

BIA submission to Industrial Strategy: Intellectual Property Call for Views

November 2017

Introduction

Technology transfer is the vital process of turning scientific research into products and services for economic and social gain. It is also a key part of generating a long-term return on investment for governments who fund research within universities and other public sector research institutions. This IPO initiative and consultation, as part of the wider Industrial Strategy work, is therefore extremely welcome.

Academia-industry collaboration in the UK is vibrant and healthy, and the BIA supports the continuation of the previous administration's goal of seeing this increase to over £5 billion in terms of commercial funding by 2025¹. Government and its agencies, universities, technology transfer offices (TTOs), public research funders, and industry have a unity of purpose – to quickly and smoothly facilitate the commercialisation of research and innovation – and are all co-owners of the technology transfer process. The BIA therefore believes that all these parties should work together to improve the system.

Improving IP licensing

A common area of difficulty reported by BIA members is the licensing of intellectual property (IP). It must be remembered that this represents less than 6% of university business-related income financially, yet causes the most friction².

We are aware of many excellent TTOs, but there is inconsistency across the ecosystem, as well as a lack of clearly understood roles and responsibilities. Not one part of the ecosystem owns technology transfer – it requires the whole community working together, including inventors, funders, universities, industry, and entrepreneurs. We all have a role in ensuring it works well.

BIA industry members have proposed the following recommendations to improve the management of IP and technology transfer, which will support the government's aims set out in the Industrial Strategy green paper:

- *Facilitate best practice sharing and a TT open market*

There are many ways to facilitate technology transfer. The fact that there are multiple, diverse routes is a positive – from simple patent licencing through to the creation of spin-out companies. There is no desire for a homogenous approach, or a reversion to technology transfer centralisation, as seen before 1985.

TTOs are currently arranged and controlled, in the main, by institution³. There is little opportunity for TTOs to pool expertise between offices and technology transfer professionals. For example, one TTO may be very good at anti-infectives while another is great in medical devices. Rather than each TTO

¹ HM Treasury and the Department for Business, Innovation, and Skills (2015), *Fixing the Foundations*: <https://goo.gl/iWIWn3>

² Higher Education Statistics Agency (2017), *HE Business and Community Interaction Survey 2015/16*: <https://goo.gl/t1w5e3>

³ Whilst often being separate corporate entities

covering all areas, it would be good if there was the ability for share such specialisation regardless of the institution. This in turn would make the process more efficient and effective.

Working with UK Research and Innovation (UKRI), the IPO should explore potential routes for TTOs to become not centralised, but more matrixed. It is appreciated that this may require a change in funding approach.

- *Metrics and incentives*

Within the community, it is commonly understood that technology transfer, and IP licencing specifically, is a loss-making activity for the vast majority of institutes. Focusing on IP licencing revenues as a metric has unintended consequences for the smooth facilitation of technology transfer, particularly for early stage, unproven technologies that will require substantial further investment (as is often the case in bioscience).

The BIA proposes that IP licence revenues are not used by the government and its agencies as a measure of TTO effectiveness. The reality is that such revenues represent a tiny fraction of academia-industry interaction in any case. For government and research funders, other longer-term goals are more important in creating a dynamic environment for companies to harness new technologies.

The need for host institutions to take significant equity stakes in spin-out companies should also be examined, with some guidance laid out by the main funders of academic research.

- *Better mapping of knowledge and technology across the UK*

It is often said that technology transfer is a contact sport. This is true to a certain extent. However, the governance structures behind technology transfer were established in the pre-internet age. Better ways of sharing knowledge across the academic and TTO communities should be encouraged. Some systems exist already, such as *In-Part*, *Konfer* and *Gateway to Research*, but these are under-utilised and in some cases not well-known.

Online tools and services should be used to help industry, and SMEs in particular, reach into the UK's research base to identify and contact experts with particular knowledge, access specialist facilities, and search a comprehensive register of IP available to license out.

A comprehensive list services currently offered to do this by the public and private sectors should be developed and published to help users access the services. The list can also be used to identify what useful tools or services are missing or underused. The reasons for absent or under-used tools should be examined by UKRI and the IPO, and improvements made for the benefit of all those collectively involved and responsible for technology transfer. The existing systems and future ones come from the public and private sector; the government should be careful not to crowd out private-sector innovations that could prove better suited to improving technology transfer.

Helping academics and SMEs value and exploit their IP

Academics (or their TTOs) and early-stage SMEs often do not have the expertise or resources to determine the value of their IP and the best way to protect, package, and exploit it. The IPO has the expertise and facilities that could help these innovators by implementing the following recommendations:

- *Enable low-cost prior art searches*

The UK Search Service allowed individuals to request a search at the UKIPO before filing a patent application. This was a great cost saving initiative which allowed SMEs and academics to assess the patentability of their inventions before incurring the expense of drafting and filing. Unfortunately, it was discontinued. Private search services are available but are often prohibitively expensive. Free or low-cost services offered by libraries or local government are sparsely spread across the country and not widely known about. The IPO should review the accessibility and utility of current options available to innovators and assess whether it should reimplement its own service.

- *Grant or subsidy funding for independent patent estate review*

Efficient exploitation of innovation is often dependent on not one but multiple patents, that only have value when packaged together with consideration for the commercial environment in which they are to be exploited. This requires specialist skills and knowledge, which are costly. Unfortunately, failure to do this is often a barrier to efficient technology transfer as it results in a misalignment of value expectation between university and industry, or indeed between two businesses engaged in licensing or patent sales.

The BIA proposes grant funding be made available (through a needs-assessed process) to academics, TTOs and SMEs to enable them to commission an independent patent estate review. Alternative but less preferable to a grant would be a subsidy, which could, for example, be provided through the existing R&D tax credit system by making patenting and protection costs eligible. This would reduce the cost to SMEs by 33% and promote the exploitation of IP.

- *IP-awareness training for academics*

Although awareness of other forms of research impact is improving, publishing in academic journals is the primary aim and focus of university researchers. This not only diverts attention away from the consideration of patenting, but can obstruct it if valuable IP is released into the public domain too early.

Recent initiatives from the IPO such as *IP for Research*⁴ are welcome and should be actively promoted to universities and research institutes, which should be encouraged to embed them into their curriculums and post-graduate training programmes. The uptake of such initiatives could be promoted and rewarded through the proposed Knowledge Exchange Framework.

The IPO could further develop the resources to ensure they are tailored for the research community (they currently appear integrated with pre-16 years educational resources) and explore sector-specific resources to maximise impact.

⁴ <https://goo.gl/gG2k8v>

About the BIA

Established in 1989, the BioIndustry Association (BIA) is the UK trade association for innovative bioscience enterprises. BIA members include emerging and more established bioscience companies, pharmaceutical companies, academic research and philanthropic organisations, and service providers to the UK bioscience sector.

Our members are responsible for over 90% of biotechnology-derived medicines currently in clinical development in the UK and are at the forefront of innovative scientific developments targeting areas of unmet medical need. This innovation leads to better outcomes for patients, to the development of the knowledge-based economy and to economic growth. Many of our members are small, pre-revenue companies operating at the translation interface between academia and commercialisation.

Our goal is to secure the UK's position as a global bioscience hub and as the best location for innovative research and commercialisation, enabling our world-leading research base to deliver healthcare solutions that can truly make a difference to people's lives.

For additional information or clarification on any of the points raised please contact Dr Martin Turner, Policy and Projects Manager, on 0207 630 2192 or by emailing mturner@bioindustry.org

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