group. The main issue was that of the target-audience. The Expert Group was split on this issue of whether industry should be included. Furthermore the results were used for the preparation of the expert workshop.

## *4.5 Analysis of Expert Workshop Results*

*Expert workshop*
On March 22nd there was an expert workshop organised in Brussels. The topic was professionalizing technology transfer through education. The workshop focused on the central questions raised by the 2nd work stream which were discussed by the attending national experts and representatives of the the major European and national associations in the field of technology transfer (Proton, ASTP, AURIL and LES). Most national experts came from PRO-side while a minority came from industry or had an industry background. For a full report on the Workshop, its participants and its outcomes, see Appendix F. The supporting and background materials developed for the workshop are described in Appendix G.

The IP-expert group themselves felt confident enough to make recommendations for PRO's and Industry based on the outcome of the survey and workshop.

There was a general consensus regarding the following conclusions:

- there is a shortage of qualified and professional technology transfer personnel.

- the range of different roles in Technology Transfer was recognised, as well as the need for different profiles of the skills required in each of these roles and the possibility of distributing these skills across the team, some of whom may be outsourced.

- there is a need for education programmes to educate these personnel.

- there is a need for a basic level of skills/competences.

- the critical core role/skill was 'bridge-building' between the research base and industry.

- the full core set of skills/competences that should be taught within the programme was identified; these were (in priority order, with 1 being top priority):
    1. Business development
    2. IP management/legal
    3. Negotiating (internally & externally)
    4. Networking & interpersonal skills (communications & relationships)
    5. Marketing & selling
    6. Contracting
    7. Personal organisation (multiple projects & skills integration)
    8. Coaching/leadership
    9. Project management/finance.

- Such a programme should be developed/delivered on modular-basis. If a person successfully completes the required number of different modules within the programme, he/she is awarded a title/certificate, preferably of the MBA type/level.

- The status of the course depended very much on the target audience, i.e. qualification courses were generally more important for new entrants to the profession and short courses were generally more appropriate for the experienced professionals.

- Different levels of courses should be provided. These levels should be identified as Basic/Introductory, Intermediate and Advanced. These courses should be highly practical, using case studies, be work-based, use practitioners and other experts, and involve staff exchange/mobility.

- There are a number of courses already available – from ProTon, ASTP, LES, AUTM, AURIL). However these courses don't cover the full range of skills needed for a technology transfer professional.

- there is no national certification currently available although it is an important requirement for many TT staff.

- the need for recognition/accreditation among Member States was clearly identified.

In the context of the Workshop and subsequent discussion by the IP-Expert Group, recognition means mutual acceptance between all involved parties of each others education programmes and the certificates provided after completing these education programmes. In contrast, accreditation is a formal and legal method of recognition. There are official processes in place in the European Union that one has to follow in order to get an education programme accredited at the European level. This is further discussed in paragraph 4.7 below.

Other topics involved considerably more debate and a range of views, and were therefore less conclusive or focussed. These topics included:

*A. Delivery at national or European level*

Many felt that these courses should generally be taught at a national level, especially for the material at the introductory & intermediate levels, but that the more advanced levels and trans-national elements should be promoted and accessible at the European level, and additionally supported by trans-national mobility programmes. However, a few representatives, especially those from states where the national demand was small or the infrastructure/resources for delivery was limited or non-existent, felt that the complete programme should be delivered at the European level (this point was reinforced by some representatives at the subsequent Expert group meeting). Conversely, some representatives, especially those with significant numbers of staff, pointed out that participation in European programmes at all levels of training for all staff would not be possible financially, when taking into account the normally high course fee rates and travel and subsistence costs.

*B. Target-audience*

Although PROs were clearly agreed as the primary target audience, many also agreed that it was important to involve industry, and SMEs in particular, wherever appropriate. Several experts suggested that it was difficult to include all stakeholders, especially SMEs (which have other priorities and time-constraints). Other experts didn't agree with this view and stated that the participation of Industry is necessary. It was also felt important to engage appropriate personnel from regional, national and European public agencies as well as from business support intermediary organisations. This latter group were considered important because of their role as a route to SMEs and their potential to influence/stimulate them to invest more resources in R&D/Innovation.

*C. Experience Level of target-audience.*

Although the overall priority target was those at the entry/introductory level (0-2 years), there was also considerable support for programmes to be delivered at the pre-entry level, as well as at the intermediate (3-5 years) and advanced/expert (>5 years) levels. These levels could also be applied to the modules; for example: basic IP-training for entry-level; intermediate IP-training for intermediate-level and specialised IP-training regarding specific 'hot topics' for advanced/expert-level.

*D. Business Experience*

Many felt that a certain level of business experience was an important/desirable but not a critical pre-requisite, although it is important to be credible and confident in interactions with business.

*E. Course length*

The combination of practical short courses in a modular approach accumulating towards an MBA-type qualification clearly emerges as the most preferred option. However, the academic criteria and constraints normally associated with this level and standard of qualification make these combined options difficult to achieve in practice, at least in the short term, although some steps towards this have already been taken.

*F. Providers*

Although, some felt that competition between providers should be encouraged, others felt that a more collaborative approach, especially between professional associations, was needed, particularly at the current stage of development and with the relatively small national demand involved.

*G. Mobility programmes*

These were generally highlighted as being important. Although the Marie Curie mobility programme already exists, a number of attempts to access it to support TT mobility have failed – it seems that the programme's current objectives and assessment criteria are oriented towards academic/researcher mobility only. It therefore seems as though either the Marie Curie programme needs to change or a new programme devised to specifically support TT.

## *4.6 Overview and analyses available courses*

After the workshop, the TT professionals were asked to supply details of existing courses available to support the training and development of TT staff. This information is combined with the data from the Survey which also asked about available courses in the Member States. These results are shown in Tables 1 and 2 below.

Based on the collected information the conclusion can be drawn that the picture is quite diverse in Europe. On a national level some Member States do have several courses available, while others have nothing in place. Also the topics that are covered and the format of the course are diverse. Most Member States offers Masters in intellectual property. This covers only some aspects of Technology Transfer.

Approaches to professionalizing technology transfer staff in 3 European states – Austria, Denmark and the United Kingdom - are explained in more detail in the text boxes.

**Example 1: Technology Transfer Training System in Austria**

In Austria there was no centralised responsibility for training of technology transfer officers Indeed, TT education situation had been highly fragmented in both, the providers of seminars (e.g. university, patent office, patent attorneys, commercial organisation) and content of seminars (e.g. IP legal aspects, IP marketing, IP valorisation).

This changed in 2005, when Austria Wirtschaftsservice GmbH (AWS), a member to the OMC Cycle, initiated a new comprehensive training course for technology transfer officers. The recommendations given by the Expert group on IP and Research, AWS and the Management Centre, Innsbruck (MCI), led to the launch of the post-graduate course in **"Patent & License Management – Systematic Methods to Generate and Exploit Intellectual Property".** The curriculum covers almost all fields and competencies needed by technology transfer officers, such as training in national, European and international patent right regimes, trainings in how to generate innovations including creativity techniques, training of all forms of IP (patents, copyrights, utility models, design…) with specific focus on issues in discussion (e.g. software and bio patents) and promoting of advanced skills in exploiting IP (IP due diligence, contracting, taxation of IP…). Moreover the participants complete course with a certificate that **grants credit points according to the Bologna Process**. The course itself is also embedded in the general curriculum of the MCI.

Link to course "Patent & License Management"
**(http://www.mci.at/com/executive_education/patent_license_management/index.html)**

It is clear that, particularly over the last few years, a number of training courses and education programmes have already been developed by professional associations at both the national (e.g. in France, Italy, Spain, UK, Germany) and European levels

**TABLE 1: Available international courses**

| Course | Provider | Level | Time |
|---|---|---|---|
| Fundamentals of Intellectual Asset Management | LES International + national | Intro | 3 days |
| Beginners Workshop | ProTon Europe | Intro | 2 days |
| Licensing | LES | Intro/Inter | 1-2 days |
| Range of Expert Workshops | ProTon Europe | Inter/Adv | 1 day |
| Range of Workshops | ASTP | Inter/Adv | 1 day |

**TABLE 2: Available national courses**

| Country | Course | Provider | Level | Time |
|---|---|---|---|---|
| Austria | Uni:Invent (Post Graduate module) | Austria Wirtschaftsservice Gesellschaft mbH | Intro | 3 modules over total 4 weeks |
| Austria | "Patent & License management – systematic methods to generate and exploit intellectual property" | MCI | intro/inter | 1 year (part-time) |
| Belgium (Flemisch Region) | ? | | | |
| Czech Republic | Certificate in Intellectual Property | The University of Public Administration and International Relations (CZ) | intro/inter | 12-24 mths |
| Czech Republic | Industrial Property Training Institute | IPO CZ | intro | 24 mths |
| Czech Republic | Licensing course | University of Pardubice (CZ) | intro | 1 day |
| Czech Republic | Fundamentals of Knowledge Transfer | University of Pardubice (CZ) | intro | 1 day |
| | | | | |

| | | | | |
|---|---|---|---|---|
| Denmark | Several workshops | Techtrans.dk | intro | 1-2 days |
| Finland | Uni:Invent (Post Graduate module) Workshops/short courses | IPR University Center (see www.iprinfo.com) | Intro | several modules and weeks |
| France | Certificate in Intellectual Property (CAPI) | INPI (FR) | Inter/Adv | 9 x 2 days |
| France | Licensing Course | IEEPI/LES France | Inter/Adv | 2 weeks |
| France | Several one/two day courses | INPI, Centre Paul-Roubier, IRPI, IEEPI | Intro/Int/Adv | 1-2 days |
| France | Range of Workshops/Short Courses | CURIE (F) | Inter/Adv | 1-2 days |
| Germany | Common training courses on specific issues (organised on ad hoc base). | PROs and / or universities, also in cooperation with private consultants | Intro/Inter/Adv | Up to 1 week |
| Italy | Beginners Workshop | NetVal (I) | Intro | 3 days |
| Italy | Range of Workshops/Short Courses | NetVal (I) UIBM, IPI, universities | Inter/Adv | 1-2 days Postgraduate course |
| Netherlands | There only courses and workshops that only handling one specific aspect of the technology transfer profession; mainly IP-orientated | universities/Dutch Patent office/ TAK | intro | 1 day |
| Portugal | Range of Workshops/Short Courses | National Network (PT) | Inter/Adv | ? |
| Slovakia | ? | ? | ? | 1 day training for professionals |
| Spain | Beginners Workshop | RedOTRI (E) | Intro | 5 days |
| Spain | Range of Workshops/Short Courses | RedOTRI (E) | Inter/Adv | 1-2 days |
| UK | Fundamentals of Tech Transfer | Praxis (UK) | Intro | |
| UK | Fundamentals of Knowledge Transfer | AURIL (UK) | Intro | 3 days |
| UK | Range of Workshops/Short Courses | Praxis (UK) | Inter/Adv | 1-3 days |
| UK | Range of Workshops/Short Courses | AURIL (UK) | Inter/Adv | 1-2 days |

| | | | | |
|---|---|---|---|---|
| UK | Post Graduate Certificate in Knowledge Transfer | AURIL/Open University (UK), AURIL/ProTon/Open University (EU) | Intro/Inter/Adv | 12-18 months distance learning, work-based project |
| UK | Professional Award for Knowledge Transfer Practitioners | AURIL/Open University (UK) | Intro/Inter/Adv | 12-24 mths / work evidence based |

(e.g. by ASTP, LES, ProTon Europe). However those courses are limited in the scope of topics covered.

Where, certification is provided for the longer education/training programmes, this seems to be mostly, if not totally, provided by universities (e.g. in Austria, Germany, Spain). One such university certified course in the UK has professional association support (see Example 3 below). However this certification doesn't provide recognition of these education/training programmes between countries and/or organisations or professional associations.

Courses at the beginners/introductory level are mostly available at the national level (e.g. Italy, Spain, UK), with some presented and accessible at the European level (e.g. by LES and ProTon Europe). At the higher levels (intermediate and advanced) courses are presented at both the national and European levels.

**Example 2: Technology Transfer Training System in Denmark**

In Denmark the training of technology transfer officers is a key responsibility of *The National Network for Technology Transfer* (Techtrans.dk).

The number of technology transfer officers in Denmark is very limited (approximately 50 full time staff equivalents) and does not provide a sustainable basis for an accredited training programme for technology transfer officers at national level. The current training activities offered by The National Network for Technology Transfer include three basic elements all offered at an ad hoc basis:

***Internal network courses and workshops***

The internal network courses are designed exclusively for the members of the network. These courses deal with subjects of particular interest to of research institutions. Examples could be: Joint R&D-contracts, negotiation techniques, marketing of IP or conflict-of-interest policies. Participation is free of charge. In addition to this, it is the intention to establish a number of thematic membership groups (of a more permanent nature) for exchange of experiences on similar subjects.

***External courses by other national operators***

The Techtrans Network refunds all costs for of members participating in relevant courses offered by other national operators. In particular The Danish Patent Office is a major provider of such courses aimed at IP-managers of trade and industry, but relevant even to technology transfer officers. Examples of subjects in such courses could be: IP-strategy, IP-legislation or valorisation of IP.

***International courses and workshops***

The Techtrans Network refunds membership fees of relevant international associations such as ASTP, ProTon or LES. Furthermore, the network refunds up to 50 percent of all participation costs in relation to courses or workshops outside Denmark. Practically all Danish technology transfer officers are members of ASTP and participates regularly at ASTP-conferences and workshops.

**Example 3: Technology Transfer Training in the UK**

There are three organisations in the UK which provide training in technology transfer - **AURIL** (www.auril.org), **PRAXIS** (www.praxis.org) and **UNICO** (www.unico.org). All three provide short courses in technology transfer and knowledge transfer for staff working in PROs. These courses are dedicated to specific topics such as how to obtain a patent, how to set up a license etc., how to manage a spin-out company. Attendance at these courses is on payment of a fee and they are open to all those involved in technology transfer.

UNICO (annually) and AURIL (bi-annually) hold regular conferences where TTO staff can network, find out about latest situation on developments at national and EU level, for example, on EU framework programmes, national funding priorities, current government policies to promote TT. The websites of these three organisations provide detailed information about the training opportunities they provide, such as short courses, seminars and conferences.

**Development of TT as a profession in the UK**

AURIL has developed two programmes for technology transfer staff in PROs to obtain professional qualifications. These are:

(1) *Post Graduate Certificate in Knowledge Transfer in association with The Open University* (for details see http://www.auril-cpd.org/pgcinfo)

This is a postgraduate qualification which is 50% practical work and 50% study. The first group of students registered in 2004 and the first graduates are expected in early 2007. The course is delivered using the distance learning approach to give maximum flexibility for those students who are working while also doing the course. It can be used as part of an MBA but is also a qualification in its own right,

(2) *Professional Award in Knowledge Transfer through Continuing professional Development (CPD)* (For details see http://www.auril-cpd.org/professionalaward)

This award is usually completed over 2 years and it has graduated its first graduate in 2005. It is 100% work based and is based on the candidate providing evidence from his work to show that he has reached a certain skill in 6 areas of expertise or competency referred to as six key roles -.

- Manage information and communications
- Manage relationships
- Manage projects
- Manage the commercial interface
- Manage operations in a legal context
- Problem solve and manage the decision making process

**Accreditation of TT**

Since late 2005, AURIL, PRAXIS and UNICO have been working together to create an Institute of Knowledge Transfer (IKT) in order to

(a) respond to need to be done in terms of qualifications and accreditation to facilitate progress towards greater professionalization; and

(b) involve those more widely involved in TT such as intermediaries in business development and public sector promotion of R & D.

The certificated programmes that are available seem to be mostly presented or accessible at the national level (e.g. Austria, France, Germany, Spain), with one available across the EU via distance learning/support (the AURIL/ProTon Europe/Open University course).

Many of the courses are aimed specifically at target audiences in the Technology Transfer Offices of PROs (e.g. from CURIE in France, Red OTRI in Spain, AURIL and Praxis in the UK, and ProTon Europe), although in most cases these courses are also open to professionals from other sectors. On the other hand, LES courses are aimed at professionals from all sectors.

Most of the courses focus on the 'technical' aspects of the Technology Transfer role, eg IP, licensing, law, although the priority skills identified in the workshop tended to emphasise the 'non-technical' aspects, e.g. business development, negotiation, communications, marketing and selling. Although these latter skills may appear to be somewhat generic, it is clear from the workshop and other research that the complexities and difficulties of the role arise because of the context within which these skills need to be exercised, i.e. the critical 'bridge building' role between very different cultures (the academic/industry culture and the different legal traditions). Only a few courses seem to include some coverage of these important skills, e.g. from the national networks in Portugal and UK, and from ASTP and ProTon Europe.

Based on the available information it can be concluded that none of the programmes provide the flexible modular short course route to an MBA-type qualification that was prioritised in the workshop. Also these courses do not provide full coverage of all essential aspects of the Technology Transfer profession. And finally, the current available courses are singular and don't offer a trans-national recognised/accredited title making it possible for the mobility of Technology Transfer professionals between Member States.

Perhaps the closest to the ideal discussed in the expert-workshop are the Uni:Invent post graduate module available from Austria Wirtschaftsservice Gesellschaft GmbH/MCI in Austria and the Professional Award for Knowledge Transfer Practitioners available from AURIL/The Open University in the UK. But even those programmes don't offer the trans-national recognised/accredited title.

## *4.7 Discussion OMC-CREST IP-Expert group*

The purpose of training programmes has to be to ensure that technology transfer professionals have the necessary skills to set up effective collaborations on a national and cross-border basis.

However, while there are a number of European and national initiatives there is as yet no embedded comprehensive and Europe wide education programme for technology transfer professionals working in this field. The nature of the Technology Transfer profession and the broad variety of skills involved make it hard to develop its component parts in order to create a comprehensive education programme which meets the diverse range of needs of a relatively limited and dispersed demand.

Evidently, some programmes, training courses, and workshops are currently available in some Member States and/or across Europe on specific elements, but most of these programmes are not interrelated and are generally conducted on an *ad hoc* basis.

On the back of the first cycle outputs, a small number of Member States decided to take action in this area. For example, Austria and the UK have created professional education programmes in 2004/5 - in Austria, AWS have led on the development of a 3 module post graduate programme called Uni:Invent, whilst in the UK, AURIL has, with the financial support of the DTI, developed a Post Graduate Certificate and a Professional Award with The Open University.

Furthermore, some of the Member States have developed a project for jointly setting up national courses in the field of Technology Transfer in their respective countries (the OMC-NET CERT-TTT-M project). This project is discussed further on in this paragraph. However, most Member States have so far not taken specific/coordinated actions.

The nature of ad-hoc short course provision means that they are generally financed by fees. This means that it can be difficult to set up new courses where there is a lack of critical mass of TT-professionals. Some Member States (eg Denmark) have addressed this by funding the participation of national TTOs in European or other trans-national association's workshops (e.g. by ASTP). Similarly, EC Framework 5 funding has supported the development and delivery of ProTon Europe courses/workshops. Inevitably, this leads to a patchy and piecemeal system of training for TTOs.

Even if primarily targeted at PRO' it is useful to invite industry to participate in technology transfer training schemes in order to promote and facilitate dialogue and mutual understanding  The experience in Austria has been that it is often necessary to start courses drawing audience mainly from PROs and build up interest in industry gradually.

This goes back to the discussion within the workshop who should such a programme be targeted at. There are different arguments for a narrow target-audience (PRO-only) and broader target-audience (PRO, Industry and intermediates). The IP-expert group recognise the need for a broader approach if the aim is a recognised technology transfer profession. Those professionals will be working across the board (PRO, Industry and intermediates). Due to their limited available time and resources SME's will be more difficult to motivate to participate in a technology transfer educational programme.

The Expert group believes that Member States and the European Commission should take action to promote and support the creation of such education programmes for Technology Transfer Managers/Officers. There was general agreement that, for them to be successful, they must be set up together with experienced stakeholders.

Before setting up education programmes, the Member States should agree on joint quality criteria to be able to facilitate recognition and accreditation. The European

Commission may have a role in coordinating these activities. Based on the outcome of the survey, the workshop and discussion within the OMC-Crest IP-expert group, it was decided that these quality-criteria to include the following skill-set:

- Business development
- Negotiating (internally & externally)
- Networking & interpersonal skills (communications & relationships)
- Marketing & selling
- Personal organisation (multiple projects & skills integration)
- coaching/leadership
- Project management/finance
- IP management/legal
- Contracting

These skills should be delivered through education programmes.

Precise estimates of the market size are inevitably difficult, especially since the context in each Member State is different. There are an estimated 1600-2400 Technology Transfer Professionals in the UK involved with Universities, with a further 2500-3000 working in non-university research institutes, the public sector and industry.[49] Thus a potential market of 5000-6000 exists in the UK. Of course the level of public investment in knowledge transfer and the number of knowledge transfer staff in PROs will vary considerably across the Member States. However, this will influence the ability of a Member State to provide such courses. It was felt that for countries where the internal market would be too small, a course structure/delivery could be agreed between several adjacent countries.

Within each office the level of experience and therefore training need will vary – the more experienced staff are more likely to need a small number of advanced/expert coursers, whereas less experienced staff (especially in 0-2 years experience range) are more likely to need the longer qualification oriented programmes.

It is clear from the evidence gathered that the best way to construct the programme is through a modular approach[50] (delivery system) which leads to a qualification and/or accreditation. As proposed in recommendation 1, it is important for this qualification/accreditation to be mutually recognised between Member States within Europe. This recognition/accreditation can be achieved through several means.

One way to go is making use of the existing accreditation process on an European level. The broader long-term aim outlined by the Commission in its Communication on 'Making a European Area of Lifelong Learning a Reality' is to enable people to meet the challenges of the knowledge-based society by promoting the development of their knowledge and competences at all stages of their lives.

[49] The average number of dedicated technology transfer staff working with commercial organisations across 160 UK Higher Education Institutions was reported in 2002-03 as between 10-15 (source HEFCI/HEBCI Survey at www.hefce.ac.uk). However, this survey did not take into account people working in technology transfer for non-university research institutions, referred to in the UK as Public Sector Research Establishments (PSREs); the public sector, for example, central and local government, the National Health Service (NHS); or industry. It is estimated that the total number of people working in Technology Transfer in the UK has increased from around 3000 to about 6000 since 1999-2000. This increase in numbers is largely due to the significant increase in public investment in university knowledge transfer over this period.

[50] A modular approach means that an individual can follow separate courses/modules and that once he/she has completed a certain numer courses/modules he/she is awarded a qualification (for example an MBA-type).

However, where recognition of the qualification is sought in order to exercise a regulated profession[51] in a Member State, the procedure for such recognition must be done along the lines of Directive 2005/36/EC[52] on the mutual recognition of qualifications. In such situation, this directive is indeed, the only legally binding instrument which confers rights and obligations on both the relevant national authority and the migrant.

A third possibility is the European Qualifications Framework (EQF), which the Commission formally published as a Staff Working Document on 8 July 2005. The EQF is a key priority for the Commission in 2006. The objective of the planned EQF is, where the access to a profession is not regulated, to enable the comparison between the qualifications framework used in the Member State where the migrant trained and the qualifications framework of the host Member State, by linking qualifications systems at the national and sectoral levels and enabling them to relate to each other. When available the EQF could help setting up a framework for the accreditation of these Technology Transfer courses for non regulated professions.

Another approach is that Member States individually recognise and accredit the courses between themselves.

The great benefit of using the modular approach is that people with limited spare time (due their regular day-job) are able to follow the programme. Individuals often don't have the time and/or resources to follow a full time course. Another benefit is that it allows persons that are only interested in specific themes/skills to follow relevant courses/modules.

An added benefit is that it allows for some differentiation between the various levels of expertise of attendees. For example, people who have worked 0-2 years in the profession can follow an entry level course whilst those who have been in the field longer more advanced ones.

There was a certain amount of discussion about how such programmes should be delivered, with two main viewpoints:

1. The courses should be set up at European level with a single body (for example through a consortia of existing European or trans-national associations) delivering them;

[51] A profession is regulated when access to a profession is subordinated by law, regulation or administrative provisions to the possession of a qualification.

[52] Directive 2005/36/EC consolidates 15 existing directives adopted between 1975 and 1999. It was adopted on 07.09.2005 and must be implemented in Member States by 20.10.2007. Directive 2005/36/EC provides for a system of automatic recognition of qualifications for professions whose conditions of training have been harmonised (doctors, nurses, midwives, dentists, veterinarians, pharmacists) and also for architects. For the other professions, the system is based on mutual trust. The underlying principle is that once a person is qualified to exercise a profession in a Member State this person should be authorised to exercise the same profession in another Member State. The procedures as well as the five levels of qualifications fixed under Directive 2005/36/EC have been designed on the basis of this principle. For professions of the craft, commerce and industry area, the procedure is based primarily on recognition of professional experience. For the other professions, the following procedure applies: The Host Member State competent authorities have the obligation not only to recognise qualifications classified in the same level of the Directive as the national qualification but also qualifications classified in the immediately lower level of the Directive. In principle, qualifications must be recognised without any additional requirement. However, if substantial differences between qualifications are identified and that such substantial differences cannot be compensated by professional experience or supplementary training (e.g. seminars, lifelong learning etc.), compensatory measures can be imposed on migrants (a test or training period at the choice of the migrant).

2. The courses should be set up mainly at National level on the basis of a jointly agreed framework with the qualifications of the trainees being recognised in other countries. This could form the basis for the establishment of a single European framework to deliver/coordinate these courses through National outlets and/or to accredit/recognise the delivery of, or participation in, the courses at the National level.

**Option 1**

The benefit of a European delivery mechanism is that it brings together a much larger market and therefore makes self-sustainability a more practical proposition - a number of Member States have insufficient demand to make such courses self-sustainable at the national level. Furthermore, it was felt that a European approach would be more likely to ensure consistency of delivery across Europe. However, a number of issues are apparent:

(i) Who will be the single European body? Does a potential body exist already? Does one need to be created? Who by and how long will it take? How does this relate to the existing European associations (ASTP, Proton, LES, Eirma) and who will take the lead?

(ii) How will a European body respond flexibly to the national or even regional contexts and needs, e.g. in terms of language, legal systems, economic and business environments?

(iii) Where will the courses be delivered and how will the concerns expressed by professionals about costs be addressed e.g. potentially high fees plus travel and subsistence, as well as time away from the office?

**Option 2**

The benefit of National delivery is that courses could be more easily tailored to address the differences in national/regional context, e.g. language, legislation etc.

To some extent this sort of approach is emerging already with the existence or recent establishment of national networks in some Member States (France, Italy, Poland, Portugal, Spain, UK). For example a programme has already been developed by AURIL based on research and application in the UK – it recognises the range of roles possible across the TT/KT spectrum and the skills required in each role, and it provides a skills profiling/training needs analysis tool; it also forms the basis of the existing Post Graduate Certificate and Professional Award qualifications. Some Member States are developing ‘two-way’ partnership arrangements with and through ProTon Europe. However, these partnerships are limited in scope and don’t offer a accredited and mutually recognised title that is necessary for trans-national mobility.

Another concrete example is the OMC NET ‘CERT-TTT-M’-project which is described in the text box below. This project is set up by 6 Member States (Austria, the Netherlands, France, Sweden, Italy and the Flemish region of Belgium) participating in the OMC-Crest IP-expert group and supported by the European Commission. It will start at the end of 2006. The aim of this project is to professionalize technology

transfer through education by setting up a framework for national Technology Transfer MBA-courses through a flexible modular approach with mutual recognition and accreditation between the participating Member States. Due to the open setup of the project other Member States are able and encouraged to join this initiative.

This option also has to address a number of issues:

(i) Who will provide the training at national level? Should it be organised at Government level or left to PROs or independent national networks?
Do qualified providers exist in all member states? And how could national trainings schemes be made sustainable in member states with very few technology transfer officers?

(ii) How will the different national courses lead to a common qualification for a single technology transfer profession?

Progress to meet either option will require cooperation and interaction between both European body and the (trans)national initiatives to provide a common qualification for a single technology transfer profession. This builds on the existing strength of both models.

Irrespective of which option was preferred, there was agreement that such education programmes should be easily accessible to staff (perhaps requiring an element of delivery in each MS) and that trans-national collaboration on the development and delivery was essential.

**EC Proposal to FP6-2005_RTD-OMC-NET**

**"Certified Trans-national TT Manager" – Building up a framework to qualify TT-Mangers on a trans-national level and with mutual recognition" (CERT-TTT-M)**

This project addresses directly to the recommendations made in the 1st Crest-Report and has been developed within the IP-Expert Group of current 2nd OMC Cycle. CERT-TTT-M is a bottom-up initiative by the participating countries and aims to complement OMC-CREST process by building up a framework or a blue-print education programme that:

- Professionalize s TT on a trans-national level, thus reducing lack of TT skilled people in the ERA
- Covers all phases of the TT process, thus also facilitating a clear career structure for TT officers
- Meets the need for an official recognised course as basis for an official accredited profession (Certified TTT-Manager)
- Supports MS policy-makers to interlink CERT-TTT-M to their own specific TT-policy
- Standardises the skill-set of TT profession in Europe (making comparable to internat. TT systems with view to TRENDCHART)
- Is based on surveys on both, the requirements to such a programme and the existing programmes in the EU

The proposal has been successfully submitted the participants of the OMC Cycle have been informed throughout the process of writing the proposal. Opportunities to join the project are still available.

## *4.8 Recommendations*

The OMC-CREST IP-Expert Group set out to explore the following key questions:

(i) What skills/expertise should a person possess to be able to work as a professional in the field of Technology Transfer?

(ii) If such skills/expertise are going be taught through education programmes/courses, what should be the main characteristics of such programmes/courses? (eg target audiences, levels, subjects, formats)

(iii) What education programmes/courses are already in the Member States/Europe and what do they offer?

Our analysis of these questions has highlighted the differing levels of provision that member states are able to provide. It has shown that in order to establish a viable size of market for courses and in order to provide effective training on cross-border aspects of collaborations a European approach to training is merited.

The expert group therefore recommends that:

**Recommendation 1: Member States should determine and agree on quality criteria for the education of technology transfer professionals to be able to promote recognition and accreditation of Technology Transfer education programs.**

This will allow the free movement of graduates of these programmes within the European Research Area. Agreement on content (range/depth) and quality control would facilitate the free movement of technology transfer professionals between Member States. As mentioned there are several ways to approach this. Several initiatives are being developed to achieve this goal. The European Commission may have a role in coordinating these activities.

**Recommendation 2: Any such comprehensive education programs should be modular-based and must provide and/or improve the core-skills identified below:**

- **Business development**
- **Negotiating (internally & externally)**
- **Networking & interpersonal skills (communications & relationships)**
- **Marketing & selling**
- **Personal organisation (multiple projects & skills integration)**
- **coaching/leadership**
- **Project management/finance**
- **IP management/legal**
- **Contracting**

When such education programmes are promoted it should be taken into account that they should primarily target personnel from PROs. Such courses, for reasons of viability and to benefit from diversity, need to include intermediaries and be open to

industry. Experience has shown that industry involvement tends only to develop slowly, but forms an important long-term aspect. If there is internal special interest for specific groups, they may be addressed through internal training. Furthermore, an appropriate way to construct such a programme is through a modular approach (delivery system) in order to permit staff to engage in the course on a part-time basis. Such courses should lead to a recognised qualification through mutual recognition (e.g. an MSc) and/or be a key step towards a professional accreditation.

**Recommendation 3: The European Commission should facilitate and support setting up European-wide or trans-national training systems and assist those Member States which lack the necessary infrastructure or national demand.**

The EC has a special role in helping those Member States that lack the necessary infrastructure (e.g. sufficient personnel to deliver training courses) or the national demand to support these courses. Furthermore, the EC should facilitate, promote and support the mutual recognition of any national education system which are set up.

A concrete example how the EC can support this is through the current Marie Curie-programme. This programme could be adapted in such a way that it would provide for the exchange of technology transfer professionals between institutions. The OMC-Crest IP-expert group advises and encourages the EC to open this programme for this possibility.

It could also be achieved by providing support to European and/or national training providers for designing training programmes. There are several ways this could be facilitated. For example by economic support to allow for a higher quality or coordinated/coherent designed programme or by giving a forum for discussion through OMC-Crest. Other possibilities are providing training for programme providers,

An effect of implementing this recommendation is that through such European/trans-national education systems a recognizable professional qualification in technology transfer would become available. There are several approaches to achieve the goal of professional qualification in technology transfer.

# 5. STATE AID

## *5.1 Background*

1. The first cycle report of the expert group on IPR and Research to CREST in June 2004 added that *"there was a concern expressed by some countries regarding this subject (i.e. ownership of IPR resulting from industry/PRO collaboration) and whether it could infringe State Aid rules. The group agrees that this is a key question which might be looked into in greater depth by the next cycle".*

2. Article 87 of the Treaty of the European Union provides that "any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the common market."

3. State Aid will therefore be present if all of the following tests are met:

- Is the measure granted by the State or through State resources?
- Does the measure favour certain undertakings?
- Is the activity tradable between member States?
- Does the measure distort or have the potential to distort competition?

4. Several exceptions and exemptions to this blanket prohibition of state aid are, however, provided for. Among them is the possibility of public assistance for research and development (R&D) work undertaken by or for enterprises. Such aid may be granted, subject to a body of rules that regulate the nature and value of permissible R&D assistance: *The Community Framework for State Aid for Research and Development*.[53]

5. Of particular relevance to the work of the Group is paragraph 2.4 of the Framework:

> *2.4. Public financing of R&D activities by public non-profit-making higher-education or research establishments is normally not covered by Article 92 (1) [now 87(1)] of the EC Treaty.*
>
> *Where the results of publicly financed R&D projects carried out by such establishments are made available to Community industry on a non-discriminatory basis, the Commission will assume that State aid within the meaning of Article 92 (1) of the EC Treaty is not normally involved.*
>
> *Where R&D is carried out by public non-profit-making, higher-education or research establishments on behalf of or in collaboration with industry, the Commission will assume that State aid within the meaning of Article 92 (1) of the EC Treaty is not involved either:*
>
> *(a) where the public non-profit-making higher-education or research establishments contribute to research projects as a commercial firm would, e.g. in return for payment at the market rate for the services they provide;*

[53] http://europa.eu.int/eur-lex/lex/LexUriServ/LexUriServ.do?uri=CELEX:31996Y0217(01):EN:HTML

*(b) or*

*- where the industrial participants in the research bear the full cost of the project, or*

*- where the results which do not give rise to intellectual property rights may be widely disseminated and any intellectual property rights to the R&D results are fully allocated to the public non-profit-making establishments, or*

*- where the public non-profit-making establishments receive from the industrial participants compensation equivalent to the market price for the intellectual property rights which result from the research project and which are held by those industrial participants, and where the results which do not give rise to intellectual property rights may be widely disseminated to interested third parties.*

6. In June 2005, The EC adopted a State Aid Action Plan[54] outlining the guiding principles for a comprehensive reform of state aid rules and procedures over the next five years. There is particular emphasis on the use of the EC Treaty's state aid rules to complement the Lisbon Agenda and the Barcelona Council objectives.

7. The Plan states that:

*"This review will also seek to better take into account the priorities of the Community's R&D policy such as the promotion of cross-border research cooperation, public-private research partnerships, dissemination of research results and important research projects of common European interest."*

*"The framework should also take account of the growing importance of public private partnerships in the R&D field. In particular, it should provide for adequate provisions for collaborative research including the ownership of, access to and exploitation of Intellectual Property Rights obtained in such projects. Furthermore, the need to allow for aid for dissemination will have to be considered in the course of the review."*

8. In September 2005, the EC published a consultation document on State Aid for Innovation[55].

9. To support the development of poles of excellence through collaboration and clustering, the Commission noted in the consultation document that in the current R&D framework, where there is cooperation between industry and public institutes, industry has to pay the full cost of the project or give all intellectual rights to the public institute. They proposed that this provision should be amended, and rights should be allocated between partners on a pro rata basis according to the contribution of each partner.

10. The Commission further proposed that as is currently expressed in the R&D framework, in all cases where the Commission concludes that the purpose of the aid in question is to promote the execution of an important project of common European interest, that aid may qualify for the derogation contained in article 87.3 (b).

[54] http://europa.eu.int/comm/competition/state_aid/others/action_plan/saap_en.pdf

[55] http://europa.eu.int/comm/competition/state_aid/others/action_plan/cdsai_en.pdf

## *5.2 The View of the Expert Group*

1. The Group considers that in setting up and carrying out technology transfer activities PROs are not themselves carrying out commercial activities. Rather, they are fulfilling what is regarded as their "third mission" of transferring scientific knowledge to industry and society. As Richard Lambert noted in his presentation to the Group, PROs should look on technology transfer as an extension of the PROs public duty, rather than as a source of revenue.

2. It is the view of the Group that in carrying out of the technology transfer function, PROs are promoting the execution of an important project of common European interest, i.e. the promotion of the 'Barcelona Objective'.

3. As such, the Group stresses the importance of providing the necessary framework conditions for PROs to successfully undertake the task of technology transfer. This would include:

- For PROs to be entitled to actively engage in the protection, transfer and commercial exploitation of IP generated from publicly funded research.
- For PROs to be able to organize commercial activities such as patenting and licensing in various types of entities.
- For PROs to have clarity in the legal framework regulating the transfer of IP from academia to industry.

4. PROs across Europe have organized technology transfer activities using a variety of models, e.g. integrated offices at the PROs, subsidiary companies or trans-institutional technology transfer organizations. The present state aid regulation, however, offers little guidance as to the operational conditions of such entities.

5. The lack of clarity in the existing state aid regulation regarding transfer of IP from PROs to industry has complicated R&D collaboration and limited market transparency. In particular, the present regulation in paragraph 2.4 of the state aid framework has been subject to different interpretations by various stakeholders - complicating the formulation of collaborative R&D contracts.

6. Our group chairman therefore sent a letter on behalf of the group to the Chair of the Crest group (DG Research.) In its response DG Research thanked the group for its comments, and agreed to discuss this within the Commission. The group acknowledged the preliminary draft (20.4.2006) "Community framework for state aid for research and development and innovation." It was noted that this did not mention support for technology transfer from PROs.

## *5.3 Conclusions*

**The revised Community framework for State Aid for R&D should reflect that exploitation of IP is a legitimate and necessary role of PROs in fulfilling their role in the execution of an important project of common European interest. Consequently, the Commission should consider appropriate measures for achieving this objective - e.g. in the form of a block exemption or similar.**

**The revised Community Framework for State Aid for R&D should aim to facilitate the flexible development and implementation of the various organisational models – including integrated offices at the PROs, subsidiary companies or trans-institutional technology transfer organizations - even if this challenges traditional borders between public and private sector.**

**The revised Community Framework for State Aid for R&D should seek for clarification – e.g. in the form of an accompanying guideline describing the practical implications of the regulation in various situations of R&D collaboration.**

European Commission

**EUR 20796 — Final report of the CREST OMC expert group on Intellectual Property. Cross-border collaboration between publicly funded research organisations and industry and technology transfer training**

Luxembourg: Office for Official Publications of the European Communities

2008 — 86 pp. — 29.7 x 21 cm

ISBN 92-79-02265-2
ISSN 1018-5593

KI-NA-20796-EN-C

Improvement of cross-border collaboration between public research organisations and industry has a significant role to play in promoting the long-term competitiveness of the European economy. Such collaboration is essential for the development and transfer of knowledge and technology throughout Europe.
This CREST group on Intellectual Property (IP) set out to address specific IP-related difficulties in setting up cross-border collaborations, by looking both at skills training and the tools available for technology transfer.

This report can be found on the Internet at http://ec.europa.eu/invest-in-research/pdf/download_en/crestreport.pdf
Its appendices, containing detailed information about national legal systems, are available at
http://ec.europa.eu/invest-in-research/pdf/download_en/crestreport_appendices.pdf

http://ec.europa.eu/invest-in-research/coordination/coordination01_en.htm

Publications Office
*Publications.europa.eu*

ISBN 92-79-02265-2