

## **REVIEW OF BUSINESS – UNIVERSITY COLLABORATION**

### **Response to consultation by Brunel University**

The Lambert Review is particularly welcome from the perspective of Brunel University, an institution with a long established history of involvement with industry and commerce.

There are a number of issues that Brunel would wish to highlight: -

#### **Creating “critical mass”**

Arguably this is of the highest priority for many HEIs, including Brunel. Providing the resources required to compete at an international level in research while also providing knowledge transfer, joint venture and start up facilities for UK companies is a significant challenge for all but the best endowed universities. For this reason Brunel has embarked on an intense process of collaboration initiatives, coupled with an increased focus on areas of research strength

A specific example of this is the Enterprise and Innovation joint venture formed between Brunel and Royal Holloway University under the Partnership for Accessible Research and Knowledge, *PARK*, [www.unipark.org](http://www.unipark.org). This partnership arose from a joint HEIF bid from the two institutions and has been running for approximately 18 months. It was set up from the beginning with a strong involvement and support from the London Development Agency (LDA) and is already recognized as the leading initiative of its type for West London. The success of this venture has been due to the genuinely close working partnership of the Enterprise departments of the two HEIs coupled with a close understanding of the objectives of the LDA for the West London region.

A second phase of development is already under discussion which would draw in other universities within the West London region as well as creating a cross-RDA collaboration zone between the LDA and SEEDA. The aim is to bring together a number of funding streams to attain the critical mass required to fully address the “development gap” between early stage research and its industrial application within the region. This will include HEFCE “3<sup>rd</sup> leg funding” and contributions in kind from commercial partners. Significant support from LDA and SEEDA is anticipated.

The objective is to create state of the art infrastructures within the West London region to:

- Support the development and growth of high-tech and knowledge-based businesses in the region
- Accelerate the take up by business of new technologies in order to improve their competitive advantage in a global market.
- Establish the region as a world-class centre for innovation and knowledge transfer.

Within the WestFocus programme Centres of Excellence will be created to address each of the following five sectors:

- ICT and New Media
- Healthcare and Quality of Life
- Environment and Sustainability
- Industrial Design and Materials
- Creative Industries

#### **Collaborative Industrial Research**

An excellent example of the “new breed” of large scale collaborative research programmes being undertaken by Brunel is the £6.5 million Multi-disciplinary Assessment of Technology Centre for Health programme. MATCH brings together five universities and twenty companies working in the field of medical equipment. Financial contributions obtained from industrial partners matches the £3.25 million funding grant from EPSRC. The format of the programme ensures both “critical mass” and high quality research, coupled with an immediate route for commercialization of resulting IP. This format will be increasingly employed on other collaborative research programmes led by Brunel.

Strong project management will become an increasing necessity for all research led universities as research programmes become bigger and more complex. This is particularly true of Framework VI. The Government should recognise the need to provide extra support to institutions heading such collaborative programmes, where those institutions are achieving best practice in project management.

### **Financing Issues - General**

There is no question that HEROBC, HEIF, UCL and other 3rd Leg programmes have had a tremendous effect in “pump priming” the process of change within academic institutions. However, the timescales and level of resources to effect permanent change within HEIs and to establish truly self supporting Enterprise and Innovation programmes are considerably greater than was allowed for in those initial programmes.

We therefore feel that it would be helpful if the Government were to focus on supporting long term collaborative bids where genuine partnership could be demonstrated and where significant opportunities could be demonstrated for matched funding from the RDAs, commercial partners and other sources such as EU programmes. This would provide a much better base for real sustainability, with appropriate timescales to allow meaningful milestones and deliverables to be achieved.

In Brunel’s experience, R&D tax credits have not influenced the demand for research and skills, The current economic climate has produced a dilemma for most companies in that despite the fact that they are desperate to outsource R&D, they are unwilling to take the early risk. This has particularly affected such schemes as TCS, which despite its excellent reputation, is proving beyond many SMEs in the current market conditions.

However, it is clear that the HE sector could take a major role in helping to maintain the UK's R&D portfolio through these difficult times, up to the point that UK business is in a stronger position fully to exploit the opportunities in hand.

### **Financing Issues – Commercialisation Processes**

There is still a clear gap a gap in terms of providing pre-commercialisation funding to enable universities to test the commercial and technical feasibility of research ideas emerging from laboratories. The World Bank has noted from international experience that venture capital will typically not provide finance until commercial and technical feasibility has been established. Funds to demonstrate such feasibility are typically the critical missing link in the commercialisation chain.

The UK Govt has provided universities with friendly VC funds to help ventures at an earlier stage than would normally be considered by traditional risk adverse VCs. However, projects still have to be at an advanced stage of planning to be considered seriously. Sources of funding for early stage analyses seem to be largely absent, with universities being thrown back on their own internal (and often complex and opaque) resources. Money is needed by universities to help sift the opportunities under consideration in their pipelines, to pay for initial market analyses and to buy in specific industry/market sector expertise to evaluate the potential of technologies within the harsh realities of the market place.

General marketing/innovation consultants are often not very helpful, it is specific sector expertise that is important. For example at Brunel, we have engaged an individual with extensive experience of the polymer processing sector to help us explore and set up licensing deals with the major players in this industry. Specific sector expertise is very important in valuing the technologies: costs/benefits/market advantage to potential licensor companies having to be analysed carefully on a case by case basis to facilitate the deal making process.

A Technology Transfer Office should be able to bid to Government for a budget to do exactly this sort of work. This would help kick start many opportunities currently lying dormant in university pipelines for want of the small sums of money needed to do initial evaluation.

### **Managing Contacts Between with Industry**

There are many examples of good practice already within the UK. Brunel and Royal Holloway set up the **PARK** business networking forum based on the Cambridge model, using the same VBN based web system although with a

seminar and events structure tailored to fit the specific needs of the West London Region. Again the partnership between Brunel and RHUL was key, ensuring that one clear “shop window” could be provided to the businesses within the region. In addition PARK, since its inception, has worked in collaboration with the London Technology Network and Business Link For London, and with senior representatives from each of those organizations on the PARK steering group. This has ensured the most effective targeting of network events and avoided potentially confusing multiple messages to business. Events span the spectrum of formal and informal, scientific and business.

### **Barriers**

As outlined in the introduction to this response, the biggest barrier for most institutions is the ability to obtain sufficient critical mass to engage with business in a truly effective and sustainable way. It would therefore seem that a combination of collaboration and specialisation within institutions is inevitable. We also need to be able to construct programmes that can draw together funding from multiple sources. The creation of such programmes requires correspondingly more effort and also requires a much greater commitment and focus from the lead institutions. However, there are successful examples already taking place and both PARK and WestFocus would fit within this category at Brunel.

For technology transfer the biggest barrier at present is probably the economic climate. Many universities now have very good procedures and programmes but industry is finding it difficult to engage in the current economic climate. A practical way of boosting response in the short term may be to introduce a system of deferred payments for companies to encourage commitment to research and consultancy programmes with universities. This may be of particular help with TCS projects.

### **Graduates**

Innovation training for young people is a key issue for future effective economic development, we need to train more people who are comfortable working in, and linking, the academic and commercial sectors.

Brunel has a long track record in industrial placement and we feel that this is an extremely effective way of ensuring a close match between provision and demand. However, this has not always been recognised by Government in a tangible way. Institutions such as Brunel are capable of doing much to raise the image of science and engineering within the UK. For example, Brunel has a strong recognised brand and is seen as a very accessible institution. Brunel recently formed a collaboration with the Royal Institution of Great Britain and with CfBT to bid for the National Science Centre with a view to promoting science education in schools.

It would be helpful if the Government provided more backing for part time placement studentships with industry. Part time placement studentships are popular with companies approaching Brunel. They are cost effective, not as intimidating to SMEs as participation in a full-blown research programme, and the students involved tend to generate correspondingly more ideas for commercialising their research, a win-win scenario for all involved.

### **Conclusion**

Brunel has enjoyed a close and mutually beneficial working relationship with many industrial and commercial partners. The partnerships have been multi-layered and complex: through Governing Bodies (members of our Council are drawn from business), links on placement, sponsorships, R & D (basic and applied), community projects, business clubs etc. Universities such as Brunel have very effective technology transfer but there are difficulties - small and medium-sized enterprises are focused on core business, not on social engineering and often not on development, especially in a poor economic climate. The University looks forward to the outcome of the consultation and to the new opportunities, and funding, which it hopes will be offered for extending existing partnerships and for building new collaborative initiatives.

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