



## The European IPR Helpdesk

# Bulletin

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Research institutions invest substantial resources to achieve innovative results. Intellectual property (IP) protection is essential in this process so that such institutions can reap the benefits of their research activities and continue innovating.

This new bulletin issue focuses on the importance and the role played by IP in the context of research activities and how IP is managed by research institutions.

Firstly, WIPO introduces us to institutional intellectual property policies and explains how WIPO can assist on this matter.

OpenAIRE talks about open access and the different ways to make research results freely available under this practice.

Dr Dragan Indjin a COST Action Chair and Grant Holder shares with us his success story and his experience in research and IP.

Dr Claudia Tapia from 4iPCouncil explains how to collaborate in research projects while keeping IP business protected.

The European champion, TECNALIA, which has recently received the European Innovation Award, describes to us its experience in IP management in the context of research projects.

An article by the Luxembourg National Research Fund (FNR) summarises the initiatives and programmes which it provides for research projects.

As a closure to these articles and interviews, Professor Jennifer Littlechild, coordinator of the ERA-net project THERMOGENE, tells us in an interview about her experience in research projects and the importance of IP and IP management for their success.

As per usual, the Bulletin reports information about the European IPR Helpdesk's past and future events together with the latest updates from our Helpline service.

This time, you will also find a short article regarding the Autumn Meeting for the European IPR Helpdesk Ambassadors that was held in Brussels.

Finally, we invite you to test your knowledge on patent searching with our usual patent quiz and try to solve our brand-new IP and research multiple choice test.

Wishing you an inspiring read!

Your Editorial Team

## Institutional intellectual property policies – Getting the best out of academic research

**Lien Verbauwhede Koglin**

Counsellor, IP Policies for Universities, World Intellectual Property Organization (WIPO)

*An intellectual property (IP) policy is the cornerstone of innovation and creativity for universities and research institutions. It provides structure, predictability, and a framework for talented researchers to do what they do best: innovate.*

The agenda for the modernisation of Europe's higher education has made it a priority to reinforce the links between higher education, research and business to contribute to innovation (see [Renewed EU Agenda for Higher Education](#)). In this context, universities and research institutions often explore strategies that leverage their intellectual property (IP) assets and facilitate university-industry partnerships. Doing so, however, requires thoughtful consideration of how this IP-based process best provides economic, environmental and social benefits for society at large – while also preserving the essential character of the non-profit educational and research institution. Institutional IP policies are the first step, and the foundation for achieving these goals.

### What is an institutional IP policy?

An institutional IP policy is a formally-adopted document which establishes the way an institution intends to deal with the ownership and disposition of its IP. The main components of an IP policy include the following:

- rules on the ownership of the IP resulting from the institution's own or collaborative R&D activities;
- obligations of stakeholders involved in the technology transfer process;
- rules of the institution on how to accurately identify, evaluate, protect and manage IP for its further development, usually through some form of commercialisation;
- guidelines on the sharing of

economic benefits arising from the commercialisation of IP; and,

- rules regarding conflicts of interest and the establishment of policy safeguards.

a comprehensive policy will serve the mission of the institution and strengthen its credibility and public image.

### Why are IP policies important for academic institutions?

Establishing an IP policy is necessary for several important reasons:

- it protects and increases the value of research and innovation generated by faculty and students;
- it can significantly increase the institution's attractiveness to industry, by ensuring a predictable, stable environment of IP protection and commercialisation;
- it can help academic institutions, and their staff, move to become "entrepreneurial actors," by making innovation and entrepreneurship a core part of overall institutional strategy and by rewarding good innovation activities;
- an IP policy is also fundamental in helping institutions realise ethical and social commitments, align IP policy with their public sector mission and, especially, in ensuring the dissemination of knowledge through teaching and publications, research generation, and technology transfer so that research can contribute towards economic and social development. For these reasons,

### What should institutions consider when drafting their IP policy?

The following good practices may be useful for developing an IP policy:

- **Commitment at the highest level** – University leadership is vital to make a modern IP policy a priority and make the goals and benefits clear to the entire academic community.
- **Customisation** – No "one-size-fits-all" policy can meet all the needs of any given institution. Each institution should shape its policy to reflect its approach to IP management and technology transfer, and to take into account the institution's character, the nature of the technology itself, and the local "ecosystem": the entrepreneurial conditions beyond the institution.
- **Redefinition of the institution's mission as a source of problem-solving for the society** – IP policies can accelerate innovation and university-industry collaboration and help deliver solutions to pressing social challenges. However, to support such a process, the mission of the academic institution needs to be redefined. That mission now extends beyond education and research to





solving key social challenges and helping stimulate economic growth.

- **Focus on impact, not income** – Instead of a narrow focus on IP as an income source, academic institutions should be engaged in providing solutions for the economy; the income stream will be greater and the benefits wider.
- **Legal consistency** – The provisions adopted in an IP policy should not contradict national or international laws and regulations. Institutions should have processes in place to ensure that their IP policy is in line with national legislation and is legally binding.
- **Incentives** – Career structures for scientists in academic institutions have traditionally rewarded only academic accomplishments. IP policies should design incentives and redefine promotion criteria for faculty, to reward their active involvement in technology transfer activities.
- **Communication** – While the policy development process is in itself a valuable

undertaking, it is only the first step toward successful knowledge transfer, which also requires buy-in from senior management, reasonable expectations, and patience. The stakeholders of an IP policy (employees, students, visiting researchers, etc.) are normally not familiar with the complex issue of IP rights and transfer of technology. Therefore, an institutional IP policy should be short and comprehensive. Some institutions have found it useful to provide practical guidelines or a manual along with their IP policy, to explain IP management issues to their employees and students (such as best practices for students, guidelines for researchers, student handbook, etc.). Further, it is advisable that the IP policy be made available to the whole campus community through the hiring process, website, and other means of promulgation.

- **Improvement and adaptation** – An IP policy should be a living document and be subject to change by the institution.

### *How does WIPO assist?*

The World Intellectual Property Organization (WIPO) provides capacity building programs and tools to support the development of [IP Policies for Universities and Research Institutions](http://www.wipo.int/about-ip/en/universities_research/ip_policies).

Available resources include a list of frequently asked questions; a database of real world IP policies, manuals, and agreements from over 70 countries; as well as a variety of free documents and practical guidelines. By April 2018, this webpage will also contain an **IP Policy Template for Universities and Research Institutions**, guidelines for customisation, a policy writer's checklist and an IP commercialisation tool box.

*Would you like to add your institutional IP policy to the WIPO Database, or do you have any questions?*

Email: [lien.verbauwhede@wipo.int](mailto:lien.verbauwhede@wipo.int)

Website: [www.wipo.int/about-ip/en/universities\\_research/ip\\_policies](http://www.wipo.int/about-ip/en/universities_research/ip_policies)



## Science Set Free: Open Access to research output

**Inge Van Nieuwerburgh**  
Ghent University Library, OpenAIRE

Scholarly communication is at the core of research. Sharing the knowledge gained in a research project is a crucial part of the research cycle. Others can build on the outcome, collaborations emerge and expertise is acknowledged. Open access (OA) refers to the practice of making peer-reviewed scholarly research and literature freely available online to anyone interested. [Open](#) means that anyone can freely access, use, modify, and share for any purpose - subject, at most, to requirements that preserve provenance and openness. It does not affect authors' freedom to choose where to publish, nor the right not to publish. It is a question of making knowledge available to your peers, to the professional in industry, the teacher, the interested citizen, and making information reusable by humans and machines.

More and more funders require researchers to open up the research output of the projects they fund. The European Commission's

Horizon2020 funding programme, for example, requires open access to the publications resulting from the projects they fund, at the latest six or twelve months after publication, depending on the discipline. The Wellcome Trust issues similar mandates, as do many national funders. The idea is that everyone should profit from research paid for by public money.

There are two prominent ways to make publications open access. Self-archiving, or the green road to open access, and open access publishing, the gold road to open access.

When your article has been published in a subscription journal, you can deposit an open access version in a repository, such as [Zenodo](#) or any repository at your disposal. Since many journals require the author to transfer his/her copyright, the permission of the publisher is needed. Depending on the policy of the publisher, the version you deposit can be the preprint (the version before peer review), the author's final peer-reviewed manuscript (the version after peer review without the layout



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of the publisher), or the publisher's version (the published version). In some cases, an embargo period is required before the text can be made available in open access. You can check the publisher's open access policy in [Sherpa Romeo](#). This database indicates for

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OpenAIRE webinar series for repository managers 2017/2018

To empower our repository network, OpenAIRE is organizing a series of 10 webinars over the next 8 months. The main idea is to approach different OpenAIRE services and tools for content providers and recent repository developments, including: OpenAIRE Dashboard for Content Providers, Scholix guidelines for data-literature integration, OpenAIRE guidelines, Metrics and OpenAIRE usage statistics service, Text and Data Mining, the role of repositories in Open Access funder policy

**RESEARCHERS**  
Why Open Access. How to comply. What services to use.

**DATA PROVIDERS**  
How to make your content more visible. What to do to increase quality. How to join.

**RESEARCH ADMINS**  
How to monitor research results. What services to use for your needs.

**FUNDERS**  
Why align policies and practices. How to monitor and analyze results.

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many publishers which version you can self-archive.

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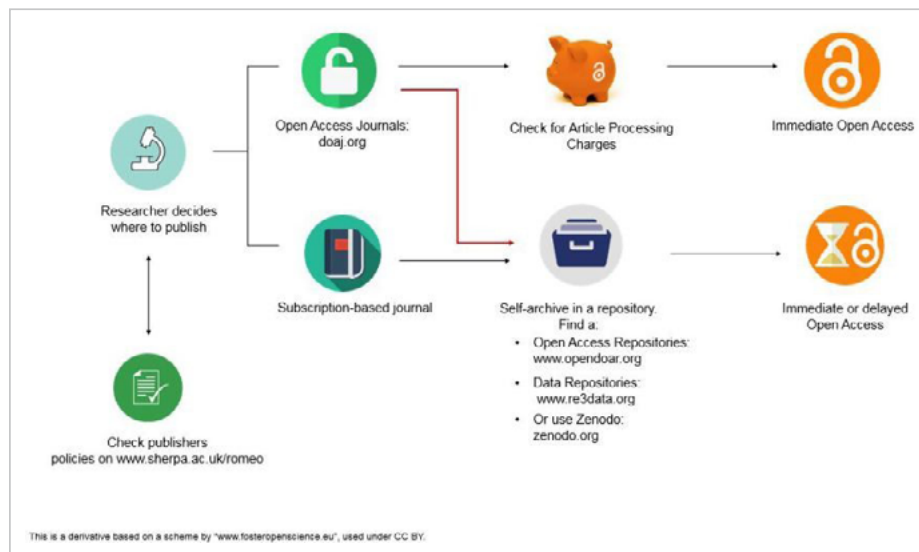
Different publishing models support open access journals. Charging APCs (article processing charges) is a commonly used practice, but some are supported by a scholarly society, some use crowdfunding to cover the costs, and in some cases the library pays a membership fee. To find a qualitative open access journal, you can consult the [Directory of Open Access Journals \(DOAJ\)](#) to browse OA journals by subject.

Bear in mind that many books follow the same path and can be found in repositories. Furthermore, the directory of open access books ([doabooks.org](#)) gives an overview of open access books.

No matter where you choose to publish, the green or the gold way, always remember to upload your publications to a repository. A repository handles exposure in search engines, is interoperable with other services through back-end APIs and is often quality-controlled. In short, the repository increases your visibility.

Moreover, a repository allows external infrastructures, such as OpenAIRE, to re-use the information and to build extra services. Let us look at OpenAIRE in more detail to show the advantages of Open Science infrastructures.

[OpenAIRE](#) is the European Commission's initiative for an Open Access Infrastructure for Research in Europe, which supports open scholarly communication and open science on the one hand, and access to the research output of European funded



projects on the other. As mentioned above, the European Commission implemented an [open science policy](#) in its funding programme Horizon2020. This policy includes a mandate for open access to publications and an (open) research data policy. OpenAIRE supports projects and researchers in complying with this policy. The infrastructure gathers open access content from a network of institutional and disciplinary repositories around Europe and beyond. The portal gives access to both open access publications and EU-funded scientific publications and datasets, registered in the 800+ participating data providers. OpenAIRE enriches the dataset as a whole and provides services such as direct reporting of publications in a project to the EC's participant portal, monitoring tools for depositing, usage statistics and interchanging enriched data. Several other funders noticed the practical use of the infrastructure and decided to take part, e.g. Australian Research Council, Science Foundation Ireland, Deutsche Forschungsgemeinschaft DFG, National Science Foundation USA.

OpenAIRE is however more than a technical infrastructure. The OpenAIRE community works to advance open science initiatives at national levels, through a network of National Open Access Desks (NOAD) in 34 countries. The NOADs follow up on local open science policy, connect the different stakeholders in their country and link them up globally, through OpenAIRE. What's more, the network operates a European Helpdesk system for all matters concerning open science, including open access, data management, copyright

and repository interoperability. Factsheets, guides, webinars and other helpful materials are developed.

As open access stretches out to other parts of the research cycle, beyond publications, OpenAIRE is moving from a publication infrastructure to a more comprehensive infrastructure that covers all types of scholarly output. Cross-links from publications to other information are supported. It positions Open Access publications in the wider research context, i.e. through linking to funding information, associated datasets, software, and patents, and promoting and supporting good research data management practices. By doing so, OpenAIRE supports researchers to adhere to the FAIR principles, making research Findable, Accessible, Interoperable and Reusable.

It is clear that the future of research is open, and research can only be open.



## INTERVIEW

## “Our advice to other researchers who want to secure investment is to contact their technology transfer office and consider protecting their IP.”

*In this issue we have interviewed Dr Dragan Indjin, Reader (Associate Professor) in Optoelectronics and Nanoscale Electronics at the School of Electronic and Electrical Engineering, University of Leeds, UK. He is also a COST Action Chair and Grant Holder with a success story that he is sharing with us.*



### Could you tell us about your current work in the field of laser devices and the importance of your research, in particular for end-users?

My primary research interests include infrared and terahertz lasers and detectors and their applications to imaging and sensing. Over more than two decades I have been working on understanding the quantum physics background and modelling of electronic structure and optical characteristics of specific semiconductor devices, so-called quantum-cascade lasers (QCLs). The ability to generate infrared or terahertz radiation with high power and high spectral purity, coupled with the compact nature of these laser devices, make them ideally suited not only to the study of fundamental science but also for real-life applications including gas-sensing, wireless communications, bio-medical imaging, security sensing and non-invasive inspection and atmospheric science.

At the School of Electronic and Electrical Engineering, University of Leeds, UK, we have established multidisciplinary routes to collaborate with partners and end-users who are interested in using these laser devices, in particular in the terahertz frequency range. Terahertz QCLs have been designed, modelled, optimised and fabricated in-house in our institution. In addition, specific terahertz spectroscopic techniques, accompanied by sophisticated computer codes and integrated modelling software, have been developed and used for both understanding complex optoelectronic properties of devices and for their optimisation for particular applications.

### In your opinion what is the importance of IP in the research world?

Patenting is a way to document and protect research results for researchers. Having a patent application helps researchers to attract research funding from industries. Furthermore, having a granted patent

also helps in evaluating and developing commercial opportunities arising from conducted research. It definitely helps in translating research into commercially viable outputs. That would be a key step to assist with exploitation through, for example, spin-out companies, and to achieve maximum impact from research and eventually enhance public benefit.

### Do you use IP to protect your research results and if so, have you faced any problem?

Yes, we do use patents to protect our research results. A recent good example is a sophisticated spectroscopic technique with quantum-cascade lasers we are developing in collaboration with researchers from the School of Information Technology and Electrical Engineering at the University of Queensland, Brisbane, Australia. The technique is called optical-feedback interferometry and in essence, employing self-mixing phenomenon allows a single QCL device to be employed as both a source of radiation and a coherent detector, which has enabled its wide application for materials analysis, three-dimensional imaging, vibration-sensing and high-resolution microscopy.

One of the most exciting prospective application is in terahertz bio-medical imaging, more specifically for the screening and early diagnosis of skin cancer. As an important outcome of this research, together with colleagues from Leeds Dr Paul Dean, Prof. Giles Davies and Prof. Edmund Linfield and from Brisbane, Prof. Aleksandar D. Rakic, Dr Karl Bertling, Dr Yah Leng Lim, Dr Thomas Taimre and Prof. Stephen Wilson, I am in the international patent application (PCT) process for [“a laser system for imaging and materials analysis”](#). We were lucky to have a strong support from the University of Queensland’s UniQuest commercialisation team and from the Commercialisation Service teams at the University of Leeds, who were – and still are – instrumental in this patent application.

A patent application is a very time consuming and expensive procedure. I would say cost is probably the most challenging problem we face, especially the cost of patent prosecutions in multiple countries. Another aspect of patent application is that researchers involved in the procedure should be “equipped” with patience and persistence and be ready for a very long process if they want their IP be protected across the globe. Therefore, apart from securing funding for international patent applications, they should be ready to deal with and reply to all comments raised by patent reviewers from different countries and try to defend all claims in their patent application.

This is of the utmost importance! It is not enough having a patent application only in your own country; you should complete the full procedure internationally and defend all claims in the patent application if you want to have your IP rights fully protected and recognised. This is usually a much more complex and time-consuming process than, for example, the work typically done to publish research results in top international journals.

### Do you think that IP protection of research results helps to obtain funding? What would you advise to other researchers who want to secure investment?

The IP protection of research results definitely helps to obtain funding from industry, for multiple reasons:

- The patent application allows us to clearly define the background IP that universities would bring into the project.
- Having a patent application shows to the industry partner that the universities intend to commercialise the collaboration outcome, which is what most industry partners want to see.
- The patent application will give us a strong position when we negotiate for a licence agreement.

Our advice to other researchers who want to secure investment is to contact their technology transfer office and consider protecting their IP. Industry partners like to see that there is an opportunity for them to obtain some competitive advantages for their business by having an option of exclusive access to the outcome of the research that they are funding.

**What has been the impact of the COST network that you have coordinated for the last 4 years?**

In my opinion, the [COST](#) research network has indeed been key to the collaboration I have developed over the past few years. Academic, clinical and small industrial partners from more than 25 European and COST associated countries have been part of the network, collaborating to substantially improve existing optical methods for skin cancer screening and early detection. In particular, recent results from our very successful collaboration with colleagues from the University of Queensland, that led to our above-mentioned joint patent for a laser imager and its prospective use in early skin cancer detection, was one of the key outcomes of this project.

The COST programme funds the networking activities that funded Actions organise, which is why [the Action](#) turned out to be a very efficient and useful mechanism. Not only did the Action help establish new

- and strengthen existing - international collaborations between partners who already have core funding supported by national funding bodies, but it also provided young researchers with training opportunities, funded their short-term scientific exchanges and open access joint publications.

The network planted a seed for further substantial joint grant applications between partners. In some sense, the COST Action was an ultimate source of funding, supporting collaboration between European and other overseas partners (for example from Australia).

**What advice would you offer a European policy-maker to boost research and innovation?**

This is not easy to answer. In my opinion, a more substantial research funding is needed. Besides, the research community evidently desires an improved procedure for grant competition. Also, much better indicators and measures of success of already funded projects should be developed. Different stakeholders, prospective industrial or clinical partners and end-users should be better informed of scientific success and technological breakthrough achieved by particular research groups. Consequently, European funding sources and their reviewers who are evaluating new project applications should be aware of and support further development of successful stories. I am

confident that open publications like your European IPR Helpdesk Bulletin would help to achieve these goals.

Today, researchers at universities and academic institutions are investing huge amount of their time and energy to align their research ideas and achievements to research funding mechanisms and corresponding funding body administrations. Most often their academic careers and career progress in their institutions, especially in science and engineering disciplines, are directly related to their ability to attract research funding, I would say sometimes much more than their research abilities themselves. I think that policy-makers together should pay attention and help to find a balanced approach.



UNIVERSITY OF LEEDS



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**cost**  
EUROPEAN COOPERATION  
IN SCIENCE & TECHNOLOGY

## Open Innovation – How to collaborate while keeping IP business protected

**Dr Claudia Tapia**

4iPCouncil Chair and IPR Policy Director at Ericsson<sup>1</sup>

There are several good reasons why small and medium-sized enterprises (SMEs) choose to collaborate with other companies or with academia. For instance, SMEs can benefit

from the resources offered by peers or large companies, both to develop their own ideas, or to better navigate complex ecosystems. By collaborating, an SME can, for example, gain access to the technology of a large company and improve its own product or service, while the large company can benefit from the specific competence of the SME, complementing its knowledge and expertise



<sup>1</sup> 4iPCouncil represents leading inventors and innovators in Europe (SMEs as well as large companies) who believe that intellectual property rights enable innovation and increase social and economic welfare. More information about 4iPCouncil is available at [www.4ipcouncil.com](http://www.4ipcouncil.com).

(e.g. an algorithm of an SME incorporated into a 5G antenna of a large company)<sup>2</sup>.

However, collaboration does not only imply opportunities but also risks. Therefore, it is essential that the SME learns how to protect the intellectual property (IP) and know-how that is created prior to, during or after the collaboration.

At the stage where the SME is exploring the opportunity to collaborate with someone external, it is advisable that both parties sign a non-disclosure agreement (NDA). The European IPR Helpdesk, for instance, provides a [sample NDA](#). An NDA allows parties to share knowledge in general and safely disclose trade secrets. When the decision has been taken to collaborate, the next step is usually to sign a collaboration agreement. The goal is to make sure that there is a win-win situation, where parties agree not to block each other and there is a mutual understanding on IP-related issues.

Normally the agreement establishes that each party is entitled to access the IP and know-how of the other party created (1) prior to ("[background](#)"), (2) outside ("[sideground](#)") and (3) after the collaboration (For example, ) and which is relevant to the "[results](#)"<sup>3</sup> of the collaboration.

However, this is usually limited to the IP and know-how needed for the party to use the results commercially. Background, sideground and postground can be licensed for free or under reasonable conditions, the later with or without monetary compensation.

IP that is created by one of the parties during the collaboration period ("results") is typically owned by the party that creates it. A different scenario may occur if the other party, e.g. a large company or a university, has paid for the filing of the patents and/or the R&D efforts, in

which case the parties may establish that the SME creator will give the result to the other party for free or sell it for a certain amount of money (e.g. a fixed price of EUR 10,000 per patent). It is also common that, in exchange, the large company (new owner) licenses such patent(s) to the SME-creator for free.

For jointly created IP results the scenario is much complex ("[joint ownership](#)"). For example, when parties decide to "co-patent" the results of the collaboration, i.e. both parties own the patent(s), the main challenge is to determine which law applies to such patent(s). The parties need to clarify the law to be applied regarding (1) the patent acquisition, (2) the scope of the rights conferred by the patent, and (3) the contractual agreements<sup>4</sup>. Negotiating how to deal with co-owned patents may be extremely time-consuming and lead to conflicting positions in the future<sup>5</sup>. What if the large company wishes to license its portfolio, including co-owned patents, but the SME refuses to license them? What if the university desires to license the patent to a competitor of the SME? What if one party decides to transfer its patent(s) to a third party and the other party disagrees with this transaction? Due to the multiple complexities that may arise during the negotiation and after the collaboration has been finalised<sup>6</sup>, parties often agree to split the patents, leading to sole ownership. Again, if the SME chooses not to pay for the filing and maintenance of the patent then, instead of splitting, a fixed price may be negotiated as a sell price per joint patent. In any case, the sole owner (large company or university) agrees in turn to give the SME a royalty-free licence for the patent(s) it acquired.

When collaborating with academia, the SME may face the situation that the university wishes to publish the result as soon as possible. Therefore, it seems desirable that the SME introduces a clause in the agreement



Dr Claudia Tapia  
4iPCouncil Chair and IPR Policy Director at Ericsson

so that it has a period (30 days should be sufficient) to review the draft for publication and that the publication will only take place if jointly approved by the parties. Equally recommendable would be to agree that if the publication discloses the invention, there is a pause in the publication (e.g. 90 days) allowing the SME to file a patent prior to making the invention publicly available. Otherwise, the SME would lose the grant of a patent due to lack of novelty.

Collaboration is sometimes indispensable for an SME to compete successfully in a global market. By considering IP issues prior to and during the negotiation, an SME can obtain the best out of the collaboration.

**The views expressed herein are the views of the author alone and do not necessarily represent the views of 4iPCouncil or Ericsson.**

<sup>2</sup> Although this article focuses on SME collaboration with a large company or with a university, an SME can also participate in R&D consortia, collaborate with public research institutions (not universities) and join an "open science" model, where IP is inexistent or licensed with little or no limitations. See J.-N. Delage, IP issues in open innovation and collaboration, Building and Enforcing Intellectual Property Value, IAM, 2010, Pages 55-58.

<sup>3</sup> "Results", as defined herein, are also referred to as "[foreground](#)", which was the term used before the Horizon 2020 EU Framework Programme for Research and Innovation.

<sup>4</sup> Gorbatyuk et al. (2016) recommend parties to select the law applicable since the national laws in Europe establishing the rules to exploit co-owned patents are not harmonised.

<sup>5</sup> Feldges and Kramer (2017) identify the following problems: (1) cost sharing (2) filing policy (3) exploitation and (4) licensing. See Robert P. Merges and Lawrence A. Locke, Co-Ownership of Patents: A Comparative and Economic View, 72 J. Pat. & Trademark Off. Soc'y 586 (1990).

<sup>6</sup> As Gorbatyuk et al. (2016) explain, "collaboration parties tend to have conflicting business interests and different preferred legal regimes".



## INTERVIEW



## TECNALIA wins the European Innovation Award with its failure prediction system for Industry 4.0 developed with NEM Solutions.

*TECNALIA Venture's founder and CEO, Asier Rufino, talks about the award and the IP protection tools available in Europe.*

### What is A.U.R.A., your award-winning technology?

A.U.R.A. is a Big Data-based technology that helps in forecasting expected behaviour and identifying future failures in key corporate assets such as wind turbines or railway subsystems. This technology, industrialised and patented by NEM Solutions with TECNALIA's cooperation during the research and development phase, is currently being applied worldwide in the wind power and railway sectors.

A.U.R.A. has conducted over 80 million hours of operation in over 65,000 assets connected worldwide. For example, 18,000 train wheels are supervised daily in the five continents.

In the wind power sector, it enables companies to plan predictive maintenance strategies while reducing operation and maintenance costs associated with unplanned downtime and increasing energy generation and wind turbine life cycle. With thousands of wind turbines supervised by A.U.R.A., there are many success stories where failure is detected often over one year in advance. The record of success stories in this sector confirms savings amounting to hundreds of thousands of Euros thanks to the identification of a single catastrophic failure at the right time. When this is multiplied by all the assets monitored, the outcome translates into millions in savings.

In the railway sector, this system improves passenger safety and security, guaranteeing greater punctuality in train services. Benefits go from the control of possible train wheel defects, to enhanced comfort as future failures in air conditioning equipment are detected. NEM Solutions clients have confirmed improvements of up to 35% in their budgets thanks to this technology and to NEM Solutions auxiliary services, increasing the useful life of assets by up to 30%.

### What does EARTO's European Innovation Award mean for you?

The European Innovation Award was jointly granted to TECNALIA and NEM Solutions by EARTO, the highest European association in the field of innovation, for the "Impact Delivered" category, which rewards the best technology transfer practice. This is very important for us, because this is a recognition that connects to the core of our organisational mission, which is to "transform technology into GDP".

We are proud of seeing this technology, where TECNALIA has collaborated from the start, offering substantial profit and loss (P&L) impact to companies in the railway and wind power sectors, through NEM Solutions' products and services.

### Would you say European research companies are well positioned at a worldwide level?

Applied research organisations focused on developing and transferring technology to resolve P&L industry problems are a powerful tool for European companies' competitiveness and, as a result, there is quality employment being created. There are parts of the developed world where applied research organisations don't have the presence they do in Europe and this usually results in a smaller representation of industrial GDP out of overall GDP in these regions or countries.

I think top European RTOs benchmark well against other similar top organisations worldwide and, even more importantly, these RTOs contribute in a relevant manner to European companies sustaining their international competitive edge.

### How can research come to commercial fruition?

I like to point out that innovation is a very hands-on exercise that ultimately aims at getting the "cash register ringing". For the

cash register to ring out of a research project, you need several pieces to come into play:

Firstly, you have to make sure that you transform the research project into a technological product that resolves a problem that has a positive P&L impact on the end user companies (most of the research we do is targeted to B2B/B2G business models and in this setting it is almost axiomatic that you have to focus on resolving P&L problems).

Secondly, you need to protect this technology in a way that will maximise its future economic value.

Thirdly you need a well-rounded team made up of both technological profiles and also, critically, business/marketing/sales profiles that will bring the innovative products to the market.

Last but not least, you need money (smart investors) brought by corporates, venture companies (VCs), family offices, etc. that will provide the "fuel" for the teams to have the time to sell the innovative products in the market and hence finally get the cash register ringing.

Therefore, in strong innovation ecosystems around the world, you always find Minds – Management – Money type of stakeholders with critical mass, interacting to transform research into innovation.

### What should be improved and what can policy makers do to boost research and innovation?

I believe that policy makers, for instance at European level, are doing a good job at providing support in "isolation" to each of the three type of stakeholders: Minds (e.g. H2020 research budgets are very substantial); Management (e.g. there are also H2020 budgets for start-ups/entrepreneurs) and Money (e.g. the EIB is the largest Limited Partner in Europe).

However, a more holistic view is missing in terms of fostering, perhaps even forcing the three type of stakeholders into working or interacting more often together. Often, rather than devising yet a new financial instrument to try to finance innovation, you could go further by trying to connect better: technological capabilities of RTOs/ universities (e.g. research financed by H2020 programs, Minds) with SME Instrument Phase II beneficiaries (Management) and for instance the European Business Angel Network (EBAN, Money).

#### **What is your view on the IP protection tools available in Europe?**

Our experience is that EPO standards are very high and are both recognised and benchmark well internationally. We use the EPO quite systematically and as a result we have been in the top 6 organisations in Spain in terms of EPO filings for the last two years.

The Unitary Patent will reduce costs and complexity after EPO patents are granted. It was a bit cumbersome checking country by country in which ones you required protection, undergoing a very fragmented renewal fee system that required the use of representatives, etc. We think it is a clear improvement.

#### **From your experience, is there any area where you see room for improvement in terms of IP management for research projects?**

First of all, when it comes to IP, sometimes we tend to believe that IP serves to prevent someone from doing something that you are doing or want to do, but the most important fact is that IP ensures that you have legitimacy to do what you intend to do in order to pursue a business opportunity. In the context of patent infringement, litigation should come as a last resort solution after you try to explore in a creative way how you could articulate, for instance, a licensing

deal, cross selling or other type of commercial deals.

Keeping this in mind is relevant, for instance, in the context of relationships inside European projects and consortia where IP is always a delicate matter.

You have to clearly state what is the background you bring to the project, and specify the particular developments that will be inside your perimeter and thus susceptible of proprietary IP emanating from the project vs. shared IP. Then, if you commercialise something that originates from the project, the rights of first refusal of other consortia members, etc. come into place. It is quite cumbersome at the moment to develop and commercialise IP in the context of a European research project although these consortia could offer the opportunity to identify partners to commercialise IP.

#### **As European innovation champions, what is your advice to start-up innovators?**

As I mentioned before, Management and Minds must collaborate in a more systematic way as it occurs across the strong worldwide innovation ecosystems that spring to everybody's minds (e.g. Israel; East-West Coast in the USA, etc.). We at TECNALIA/ TECNALIA Ventures foster this type of collaboration in a twofold way: firstly, launch and ongoing collaboration with spin-offs such as NEM Solutions. This SME gazelle is a clear example of the benefits of an ongoing collaboration with an RTO focused on both strengthening and improving the features of the existing products of the company and also bringing in new innovative products so as to keep the company's competitive edge.

Furthermore, in the context of our incubation accelerator program (Omega Zero to One), we try to find Management very early stage start-ups that are seeking capital to develop a technological innovative product and try to match it with the capabilities of our Minds

that could be deployed instead of the capital to develop the product that the start-up requires.

There is an iconic H2020 project in robotics ([RoboTT-NET](#)) that we are leading, where a group of top European RTOs have put in place a mechanism to identify early stage robotic s start-ups across different countries in Europe along with an instrument (technological voucher) to get RTO minds collaborating with these start-ups.

There is also a strong open innovation trend amongst large organisations, which have realised that perhaps some of the start-ups out there could be the seed of their future blockbuster products. In this context, we are also helping large corporate organisations reach out to start-ups through the means of venture building or acceleration incubation programs.

Start-ups should be exploring these relationships with large corporate organisations while keeping in mind potential trade-offs in terms of future loss of control.

Finally, nowadays NEM Solutions turns digitalisation and advanced data analytic processes in the mobility and energy sectors into a unique revolutionary memorable experience. A.U.R.A., with its patented technology, offers a close collaborative environment for decision-making in the field of operation and maintenance. The chief aim of all this is helping their clients to control their assets and anticipate their future needs.

#### **More information**

Website: [www.tecnalia.com](http://www.tecnalia.com)



**TECNALIA is a benchmark research and technological development centre for Europe, with 1,400 experts of 30 different nationalities, focusing on transforming technology into GDP to improve people's quality of life, by creating business opportunities for companies.**

**TECNALIA Ventures is a subsidiary of TECNALIA that was set up in 2013 and provides acceleration incubation and venture building services to TECNALIA's most promising technologies - thus transforming these technologies into technology-based business opportunities that are commercialised either via new licences or via the launch of spin-offs. Furthermore, TECNALIA Ventures provides R&D valorisation services to a wide array of organisations ranging from government to universities, RTOs (Research and Technology Organisations), and companies or investors in Europe and South America.**

## R&D is vital to the process of innovation – How research leads to innovation and why companies should seek collaboration with research institutes.

**Dr Andreea Monnat**

Head of Unit – Innovation Programmes,  
The Luxembourg National Research Fund



*Private R&D is doing very well, but only if one is talking about hugely prosperous companies - like for example the tech world's GAFA (Google, Apple, Facebook, Amazon), etc. Unfortunately, few small and mid-sized enterprises (SMEs) have the resources to invest in or pursue early-stage innovation.*

*This is where R&D collaborations with public research institutes could play a pivotal role. Companies and research institutes are two partners that might seem distant at first sight, but who are actually two sides of the same coin. In Luxembourg, the Luxembourg National Research Fund (FNR)<sup>1</sup> aims to bring these parties together, as it is convinced that public-private partnerships, and thus the exploitation of research results, enhance and underpin enterprise competitiveness and societal development.*

Since its foundation in 1999, the FNR focuses on building a sustainable research environment, from the ground up, with infrastructure and opportunities that are attractive for the brightest minds. Over the past two decades, the FNR has invested large amounts of money into both high-quality scientific projects and outstanding professionals and has established itself as the guarantor of “excellence” in its funded research. After this development phase, that lasted some fifteen years, the Luxembourgish research ecosystem entered the phase of consolidation. For the FNR, this meant the time had come for harvesting the fruits of its investments. This is why the funding agency diversified its strategy in recent years and now also contributes with funding to support innovative, applied research in collaboration projects between companies and research performing organisations (RPO).

### *A win-win situation for both sides*

In 2013, the FNR put in place specific funding instruments to encourage the translation of high-impact research into commercially viable innovations. Without an exploitation strategy, excellent research may “only” remain research work, never reaching its full potential and never creating an impact on our society. The FNR’s many initiatives range from pre-seed funding to kick-starting innovative projects, to facilitating symbiotic partnerships between researchers, businesses and ecosystem members<sup>2</sup>.

Such collaborations are a win-win for both sides: businesses gain access to creative minds, while researchers get the chance to take their research to the next level and have a socio-economic impact.

As it is the rationale of a research institution to generate, develop, exploit and diffuse knowledge and technological assets<sup>3</sup>, collaborations with SMEs just seem obvious. Exploitation of research results helps to accelerate scientific progress as companies’ feedback flows back into research. Knowledge and technology transfer to existing or newly created companies open a channel of innovation between the RPOs and the private sector. This knowledge transfer is also an important open innovation vehicle that can contribute to the competitiveness of the company in a global challenge and excellent talent attraction.

On a broader level, one can say that exploitation of research results may support the economic development of a country, preserve its competitiveness and probably contribute to attracting foreign companies.

In Luxembourg, public-private partnerships, in areas that demonstrably enhance and underpin enterprise competitiveness and societal development in the country, are supported by the FNR.

### *The FNRs industry partnership programmes*

For collaborative research (between a company and a research institute), two types of funding exist. On the one hand, there is a funding possibility via the Ministry of Economy through the research development and innovation law. And on the other hand, a competitive funding via the FNR. The latter has three funding schemes that finance either PhDs and Postdocs, or research projects in companies.

The “Industrial Fellowships” programme supports researchers who carry out their PhD or postdoc training in collaboration with a company in Luxembourg. The “IPBG” (Industrial Partnership Block Grant) programme awards a block of PhD and/or postdoc grants in which Luxembourg-based industry partner(s) active in R&D take the lead in arranging a research programme with a Luxembourg-based public research institution of their choice. The “Bridges” programme supports applied research that meets the needs of industrial partners.

The FNR’s future challenges will lie in developing strategic partnerships and putting standard, functioning frameworks in place with institutions, politicians, media, the society, researchers and the government. Only by working together with the same goals in mind we can have a greater impact on society and on the Luxembourgish economy. The FNR should become a place where researchers feel free, protected and where their efforts are appreciated in the process of generating ideas that will positively change the world.

<sup>1</sup> The Luxembourg National Research Fund is the main funder of research activities in Luxembourg and invests public funds and private donations into research projects in various branches of science and the humanities, with an emphasis on selected core strategic areas.

<sup>2</sup> <https://www.fnr.lu/innovation-industry-partnership>.

<sup>3</sup> Successful collaborations between companies and research institutes – [Guide](#) issued by Luxinnovation, with the support of IPIL G.I.E., FNR and the Ministry of Economy.



## INTERVIEW

**“It is important to protect the results obtained from research projects and prove their ownership. This can allow the results to be disclosed without the threat of them being used by others.”**

*Professor Jennifer Littlechild has coordinated and participated in several transnational EU and ERA-NET projects and is currently participating in a project which is funded within ERA CoBioTech.*



**Could you briefly tell us what is ERA-NET and your experience coordinating research projects?**

The [ERA-NET](#) is a funding scheme that allows small consortia to work together from different EU countries on a specific project of interest to the call, in my case Industrial Biotechnology.

The grant is evaluated by the ERA-NET using independent experts in the scientific area. It is a two-stage process and the applicants are allowed to comment on the referee's comments if selected for the second round. One partner is the lead on the project and is involved with the overall management together with other partners. The funding is provided from the individual countries' funding streams which were part of the original grant concept. The ERA-NET scheme has advantages in that the funded projects help to access further funding from member countries for Industrial Biotechnology. The complementary expertise of different partners allows the development of multidisciplinary projects which could not be addressed by one partner alone.

The funding available and the participation of different countries can vary from call to call. This can be frustrating for applicants as to whether they will be able to participate or not. There is also variation in the funding levels available in different countries which can create an imbalance in the overall project financing, although participants can be partners in the grant using their own alternative funds if available. In my case, I have helped to write an ERA-NET grant application in a round where the UK funding agency did not offer support. I was able to still be involved in this ERA-NET project as a sub-contractor and able to participate in the management committee.

The ERA-NET projects have a positive contribution in helping to establish consortia which can later be involved in larger Horizon

2020 consortium grant applications which are totally funded by the EU. The new call for ERA-CoBioTech is good since it covers a wider remit including both Synthetic Biology and Systems Biology together with Industrial Biotechnology. I am a partner in a consortium participating in a project called HotSolute, that has been funded in the first call for this programme.

My experience in co-ordinating an ERA-NET project is with the grant THERMOGENE. This project aimed to use nature's diversity to find new thermophilic transfer enzymes that have commercial applications in Industrial Biocatalysis for the production of optically pure intermediates for the pharmaceutical and agrochemical industries. These enzymes need to be robust for such industrial applications and need to have the correct substrate and stereospecificity for the commercial process. The use of biocatalysis opens the way for a range of green and sustainable processes for chemical synthesis that produce less toxic waste and result in purer compounds with one chirality offering improved and safer drugs.

The achievements of the THERMOGENE project have been that many new thermophilic transfer enzymes have been identified, cloned, purified and characterised from all of the four different enzyme types (transaminases, transketolases, prenyl transferases and hydroxymethyl transferases). The robust nature of these enzymes to both temperature and organic solvents makes them interesting candidates for new industrial applications.

Sharing of research facilities within the consortium and exchange of protein samples and expertise has contributed to the success of the project.

Apart from the scientific benefits of the ERA-NET project described above, good personal contacts were made between partners, postdoctoral fellows and students associated

with the THERMOGENE project who have experienced meeting in the countries of different partners.

**As a researcher and coordinator, do you think IP is important for your work?**

As a researcher and coordinator, IP is certainly important to consider. It is important to protect the results obtained from research projects and prove their ownership. This can allow the results to be disclosed without the threat of them being used by others. This sometimes can be in conflict with the pressures of the academic community to publish their results in open access journals.

For projects such as THERMOGENE it is not usually possible to patent an individual enzyme, but one can patent the process which the enzyme is used for. In this sense it is important for the project to gain advice from an industrial end-user as to which are the “highest priority” enzymes required to produce the most important industrially relevant chemical intermediates. It is important to have this industrial link with the ERA-net project, whether as an advisor to the grant team or a full industrial partner.

**Before entering into a research project, do you put in place any IP measure?**

Before starting the project, a consortium agreement covering any IP issues was put in place between all partners of the THERMOGENE project, which was agreed with Exeter University (the co-ordinating UK partner) and signed by all partners. The use of background IP should be considered and should be declared in the consortium agreement before the start of the project. In our case, the background IP that each member was going to bring to the project was clearly defined in the agreement and access rights to that IP by each member (in order to perform their own activities within the project) were decided on a royalty-free and non-exclusive basis. Furthermore,

it was agreed that the parties would be granted access to that IP under fair terms, if needed for their own internal commercial use, provided they requested such access in writing. It is important that all consortium partners are represented on a management committee to address IP issues.

#### How do you manage the ownership of IP related to research results?

The consortium agreement should address the issues of ownership of IP related to the research results of the project. In the case of the THERMOGENE project, the issues of the ownership and protection of the results were addressed. It was agreed that the results obtained should be the property of the party who generated them. That party has to ensure that the ownership, title and all the IPRs in any results generated by its staff or subcontractors are transferred or assigned to it.

Joint ownership of results should also be foreseen in the agreement. We agreed that the shares of ownership should reflect the

contribution of each joint owner as accurate as possible, and that they had to agree separately on the management of the joint ownership. The disclosure of the foreground IP should be discussed with all partners involved in the consortium before any action of individual partners.

#### How challenging is it to engage investors in research projects and, what role do IPRs play in this process (e.g. holding a patent may help to get fund)?

It is anticipated that an SME will be established to produce some of the enzymes developed from this project and make them available in kit form to interested companies. The THERMOGENE enzymes are not currently available to industry. It is always a challenge to engage initial investors in such an enterprise.

The available time on a 3 year ERA-net project which has to identify new enzymes and characterise them is not enough to put in place patents for their applications in specific industrial processes. It would be good to have a follow on fund to try to exploit the

thermostable enzymes. This would however ideally have to be provided centrally from EU funds. This would then help to engage potential investors to carry out further research to allow commercial application. There are follow on funds for exploitation of BBSRC funded projects in the UK. These consist of relatively small amounts of funding to enable preliminary commercial activities.

#### In your opinion, is there anything that should be improved regarding available IP protection tools in the field of research and development?

It is sometimes difficult when only universities and research institutes are involved in a project to secure the funding to support and more importantly maintain potential patent applications. Funds to assist in this would be helpful.



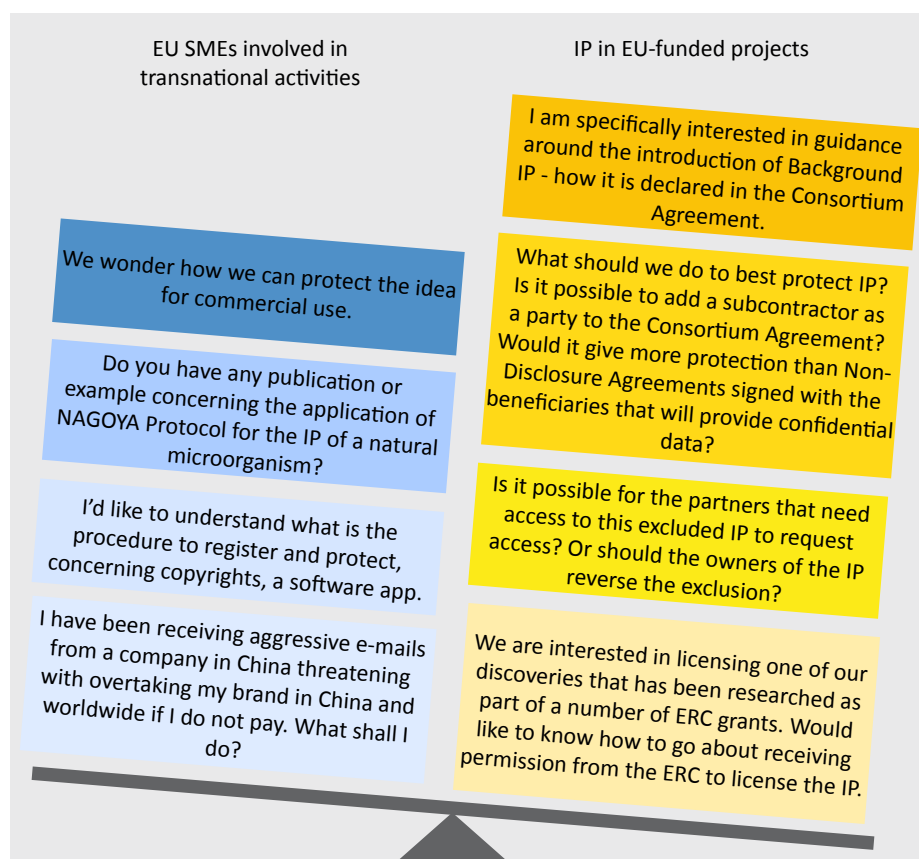
## Your IPR Queries Matter to Us: Ask the Helpline

The European IPR Helpdesk Helpline answers your questions concerning intellectual property (IP) within three working days. You get practical, and free-of-charge, first-line support directly from our IP experts.

If you are curious about the type of IP queries that the Helpline has recently been dealing with, these are shown in this illustration.

If you would like to talk to one of the IP experts of our Helpline, please dial +352 - 25 22 33 - 333

[www.iprhelpdesk.eu/helpline](http://www.iprhelpdesk.eu/helpline)



## FREQUENTLY ASKED QUESTIONS

## IP RIGHTS IN GENERAL:

I have a question regarding a publication I participated on by providing some drawings. The authors did not include me in the authors' section but simply cited me in acknowledgments. They consider that, as I have not provided any scientific contribution to the publication, I am not an author. What do you think about this case?

Writing is not always seen as the only criterion for being accepted as a co-author. Depending on the field of research, collecting, processing, or analysing data, performing practical experiments, or simply being part of a project, can also be considered as co-authorship. There exists no universal standard for authorship assessment. Many research institutions have developed their own ethical guidelines that regulate co-authorship. Nevertheless, there is one rule that is always present, and which seems to be of paramount importance for the determination of the authorship: authors should be those who have contributed substantially to the work (for the most part, essentially). We could see that you have created several graphics that, in our opinion, merely complement the main content of the article. We have our doubts if such contribution can be considered as "substantial" in this case. It is, at the same time, a good practice to mention all the contributors in the acknowledgements – which has been done in this article. Additionally, you could ask the authors to put your copyright notice under each of your graphics. In order to avoid this kind of unclear situations in the future, we suggest that you discuss this kind of issue before you decide to contribute to a scientific work. As mentioned, assessment of the authorship has no strict rules, and the distribution of authorship can be agreed upon between the collaborating participants before the work starts. It is also a common procedure to conclude a written agreement between the collaborators.

## EU-FUNDED PROJECT:

Exergy is coordinating one of the Horizon 2020 projects named EcoBulk. Just recently, we have established an external collaboration with a company that specialises in the recycling of waste materials from wind turbine blades. This company will not formally join the EcoBulk consortium, instead we have agreed on a certain scope of work that will be

undertaken by some partners of the EcoBulk consortium and this external company for mutual benefit. We are at the stage where we would like to formalise this collaboration with some kind of agreement to make sure that the expectations and tasks of each party are clear from the beginning.

Could you provide us with some advice on this?

We understand that you are looking for a template of a subcontracting agreement that would be suitable for Horizon 2020 projects. Unfortunately, to the best of our knowledge, no such template exists – the European Commission has not released any official document for this purpose. A reason for that may be that the contents of such agreements can vary greatly in scope, depending on the complexity of the work subcontracted, on the expected compensations, and on the expectations of both parties regarding e.g. IPR. All of these parameters have to be defined contractually: there is no rule and therefore templates will never fit all situations. Drafting an efficient subcontracting agreement may be a complex matter and should be entrusted to a commercial lawyer, in order to avoid any pitfalls and ensure that both parties' interests are secured (in particular regarding warranties and liability). Nonetheless, your agreement could cover the following points:

- Identification of the parties
- Definitions
- Purpose of the agreement: subcontracting agreement signed in the context of project X regarding Y
- Obligation of the parties: precise description of the tasks entrusted to the subcontractor, and relevant milestones or timeframe; the beneficiary may also have some obligations (e.g. to provide specific input or guidance)
- Price and payment terms for the work that will be performed, and relevant milestones or timeframe
- If relevant, monitoring mechanisms (e.g. checking that the work is correctly performed before each payment instalment is carried out)
- Ownership of the work and related intellectual property rights: this part should mention which party (beneficiary or subcontractor) retains the IPR over the subcontracted work. In principle, the beneficiary should acquire ownership of the results and related IPR developed under the subcontracting agreement, or at least appropriate user rights (see

further explanations below)

- Confidentiality clause
- Liability and warranties clause - relates to the liability of either party to the other for breach of the obligations under the agreement
- Duration of the agreement - the agreement should include provisions on the date when it enters into force, its duration and the forms of termination
- Law and jurisdiction clause
- Signatures and date

Regarding intellectual property rights, please keep in mind that in Horizon 2020, subcontractors are third parties to the grant agreement, and as such have no specific, automatic ownership rights to the results. Therefore the involvement of subcontractors in a project should not hinder the implementation of this project, and any rights that they require should not deprive project partners of the possibility of fulfilling their obligations under the project: performing their tasks, granting access rights, disseminating their results, exploiting them, and so forth.

For this reason, the Horizon 2020 Rules for Participation (RfP) provide that "if [...] any party working for a participant [is] entitled to claim rights to results, the participant concerned shall ensure that it is possible for those rights to be exercised in a manner compatible with its obligations" (see article 41.3 RfP). That is why it is generally recommended that project beneficiaries which resort to subcontractors make it clear, in the subcontracting agreement, that the ownership vests in the beneficiary and not the subcontractor. This is usually the most straightforward solution.

If the subcontractor insists on getting ownership of the work performed, the project partner would at least need to negotiate all appropriate licensing rights in order to be able to access and use the results in the same way as if it owned them. In that case, the terms of the licence should be sufficiently broad to allow the beneficiary to perform all its obligations under the grant agreement – during project implementation and the exploitation phase alike. Do not hesitate to contact us again should you need more clarifications on this particular point.



## The European IPR Helpdesk Ambassadors gathered in Brussels

The Autumn Meeting for the European IPR Helpdesk Ambassadors was held in Brussels on 19-20 October 2017. On the first day of the event, the agenda focused on which further services and tools can be developed for the benefit of SMEs, and how the Helpdesk and Enterprise Europe Network (EEN) services can be better integrated.

On the second day of the event, the Ambassadors welcomed the event's keynote, Ms Barbara Weizsäcker, Secretary General of the European Exhibition Industry Alliance (EEIA), who delivered a stimulating presentation on handling IP in internationalisation activities, trade fairs and B2B events.



## The European IPR Helpdesk on tour: Take a look at a selection of our recent events

In the last three months the European IPR Helpdesk Team participated in a number of IP events all over Europe, and provided several IP workshops building capacities in IP management among SMEs and researchers.



### Meet us at these upcoming conferences

- 5-9 March 2018: all over Europe  
Start-Up Week Europe

### Upcoming IP training events

- 25 January 2018: Vilnius, Latvia  
VILNIUS! IPforBusiness Training
- 07 February 2018: Brussels, Belgium  
IP&Coffee: on-site training session: IP Commercialisation and Licensing
- 26 February 2018: Riga, Latvia  
RIGA! IPforBusiness Training

- 14 March 2018: Rome, Italy  
ROME! IPforBusiness Training
- 21 March 2018: Brussels, Belgium  
IP&Coffee: on-site training session: Technology Transfer
- 11 April 2018: Brussels, Belgium  
IP&Coffee: on-site training session: IP in EU funded projects

### Upcoming webinars

- 07 February 2018  
IP Commercialisation and Licensing

- 28 February 2018  
Geographical Indications
- 21 March 2018  
Technology Transfer
- 11 April 2018  
IP in EU funded projects

For further information, please have a look at our [online event calendar](#).

## IP AND RESEARCH QUIZ

*To conclude this learning experience, why not strengthen your knowledge of IP and research with this multiple choice test? Only one answer is correct for each question: try to find them!*

1. According to WIPO, what is an institutional IP policy?
  - (a) A formally-adopted document which establishes the access rights regime of the parties participating in a project.
  - (b) A formally-adopted document which establishes the way an institution intends to deal with the ownership and disposition of its IP.
  - (c) A formally-adopted document which describes the IP owned by an institution.
2. According to OpenAIRE, what is open access?
  - (a) The practice of providing access rights to the IP owned by academic and research institutions under fair and reasonable conditions.
  - (b) The practice of making peer-reviewed scholarly research and literature available online to third parties, under payment or free of charge, depending on the conditions applicable.
  - (c) The practice of making peer-reviewed scholarly research and literature freely available online to anyone interested.
3. Dr Dragan Indjin, from University of Leeds, explains that IP protection of research results helps universities to obtain funding from industry because:
  - (a) Industry partners are not interested in unprotected research results.
  - (b) IP protection contributes to background definition; it shows industry partners the university's intention to commercialise the results; it gives universities negotiation power.
  - (c) Industry partners do not have the time and the financial means to evaluate whether the results generated by universities are protectable.
4. According to Claudia Tapia, from 4iPCouncil, what is the main challenge when parties decide to "co-patent" the results of a collaboration?
  - (a) The main challenge when "co-patenting" is to determine the jurisdiction applicable in case there is a conflict regarding the patent.
  - (b) The main challenge when "co-patenting" is to determine the responsibilities of the parties regarding the patent protection costs.
  - (c) Neither of the above is correct.
5. According to Asier Rufino, from Tecnalia, what can policy makers do to boost research and innovation?
  - (a) Reform the patent system, which is obsolete
  - (b) Create new financial instruments to finance innovation.
  - (c) Force stakeholders into working or interacting together more often.
6. According to Dr Andreea Monnat, from the Fonds National de la Recherche Luxembourg (FNR):
  - (a) Only big companies, such as Google or Apple, have any chance to do well in R&D.
  - (b) The FNR advocates public-private partnerships.
  - (c) Neither of the above is correct.
7. According to Professor Littlechild, coordinator of the ERA-net project THERMOGENE:
  - (a) The academic community is always in favour of early publication of their results in open access journals and against IP exploitation.
  - (b) The definition of background is an important IP measure to implement before entering into a research project.
  - (c) The parties to the ERA-net THERMOGENE project agreed on a joint ownership regime where the results would be commonly owned, irrespective of which party generated them.

## Fancy a Little Quiz?

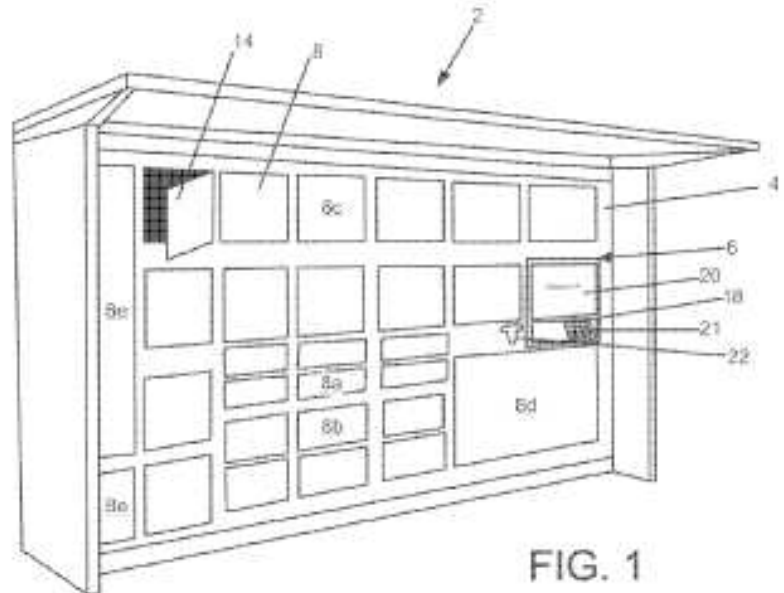
As you know, in every issue we include a patent quiz to help you develop your patent searching skills using Espacenet. Why don't you try using Espacenet today? Here comes our new quiz:

### PATENT QUIZ

#### Not at home, no problem.

One major disadvantage of ordering online for later delivery is that you have to be at home to accept the package. Imagine a locker system close to your place to which you can have your package delivered and where you can pick it up later.

Using [ESPACENET](https://www.espacenet.com/), try finding patents covering this concept and its improvement.



### SOLUTION IP AND INNOVATION QUIZ

#### Letter Soup

To conclude this learning experience, why not strengthening your knowledge on IP and innovation with this letter soup? The concepts in bold capital letters below are hiding in this chaotic soup, try to find them!

- TRADE SECRETS** and **PATENTS** are likely to be used in companies with internal R&D, with high innovation expenditure or when the innovation is new to the market.
- The effective use of **IP TOOLS** plays an important role in reducing risk for players involved in the success of **INNOVATION** in the market.
- TRADE MARKS** and industrial **DESIGNS** play an important role in the marketing process.
- The breeder's exemption has always been relied upon by breeders for further improvement to each other's **PLANT VARIETIES** and to foster innovation in plant **BREEDING**.
- Patents help **SMEs** to attract investors and support their image to consumers as companies offering high-quality products.

S	E	I	T	E	I	R	A	V	T	N	A	L	P	T
Y	B	I	M	R	I	N	P	R	O	P	J	X	U	G
G	H	S	Y	F	A	P	A	I	F	X	B	F	N	M
M	B	G	Q	L	B	D	T	S	C	W	A	I	P	K
E	M	A	V	B	E	A	E	O	T	Z	D	Y	A	S
C	J	Q	U	M	V	M	N	S	O	E	F	F	M	Q
G	I	B	A	O	Y	G	T	W	E	L	B	E	E	E
O	U	R	N	X	F	T	S	R	Q	C	S	L	S	C
E	K	N	F	L	H	N	B	A	T	S	R	Y	S	X
S	I	E	D	T	G	D	M	P	L	E	L	E	S	E
Y	K	L	R	I	R	P	O	B	J	I	I	I	T	H
S	A	B	S	Z	F	C	K	J	C	N	F	D	J	S
A	P	E	K	V	G	L	N	I	J	R	K	J	P	D
R	D	Z	T	E	N	T	S	L	K	G	V	Q	L	L
W	Z	L	Q	R	Y	Y	P	A	H	T	R	J	R	J



## SOLUTION PREVIOUS PATENT QUIZ

## Fly electric

The Age of Flight has an extraordinary carbon footprint. Consider that when you fly round-trip from New York to Paris, that travel generates approximately the same greenhouse gas emissions as heating a residential home for a year.

Why only drive electric when you can also fly electric. Major players like Airbus [are working on such aircrafts](#). This field is of course patented. The challenge this time is to find the oldest possible patent covering this invention: the electric aircraft.

Using [ESPACENET](#), try finding some old if not the oldest patents covering such aircrafts.

**Step one:** This quiz requires you to find the oldest patent that can be characterised by combining the *airplane* concept with *electric*. The concept airplane is best covered by a broad classification symbol covering airplanes in a very generic manner. This can be done by a [classification search looking for airplane](#). [B64C](#) is the best symbol that can be used to broadly cover aeroplanes.

The simple combination *B64C electric\** yields [thousands of results](#). It would be quite difficult to find the oldest one from this set of documents. A better way is to use the date range search feature in ESPACENET: 0000:1930 entered as a publication date in the search screen retrieves all patents published up to 1930.

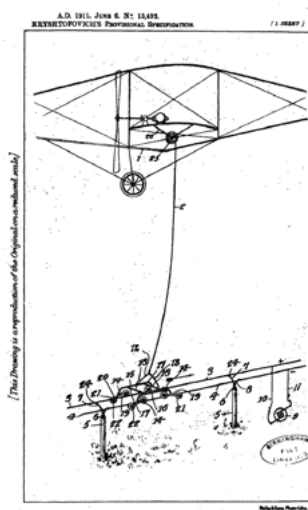
Combined with the first search statement, you obtain [this list of patents](#).

This list can be sorted by the date of publication in ascending order.

You will then be able to retrieve the following patents:

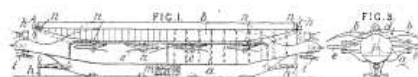
[GB191113492 \(A\)](#) - [Improvements in the Transmission of Electric Power](#).

From 6 June 1912



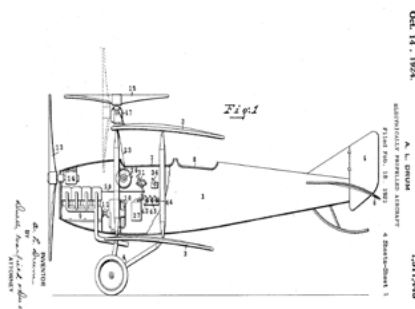
[GB105948 \(A\)](#) - [Improvements in and relating to Flying Machines](#).

From 30 April 1917



[US1511448 \(A\)](#) - [Electrically-propelled aircraft](#)

From 14 October 1924

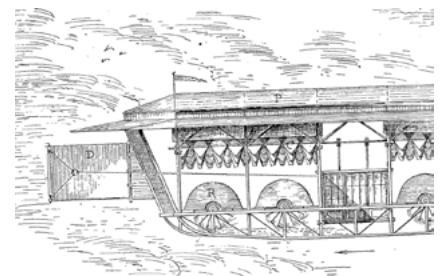


The patent dated 1912 seems to be the oldest one. One can try finding even older ones using the full-text search feature in ESPACENET.

Using this feature, you will find this French patent by looking for *electric\** in the complete description of patents that have been digitised.

[FR375273 \(A\)](#) - [Aéroplane automoteur](#)

From 4 July 1907



Our readers can look further and try to find an even older patent than this one.

## GLOSSARY

**Institutional IP policy** is a formally-adopted document which establishes the way an institution intends to deal with the ownership and disposition of its IP.

**Open access (OA)** refers to the practice of making peer-reviewed scholarly research and literature freely available online to anyone interested.

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