

**LiSAB/ISF consultation: "Intellectual assets at the university-business interface: seizing the opportunity"**

**Joint response by AURIL and PraxisUnico**

**1. What has been your involvement in and experience of HE – business collaboration?**

AURIL is a national Association which represents knowledge exchange professionals involved at the interface of universities and business (and our community is also active in relationships with the public and third sectors). The experience and specific activities undertaken by individuals within the AURIL membership is extensive and ranges across areas of work characterised as technology transfer (including patenting, licensing and spin-out company formation, follow-on funds and proof of concept funding), knowledge transfer (KT) and knowledge exchange (KE). KT and KE activities include such activities as entrepreneurship, management of Knowledge Transfer Partnerships KTP, collaborative R&D, European funding (ERDF) and university consultancy work.

PraxisUnico is a key representative body of the UK's research and development and technology transfer profession. Although originally focused solely on "technology transfer" (commercial deals involving intellectual property generated by universities), PraxisUnico members are engaged across the whole range of knowledge exchange activities, promoting the transfer of knowledge in all its forms across the boundaries of universities and into society. PraxisUnico has over 2600 members from 117 universities and research organisations and 52 commercial concerns, patent agents and intellectual property lawyers are associate members. PraxisUnico has delivered professional training to around 3000 individuals from 40 countries.

We are thus ideally positioned to comment on higher education – business links around the R&D and innovation interface.

**2. From your experiences, what value have you (seen) secured from HE- business interactions; what has worked well and what barriers have you encountered?**

Value secured

It should be recognised that the major motivation for universities to interact with business is to generate impact. The primary motivation is not to make money, although in the process a great deal of monetary value has been generated.

As one of their core, underpinning areas of activity, universities are in the business of providing a skilled workforce for the private sector. Higher Education supplies graduates with vocational

training and with professional qualifications and is invariably responsive to the particular needs of the major private sector employers which engage with their local HE providers in any given locality or region.

Another core role for universities is to reach out to and engage with businesses, from blue-chip, multi-national entities to SMEs and social enterprises. Universities are highly proactive in their efforts and take advantage of the sources of funding made available to support these interactions (in England this would include Higher Education Innovation Funding, HEIF).

Many universities act as hubs of the innovation community in their local areas. Many run innovation centres or science parks which provide space and innovation support to growing small businesses. They also help their own students and staff to start new ventures. Student entrepreneurship is now becoming a growing feature of university towns.

There is an extensive literature describing the benefits to businesses of interaction with Higher Education and we will not attempt to reprise that here. We would refer readers to the series of reports published by the National Centre for Universities and Business (NCUB) and, in particular, to the 2014 publications *Growing Value: Business-University Collaboration for the 21st Century* and *State of the Relationship 2014* for a well-informed and balanced overview (see <http://www.ncub.co.uk/reports/growing-value-book.html> and <http://www.ncub.co.uk/reports/sor.html>).

The value secured from HE-business interactions is measured by the Higher Education Funding Council for England through the annual Higher Education-Business and Community Interaction (HE-BCI) survey. For analysis of these data we would commend:

- Using trend growth in knowledge exchange income to track collaboration across UK HEIs by Adrian Day (HEFCE) and Rosa Fernandez (NCUB) in the NCUB State of the Relationship 2014 report
- Knowledge Exchange Performance and the Impact of HEIF in the English Higher Education Sector by Tomas Coates Ulrichsen for HEFCE, 2014
- UniverCities: The Knowledge to Power UK Metros, City Growth Commission, October 2014
- Strengthening the Contribution of English Higher Education Institutions to the Innovation System: Knowledge Exchange and HEIF Funding by PACEC for HEFCE, 2012

Estimates of the impact of HEIF funding in the above references suggest that every £1 invested generates a return of £6 in gross additional knowledge exchange income. The point is also made that this probably represents an underestimate of the total benefits to the economy and society, owing to potentially large impacts that are very hard to capture and long-term benefits arising from the positive behavioural and attitudinal changes in academics.

More anecdotally, there is a steady stream of news stories about successes by incubators, university spin-out companies and R&D investment. Recent examples include the recognition of SETsquared as the most successful university business incubator in Europe and second most successful in the world (<http://www.setsquared.co.uk/news/201406/uk-business-incubator-named-number-one-europe>), the role of universities in funding successes in the technology and life sciences sectors (<http://www.praxisunico.org.uk/news/sector-detail.asp?ItemID=2118> and <http://www.praxisunico.org.uk/news/sector-detail.asp?ItemID=2127>), continued progress by university spin-outs (<http://www.praxisunico.org.uk/news/sector-detail.asp?ItemID=2151>) and the demonstration of successful co-existence of research and commercialisation at the Institute of Cancer Research (<http://www.timeshighereducation.co.uk/news/campus-close-up-institute-of-cancer-research/2016463.article>).

### What has worked well

Like all collaborative and partnership working, interactions between universities and businesses work best when both parties are able to invest the necessary resources (largely time) in gaining a mutual understanding of culture, priorities and drivers or KPIs. Recognising that large, multinational companies and locally based SMEs are very different entities, conventional wisdom is that businesses have R&D needs which need addressing in a timely manner. The same wisdom recognises that universities have a requirement not just to conduct exciting, novel and challenging research but to publish the outputs in peer-reviewed journals in order to enhance their reputations and demonstrate economic and societal impact. The reality is that these needs can both be accommodated under formal arrangements underpinned by suitable forms of legal agreement, and the majority of HE – business collaborations do so very successfully. The key element common to all such successful collaborations is ensuring that all aspects of the proposed project or programme are discussed in advance in an open manner which recognises the needs of both parties, and that the formal contract or agreement which governs the interaction is balanced, equitable and genuinely reflects the pre-contractual discussions. (A common failing is for positive discussions to be followed up with an inappropriate, one-sided draft contract from one party, the final negotiation of which can potentially become contentious and drawn-out affair).

The Lambert Toolkit was the result of a joint initiative between industry, Government and universities to facilitate collaborative research between industry and universities. A set of model agreements was produced which is now being updated by a Working Group including representatives from AURIL and PraxisUnico as well as St Andrews and Edinburgh Universities. It is notable however that so far there has been a reluctance on the part of industry to accept the Lambert agreements (see also question 7).

PraxisUnico has advocated a revival of the University Challenge Seed Fund model of funding because it addressed so many of the difficulties encountered in the research commercialisation process. This scheme assisted the development of seed funds in universities, supported the creation of incubators such as SETsquared and encouraged private sector investment in university companies, as well fostering collaboration between universities. Over a period of nine years to

2009 these funds leveraged seven times their public sector investment from the private sector to £433m. By any measure this scheme was a success. It promoted the development of technology transfer, it built on the strength of the university sector and fostered collaboration.

#### Barriers encountered

- Financial barriers and long-term commitment from investors. Research by the Russell Group of universities (published in 2010) has demonstrated that commercialisation is a long process, quoting an average of nine years from invention to a commercial deal (from the study of >120 case studies).
- Fragmentation of funding and portfolio funding of research projects. Commercial outcomes emerge from groups with diverse funding sources, and increasingly from inter-disciplinary and multi-institutional teams. Each funding source has different rules which, in turn, increase the complexity of moving forward into the commercial domain. This is further exacerbated as it is also very rare that a single research idea will succeed without adding other technologies. Collaboration across the research community not just in research but in commercialisation will become increasingly critical.
- Short-termism. What is required is a sustained solution, delivered over sufficient time to assist in the re-shaping of the UK economy.

### **3. How can (the treatment of) intellectual assets, including IP a) facilitate university-business engagement b) support business innovation**

Universities recognise that intellectual assets can be vital in facilitating university-business engagement and in supporting business innovation. We believe that most universities are now, or are becoming, sophisticated enough to understand that treatment of IP can and should vary according to the circumstances of the industry partner(s). Business innovation mechanisms and styles vary by sector and size of company. In some cases it is appropriate to facilitate “sharing or pooling” of IP for the benefit of an industry consortium – typically this would involve royalty-free non-exclusive licences within a consortium and is facilitative of “open innovation” type models involving large companies and their supply chains. In other cases, small innovative companies backed by private equity typically see it as important to have at least an exclusive licence to relevant university IP in order to strengthen their competitive position, ability to secure further investment and/or a remunerative exit. In life sciences/drug, long and highly-capital intensive product development and regulatory cycles drive a requirement for an exclusive position in order that the industry partner can recoup its investment in those few cases where a product launch ensues.

Finding the right models for the right circumstances requires both (or all) parties to be open about their intentions and circumstances and to avoid being too “rule-bound” on either side. Framework arrangements can be very helpful, i.e. a scale of suitable arrangements ranging from industry paying at least the Full Economic Cost for contract research and securing IP ownership, through

collaborative co-funded arrangements to the other extreme where a company might be making minimal contribution to the resources required for a project (and hence should usually have little claim over IP). When such a framework is pre-negotiated this can greatly speed up the R&D commissioning process for both parties.

There are also situations where business brings significant background IP and also the project concept to the table, in which case a university may have little reason to negotiate hard over IP rights.

Finally, and this answer relates to other questions, we note the concentration on “intellectual assets, especially IP” as though these intellectual assets are goods to be deployed at the owning HEI’s discretion. In a university or PSRE context intellectual assets are inexorably linked to their originators. In many cases the biggest contribution that is made to business innovation is when the originators of IP in universities share their perspectives with business, develop trust and work together towards common goals. Often these goals are not spin-out companies nor licences but rather a long-term collaborative relationship where mutual understanding of motivations develops and each partner respects the other’s strengths.

In contrast, the number of success stories our members could offer where “cold” IP that has been divorced completely from its originators were very limited. Our experience is that IPR that has been separated from its originators and managed at arms’ length has a much lower likelihood of commercial exploitation (by any mechanism) than IPR that comes with its creators, their enthusiasm, commitment and further ideas. Partnership with academic IPR creators is one of the characteristics of all the good/successful TTO operations and recognition that a good TTO can add complementary skills and experience to the piece in order to facilitate a successful outcome (including in many cases actual investment). This partnership and trust aspect heavily outweighs most other factors (including sector specialism).

#### **4. Does the treatment of intellectual assets, especially IP, support the success of universities and businesses? How does the approach in Scotland compare internationally?**

Investment follows excellence, excellence measured by research output and research impact, which itself is evidenced by collaborations and KT to external organisations. Universities with high impact ratings will attract more interest from business for various types of collaboration because there is security in a track record. This third party collaboration is of value to future researchers – through new challenges to their research – and research development/commercialisation through investment and technology transfer. In business terms, new technology adds value in many ways: product development, market disruption, supply-chain innovation etc.

There are contrasts in how universities may look to commercially exploit IP generated from research undertaken using public or internal funding sources, versus that generated in interactions with companies (the latter usually being ‘fettered’ IP).

It is important to appreciate that the majority of intellectual assets in universities and PSREs are either uncodified know-how or know-how that has only been codified within the domain of academic publication. The know-how of individual academic researchers is by a long way that main asset upon which universities trade to the benefit of themselves and industry. Most universities identify a proportion of this know-how as having commercial potential and/or inventive significance and have processes for deciding which items of IP to protect e.g. via patent applications. It is important to note that the motivation for protecting IP is not always simply financial return. There are several motivations for IP protection:

- To preserve the freedom of academic staff to pursue their chosen research fields without restraint;
- To fulfil the expectations of research funders e.g. Research Councils UK, etc;
- To underpin future commercialisation prospects (licensing, spin-outs, etc);
- To “advertise” expertise (patents are published and search-able);
- To help codify the “background” knowledge that is traded, especially in relation to an academic’s work with industry.

Universities may require rights to use their own arising IP for research purposes, as well as for exploitation via licensing and spin-out companies in some circumstances. The expectations of e.g. RCUK, are that universities should exploit their IP where possible and should see a reasonable financial return in respect of the same. There is also considerable pressure from academic inventors and university management as well as businesses for commercial deals to be concluded.

In terms of international comparisons, UK research is much better at crossing the ‘valley of death’ than is generally realised. The UK was second, behind Switzerland, in the Global Innovation Index 2014, and fifth for university-industry collaboration in the World Economic Forum’s Global Competitiveness Report for 2013-14. UK universities attract a larger proportion of their income from industry than their counterparts in the United States. An analysis published by the Department for Business, Innovation and Skills in January 2014 ([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/277090/bis-14-544-insights-from-international-benchmarking-of-the-UK-science-and-innovation-system-bis-analysis-paper-03.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/277090/bis-14-544-insights-from-international-benchmarking-of-the-UK-science-and-innovation-system-bis-analysis-paper-03.pdf)) found good international collaboration between universities and business, strong knowledge networks, several clusters with critical mass, and a good mix of basic and applied research.

## **5. Should companies have free access to all University IP? What are the pros and cons of such an approach for universities and businesses?**

There are two principal benefits of the prevailing university technology transfer model:

- Universities ensure that technologies are protected so that in transferring them we can also transfer monopoly rights, which is often necessary if a company is going to commit

substantial investment into their development. Without that protection they become common goods or (as someone once said) 'lost property'.

- A reasonable return to the university is ensured, i.e. the place closest to where the IP originated and the place that owns it. This puts incentives (to manage and market the technology) in the right place, enables universities to re-invest and importantly allows universities to incentivise the originators of the IP via reward-sharing formulae etc.

Perhaps the major advantage of the present system is that it has demonstrably worked. Activity has been hugely increased over the years, impact has been generated and value has been created.

Universities have continued to make efforts to refine and improve the models and processes for university-business collaboration. The Easy Access IP scheme is one example. It was introduced by some universities as a solution for a particular type of IP. It has had some success with some universities which focus on a certain model of university-business collaboration. However, it is not appropriate for all university IP or all situations. It also has the disadvantage of losing returns from IP which, except for those shared with academics, are re-invested into research, teaching and technology transfer.

As noted in our answer to question 3, for some businesses, especially early stage technology companies backed by private equity (business angels, VCs) having an exclusive and protected (patented) IPR position can be absolutely vital to their economic success. Likewise for companies in pharmaceuticals and other sectors with highly capital intensive product development cycles, the inability for companies to obtain an exclusive position would prohibit innovation. It is hard to see how this requirement for an exclusive protected position for such companies can be reconciled by all companies having free access to all University IP. Likewise, if all companies should have free access to all University IP it would appear impossible to limit this to Scottish, UK or European companies.

If the suggestion was that companies should be able to obtain free EXCLUSIVE licences to University IP on a first-come first-served basis then it is hard to see how this would facilitate business innovation. Providing free IP runs the risk that companies would acquire and sit on IP in order to block competitors, hence universities would still need to ensure that licence or transfer terms were appropriate and guarded against this. There may therefore still be a considerable transaction cost associated with 'free' technology transfer.

Finally, for universities and PSREs, one of the main ways that our members incentivise their researchers to engage in inventive or innovative activities is by offering them the opportunity to share financially in the returns (typically royalties, in some institutions equity as well) when the university receives any such returns from successful commercialisation. This incentive would not exist if all University IP was freely available to all companies

It should be noted that in their response to the House of Commons Science and Technology Committee report Bridging the Valley of Death, the Department of Business, Innovation and Skills

tasked NCUB with investigating the results of Easy Access IP and other IP practices. A report is expected in the next few months.

## **6. Do universities and businesses value IP differently? How do they determine that value? What value is realised from IP by universities and businesses?**

There is an inevitability that there will be differences of opinion on the valuation of IP. Universities are usually providing IP - by licensing pre-existing IP to a business or as arising IP generated during a collaboration, whereas businesses are acquiring or procuring said IP. There is thus a classic seller-buyer relationship, albeit with some subtleties. Universities would look to secure terms which reflect a value in licensing deals, often with reference to market intelligence (e.g. specialist reports, which benchmark deals in various sectors and areas of technology). Universities also have an appreciation of the investments (from research grants and academic investigation) that have led to the creation of the asset.

Companies rightly make the argument that, when acquiring university IP, the IP is usually at an early Technology Readiness level (TRL) and needs significant further investment. This results in a low valuation by companies. A common university perspective on this is to propose a shared risk approach, where a revenue return (e.g. royalty arrangements on the sales of products or services) is dependent on the technology in question maturing under the company's management to the stage where it is marketable.

In terms of IP commercialisation, universities and PSREs undertake technology transfer for five principal reasons:

- To see the fruits of research activity transferred into practice;
- As a service to individual researchers;
- To fulfil their commitment to public sector funders and charities which require universities and PSREs to generate a return on the investment of public and charitable funds;
- As part of their public benefit mission as universities
- To generate uncommitted funds for their institution for further investment in teaching and research.

Although it is a relatively small part of knowledge transfer activity undertaken by universities, a notable success has been the generation of new businesses. Since 2003, over 2000 spin-out companies have been formed (<http://www.hefce.ac.uk/whatwedo/kes/measureke/hebci/>). In that time more than 70 university spin-outs have gone to trade sale or initial public offering, with a combined price at the point of transaction in excess of £15 billion. More than 1,000 have now been trading for more than three years; and almost 40,000 people are employed.

However it should again be stressed that although so much value has been created this is not the primary motivation of universities, which is to generate impact from their research.



**7. Would the economy benefit from a single set of terms and a common process used to spinout companies/license IP from all Scottish universities? Are there limits to standardisation given the wide diversity of contexts?**

Companies – by and large – value simplicity and may be frustrated by the different ways that universities treat IP and approach commercialisation. However, it should be borne in mind that companies also have many different ways of treating IP and will treat each deal on its own merits and business case, based on their priorities.

Given the metrics under which all HEIs report their research commercialisation activities (notably, HE-BCIS) and also in relation to the attention given to Impact under assessments such as the Research Excellence Framework (REF), it is in the interests of universities to maximise their creation and incubation of sustainable, high growth spin-out companies as well as their licensing of IP to pre-existing companies. Universities therefore effect their arrangements with the founders of, and investors in, individual spin-outs in order to maximise growth and sustainability and to make these new entities optimally attractive of further investment.

It is our view that there is already broad agreement within Scottish HEIs and many common templates and processes already exist. AURIL and PraxisUnico were involved in the review of the Lambert Agreements and the majority of HEIs in Scotland make use of these UK agreements. All Scottish universities have agreed a series of template contracts in addition to the Lambert agreements, which are now being promoted by Interface, and are working on more. While these broadly agreed processes and procedures exist, and are helpful, they work best where standard deals are anticipated (KTP, SME vouchers, consultancies etc). It is important that there is sufficient flexibility to allow them to be tailored for more complex collaborations in order to maximise the chances of success in the context of each agreement. And, in fact, industry is hugely reluctant to use the Lambert agreements. We sense that investors or companies value their perception of the specific business needs of an opportunity or project on a case-by-case basis, above standardisation.

The ownership of IP will vary across institutions, however, universities will wish to see all IP effectively protected and managed to ensure individual staff involved in its creation share the rewards arising from its use. Where institutions are in the journey to embed and encourage a culture of innovation and commercialisation, will determine the terms of their individual IP Policies. Given the individuality and specificity of these arrangements we feel that good practice sharing is to be greatly encouraged but that standardised terms and processes may be of little utility. We stress that second round and subsequent investment in spin-outs is likely to be sourced from larger, institutional investors which would expect to see substantial due diligence and would require the establishment of bespoke commercial arrangements.

Some parties believe that the State should own all HEI IPR and have it commercialised through a British Technology Group (BTG) type state-mandated object, despite the history of this model. Other parties advocate the “old Cambridge” model where academics owned their own IPR by custom and practice. This view may be held by entrepreneurs who seek to acquire IPR cheaply or at

least to 'divide and conquer' en route to any deal. Such alternative ownership models are not easy and in our view are not the answer:

- 1) Expectations of research funders (e.g. Research Councils UK) that universities will manage and exploit IPR created by or with their funding for the benefit of the UK;
- 2) Investors actually like university IPR as it tends to be 'clean' and professionally protected and therefore suitable for the warranties, etc. that go with commercial licences;
- 3) Not insignificantly, any changes in the fundamental ownership of IPR might involve law changes.

There is also a fallacy that "hot shots from industry" will automatically be more capable of doing more and/or better commercialisation deals. Our experience is that most senior executives from most industry sectors have little or no knowledge of IPR or technology transfer deals, let alone experience. An industry view on the market prospects of a technology, routes to market, regulatory path, product development cycle, etc., is of course very helpful at the individual opportunity level, but the person providing it is not necessarily the same person who concludes the deal.

**8. Scotland appears to suffer a failure to grow "companies of scale" across the board, [but particularly in the life sciences sector]. Why don't [life science] companies grow to a larger scale in Scotland & are there any changes you might suggest to address this?**

We would refer the meeting to the *Bridging the Valley of Death* report by the Science and Technology Committee from the House of Commons which covers this issue in significant detail. (<http://www.parliament.uk/business/committees/committees-a-z/commons-select/science-and-technology-committee/inquiries/parliament-2010/role-of-the-private-sector/>)

The issue relates partly to a UK-wide issue of low R&D investment. The failure of UK industry to invest in the UK research base was highlighted over ten years ago in the Lambert review of university-business collaboration:

*"The biggest challenge identified in this Review lies on the demand side. Compared with other countries, British business is not research intensive, and its record of investment in R&D in recent years has been unimpressive. UK business research is concentrated in a narrow range of industrial sectors, and in a small number of large companies. All this helps to explain the productivity gap between the UK and other comparable economies."* (Lambert Review on University-Business Collaborations, 2003)

This was reiterated in the *Bridging the Valley of Death* report:

*Recommendation 23: "We recommend that the Government's objective should be to create a commercial demand for university engagement to which they are already primed to respond. This echoes and reinforces the point made almost 10 years ago in the Lambert Review. "*

In spite of the low level of UK R&D, UK universities secure a far higher proportion of their research grants and contracts funding from industry than US universities. So, the weakness in the system is not universities. However, for many universities there is more funding from overseas industry compared to UK industry. This reflects the quality of the UK university sector (as shown in global rankings) and demonstrates that universities are an inward investment success story for the UK, so the system actually works quite well. It also suggests that since most industrial funding comes from foreign companies, it might not be beneficial to the UK to compel UK universities to be more generous in IP deals with these companies.

These findings point to the importance of recognising that the university sector is a research-intensive business sector in its own right, and that the growth of universities' R&D efforts is itself an attractor for funds from outside Scotland that creates important and high-value-added jobs with consequent economic multiplier effects. Universities also attract significant international talent to Scotland and this reinforces Scotland's message overseas. Universities have the potential to be a much more important part of the inward investment offer attracting collaborations with knowledge intensive businesses from outside of Scotland as those companies seek to develop products for the European market.

Another issue is the short-term approach employed by many investors, who seek an exit within a few years. This does not fit with the time needed to develop and commercialise early-stage university technologies. More recently the widely respected fund manager Neil Woodford has chosen to focus on IP generated by universities and has advocated a "patient capital" approach which will be much to the benefit of the sector (<https://woodfordfunds.com/intellectual-property>). In the video clips at this link Mr Woodford states that university IP is a very undervalued asset class and when talking of patient capital his average holding time for a quoted stock is 12-16 years compared with a City average of 7 months (<http://www.publications.parliament.uk/pa/cm201314/cmselect/cmbis/603/130305.htm>).

In addition to the funding 'valley of death', Scotland as compared with England lacks both a substantial existing industry client pool and a substantial presence of venture capital investors.

In this context the recent announcement of c.£50 million research/infrastructure funding for Life Sciences at Dundee University (including incubator space) is a very positive development (<http://www.dundee.ac.uk/news/2014/nobel-laureate-opens-dundeess-26m-discovery-centre-in-life-sciences.php>).

**9. What impact does the current level of resourcing and prioritisation (people/time/training/experience) – from universities, companies and support agencies - have on the success of negotiations, including those for IP licensing?**

We have consistently emphasised that knowledge exchange and technology transfer is a people business. One of the difficulties mentioned in the Bridging the Valley of Death report was churn of technology transfer staff. Appropriate, and common, training is important, along with sharing of

best practice and opportunities to learn from others' success. Stability of resourcing is needed for universities and support agencies in particular, where public funding is often quite short-term and subject to reviews creating more uncertainty in the environment. Resourcing varies widely from institution to institution and priorities depend on many internal and external factors. Successful negotiations depend on simplicity and consistency of approach (people and processes) rather than on a particular level of resource. Companies find it hard to navigate the multiplicity of schemes designed to support collaboration – some of which are also short-term initiatives – or to know which support agencies to engage with and to what end.

UK universities lead the world in preparing professionals who can deal with this complexity, as many companies will acknowledge. We are in demand globally to share our experience and train commercialisation professionals. PraxisUnico itself has now trained over 3000 individuals from 40 countries and international demand is growing fast. This is a UK competitive advantage that should not be diluted.

It is recognised that there may be issues around the capacity of smaller institutions to provide technology transfer expertise in a range of fields. This relates to the recent comments made by Lord Drayson to the BIA, in October 2014, where he recommended that smaller TTOs might merge to good effect. The response of AURIL and PraxisUnico to those comments, as reported in Research Fortnight 17/10/2014, was that simply bringing together functions with limited resources in itself may achieve little without a systematic review of requirements and further augmentation.

A useful model to consider may be for HEIs to increase their utilisation of centres of expertise in focused areas of technology commercialisation. Examples include the Catapult Centres where, for instance, the Cell Therapy Catapult is now actively promoting itself as having the capacity to advise HEIs on their commercialisation of relevant technologies. Similarly all universities benefit from using the expertise of Cancer Research Technology to commercialise oncology-related IP. This kind of specialist hub is likely to be a much more beneficial model than the idea of a geographically based multi-discipline hub.



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## **About AURIL**

The Association for University Research and Industry Links, AURIL is a professional association representing practitioners involved in knowledge creation, development and exchange in the UK and Ireland. Our member institutions work to ensure that new ideas, technologies and innovations flow from their institutions into the market place.

AURIL is one of the largest knowledge exchange associations in Europe, drawing its membership predominantly from universities and the public sector. AURIL was a founder member of ProTon Europe (now ASTP-ProTon), the European knowledge exchange network which provides a platform for international sharing of best practice in knowledge exchange, knowledge transfer and technology transfer and provides incubation and support for the development of new national associations.

The Association enjoys widespread international recognition through its success in influencing UK Government policy. We have strong working relations with the Confederation of British Industry, Universities UK, the UK Intellectual Property Office, the Department of Business, Innovation and Skills (BIS), HM Treasury and Higher Education Funding Councils, in partnership with whom we have undertaken joint projects and produced several publications.

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## **About PraxisUnico**

PraxisUnico is an educational not-for-profit organisation set up to support innovation and commercialisation of public sector and charity research for social and economic impact.

PraxisUnico encourages innovation and acts as a voice for the research commercialisation profession, facilitating the interaction between the public sector research base, business and government. PraxisUnico provides a forum for best practice exchange, underpinned by first-class training and development programmes.

As the UK's leading organisation for commercialisation professionals we play a key role in training, developing and representing our profession.

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